

ANNUAL REPORT
FREUDENBERG GROUP

2023



WITH SPECIAL PAGES ON
THE 175TH ANNIVERSARY

[CURIOUS]
**SINCE
1849**

SPECIAL PAGES ON THE
175TH ANNIVERSARY

THIS YEAR we are celebrating a major anniversary: 175 years of Freudenberg. That is how long we have been developing innovative solutions, improving materials, and making technological progress.

Freudenberg has made a commitment to its employees and customers, a promise to adapt to change and seize the opportunities it offers. This applies to the past, the present, and the future. During our anniversary

year 2024, this commitment will be a topic of conversation, as we celebrate the company's birthday with a great many stories, activities, and events at our locations around the world.

We are proud of our successes over the history of Freudenberg, which dates back to 1849.

Then as now, curiosity has been the engine driving us forward. We have truly been

CURIOUS SINCE 1849.

ON THE TRAIL



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OF THE FOUNDER

Carl Johann Freudenberg – the success of today’s technology company can be traced to him. It was 175 years ago – on February 9, 1849 – that he and a partner founded a leather factory in Weinheim, Germany. The company’s unique rise followed. Their enterprise would become a global company, whose story has been superbly documented in a modern archive and other sources. But what does the record tell us about Carl Johann’s personality, about him as a human being? How do his thinking and actions continue to shape Freudenberg’s corporate values today? The detectives at the Freudenberg Archives are on the case.

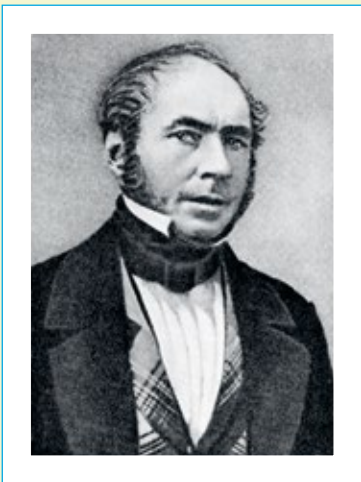
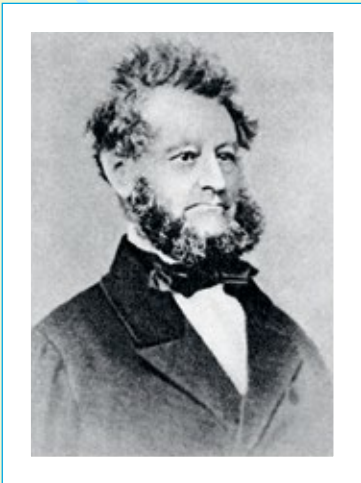
Picture the founder of a startup, who has just become a father for the third time and, in the middle of a civil war, has bought a small, insolvent leather company with the help of money from his wife Sophie,” suggests Freudenberg Archivist **Julia Schneider**. This is an admittedly simplified image of Carl Johann, but it shows he had no shortage of confidence. He was also lucky to be able to assemble the right ingredients for a step-by-step rise from apprentice to co-owner and eventually sole proprietor of his own company. What were these elements? What led him, as a 30-year-old father and family man, to look ahead to success during a period of such uncertainty? “The right character traits are part of the answer. So are the right associations in his business and personal life,” Schneider says. →

The child

It all begins with an early, fateful event. Carl Johann was just nine years old when he lost his father, a man that had a hard life. Georg Wilhelm Freudenberg ran “Zum Löwen,” an inn in Hachenburg, a town between Cologne and Frankfurt. But all was not well in the severe poverty of the early industrial era. In early 1829, the inn had to be closed, and the innkeeper had to make a drastic career change. He found a job at the customs house in Weilburg an der Lahn, but he soon died there. The date was March 9, 1829. His son Carl Johann had accompanied him from Hachenburg and was the only one with him at the time. His childhood was over. His family mourned and struggled for financial survival. His mother took him and his five siblings to Neuwied, where relatives made sure they would not starve.

At 14, Carl Johann had to stand on his own two feet. He began an apprenticeship in his uncle’s leather shop 200 kilometers (about 124 miles) from Mannheim, a long distance to travel at the time. “The family’s poverty no doubt triggered something in Carl Johann and gave him the urge to make something of himself,” Schneider says. “We see this in his later years, when he rose to become a kind of self-made man – thanks to his ambition, industriousness and thrift.”

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The up-and-comer

Carl Johann was on his own. But he quickly found himself. He discovered his strengths. He supported himself as an apprentice to his uncle Johan Baptist Sammet and partner Heinrich Christian Heintze in Mannheim, which was a vibrant, large city and quite a contrast to his hometown. “At this time, he notices the positive impact of his own performance and his own capabilities on his life. This gives him the self-confidence to continue the mission of making something of himself,” Schneider says. His industriousness and ambition drove him on.

The young man not only served customers from behind the trading house’s counter and made deliveries – with the help of earnings from the leather business, he was also able to operate a cigar store, improving his finances. Freudenberg, who never attended secondary school, learned French and English, attended the Nationaltheater Mannheim, moved with growing confidence in respected and international circles, and continued to shine in his uncle’s company. The result: in 1844, he was allowed to invest his money into the firm and acquired 20 percent of its shares as a silent partner.



“They had a marriage of equals.”

Julia Schneider, Company Archivist

The husband

The next important step the same year: Carl Johann married [Sophie Martenstein](#), whom he had met at a choral society event during the spring of the previous year. Martenstein came from a wealthy Worms family. Her father, a spice merchant, was a respected businessman. He approved the match, but he no doubt looked beyond young Freudenberg’s heart, character and personal appearance in making the decision. There were economic realities to consider, including the suitor’s personal net worth and his professional success.

In her memoirs, Sophie wrote: “The conviction that he was gaining a good, capable son-in-law, who had already saved up 5,000 guilders [the equivalent of about €100,000 today], led my father to entrust his only daughter to him.” A young family grew up in the following years. The first arrivals were two daughters, Elise and Luise, although the latter died young. When son Friedrich Carl was born in 1848 in Mannheim, the Baden Revolution was already raging. →



“Riots, excitement, and a lot of talk! It was an anxious time for us.”

Sophie Freudenberg in 1867, recalling the revolutionary turmoil

His contemporaries

What was happening on Carl Johann’s doorstep in Mannheim? At stake was nothing less than press freedom, trial by jury and a German national state with a freely elected parliament. Until that point, the country was a patchwork of independent territories, including the Grand Duchy of Baden, where Mannheim was located.

The revolutionaries were divided into two camps, one liberal-constitutional and the other radical-democratic. Disorder reigned in Mannheim. There were calls for radical change. Thousands attended revolutionary peoples’ assemblies, and countless more of them were held across the entire country. There were pitched battles. “Businesspeople that generally want stable political conditions viewed the events anxiously. That was true for our founder as well,” Schneider says. He may have suspected that fate was about to put him to the test – again.

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The entrepreneur

The country was in the throes of political storms. In their midst, the bank that had handled the company’s bills of exchange and financed its leather business collapsed. The firm fell into economic difficulties and had to be dissolved in 1848. “Let’s return to the concepts of luck and the right ingredients,” Schneider says. “Freudenberg has the good fortune to be able to turn the crisis into an opportunity. He now has a strong family behind him that can give him seed money.”

His father-in-law, who thought highly of Carl Johann, made the capital available to his daughter Sophie, so she could help her husband with a plan to acquire part of the company. At the time, it was a progressive notion to involve a daughter in business matters.



Nine decades later, [Friedrich Carl](#), the son born during the year of revolution, wrote about the era of the company's founding. "Since the liquidation required the departure of the two owners, my father was able to choose between them. He chose Mr. Heintze. The firm of Heintze & Freudenberg ended up in [Weinheim](#), taking over the small calf leather tannery in 1849." Why did he buy into a leather factory with Heintze and not into the leather shop with his uncle? For an entrepreneur, the leather factory offered far broader opportunities for designs and growth than "just" a leather shop.

"This shows Carl Johann's entrepreneurial vision," says Schneider. And there was something else. "The conviction that he could pull this off in turbulent times is based on the fact that he had already extricated himself from a financial crisis as a young man. His personal qualities had made him a success. In a sense, it was a repetition of something that he had already handled. This time, he was determined to use his experience and strengths to his advantage." Thus, in the middle of a revolution, he set out on a course that would lead to a global company.

On Friday, February 9, 1849, the partners officially founded the firm of Heintze & Freudenberg with an entry in the commercial register. The revolution was put down just a few months later. →

***"My father gave me
30,000 guilders. That
became the equity
in today's business."***

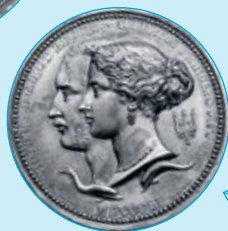
Sophie Freudenberg in 1867, remembering the company's founding

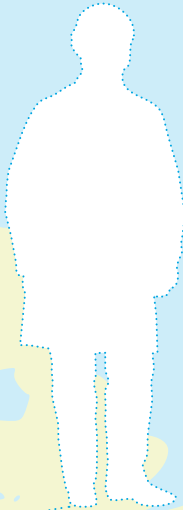


The head of the company

Then things began to move fast. The plan worked out. Over the next three years, revenues quadrupled, and the staff grew from 50 to 170. “Three aspects play an important role here,” Schneider says. The first is quality. “In Germany alone, there were about 10,000 companies making leather products. Freudenberg knows that he and Heintze are setting themselves apart with quality products.” Secondly, it was clear to him that he had to internationalize the business quickly to buy hides and sell leather. It was either “go big or go down,” as the saying goes. The two businessmen built up relationships in the United States, Switzerland, the United Kingdom, France and Turkey (still the Ottoman Empire at the time.)

And last but not least, Freudenberg recognized the importance of innovation early on, picking up on a trend from France and gearing his production operations to patent leather. To make this change, he had to win his partner Heintze over: “If you make patent leather, you get to ride in the carriage. If you make regular leather, you walk,” he once said. He had demonstrated his farsightedness once again. At the Great Exhibition of 1851 in London, the product from Weinheim was a prizewinner and secured the company’s success for many years.



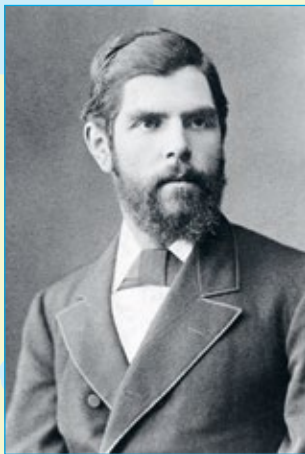


The mentor

What remains of the spirit of those early years? Or the traits of Carl Johann Freudenberg? After he bought out the Heintze family and the company became a sole proprietorship in 1874 – once again with financial help from his wife’s family – he was able to show his caring side as an entrepreneur. That same year, Freudenberg founded a health insurance association for his employees, the forerunner of the health insurance fund that the company later established. A general aid fund followed – it was for employees and their families that were in need. “You can see a connection to his experience as a child,” Schneider said.

Freudenberg brought his sons Friedrich Carl and Hermann Ernst into the company for support, making it a family operation. In 1887, he made them partners, giving each one-third of the company. At this point, the company had more than 500 employees.

As part of the transition to the next generation and with the size of the company in mind, Carl Johann wrote down his business principles by hand. He considered humility, honesty, a solid financial foundation, and the ability to adapt to change as the most important principles for a successful business. The theme of trust – not just in oneself but in one’s family, partners, employees – played a major role. For example, he writes: “It is better to trust hundred times at the risk of being taken in, than to mistrust unjustly even once.”





FAMILY

Freudenberg has been in family ownership for seven generations. And there are entire dynasties of employees, who have worked for the technology company for decades. The following examples illustrate employees' strong sense of attachment to Freudenberg.

[CURIOUS] SINCE 1849

TIES

A close-up photograph of a hand holding a bright green sock. The hand is positioned on the left side of the frame, with the fingers gripping the top of the sock. The sock is a vibrant lime green color and has a ribbed texture. The background is a solid, bright blue color. The word "TIES" is overlaid in large, white, sans-serif capital letters across the middle of the image.

PAST [PRESENT] FUTURE

The friends

Michael Miller and Kelly Smith can thank Michael's grandmother for their careers at Chem-Trend. During the 1960s, she had a restaurant near the Chem-Trend facility in Howell, Michigan, in the U.S.. She regularly served lunch to Chem-Trend employees and was aware of the company's good reputation. That's why she regularly requested job interviews for friends and family. Her efforts were a great success. Not only her son, Michael Miller's father, started working at Chem-Trend a short time later. His aunt, his brother, his brother-in-law and his nephews followed. Michael himself came aboard in 1991 as a lawn-care employee and now works as a purchasing manager.

The Smiths, who were family friends, found their way to Chem-Trend via the Millers' restaurant as well. Kelly Smith's father and uncle were the first to join the company. His brothers followed during the 1970s, and he joined it in 1988. Smith is now a group leader in material handling. "Chem-Trend has always had our well-being at heart. That's what makes it an exceptional employer," Smith says. "We do our best every day to make the company successful," Miller says. "In turn, our employer supports us when we have to deal with tough personal matters. That makes the relationship special."

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Kelly Smith

Michael Miller

The developers



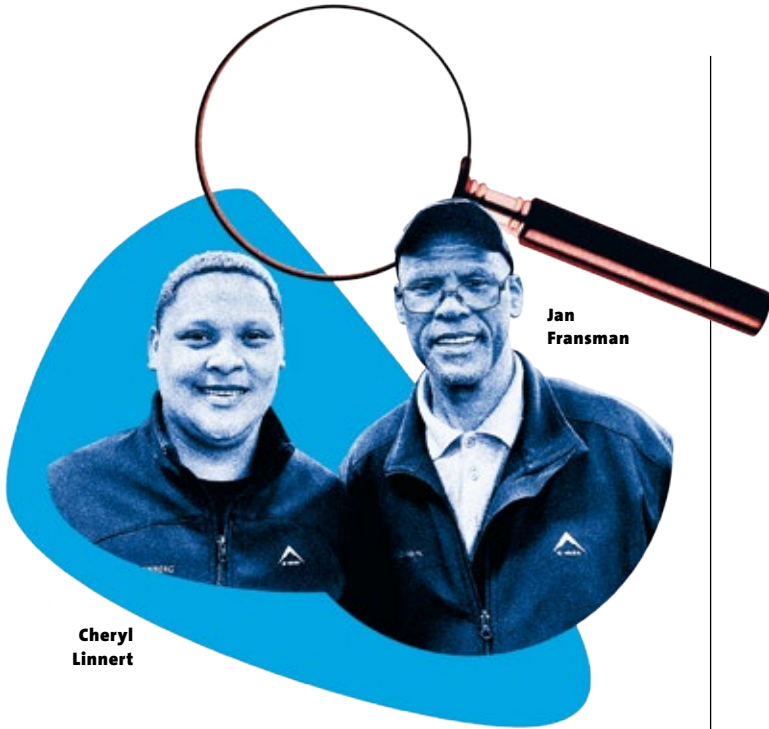
Dinglong Luo

Huajin Luo



Count on them to be wherever they are needed: Huajin Luo and his son Dinglong Luo. Huajin Luo joined Freudenberg Filtration Technologies in Shunde, China, in 2007. Initially a production worker, he is now in charge of a manufacturing line. "My father was deeply impressed by the company's success story, as well as its strong customer orientation, humanity, and social commitment. Aside from the opportunities for professional development, that is precisely what motivated me to apply for a job and join him at Freudenberg," Dinglong Luo said.

After he was hired in 2009, he worked as a quality inspector before moving to process technology in 2013 and taking over as manager in 2016. Today, Dinglong Luo is in charge of quality management. "My son and I both love our work. For me as a father, it has been very special to see my son grow within the company," Huajin Luo says. Dinglong Luo expresses similar sentiments. "My father is my role model. We both strive to develop personally and keep moving forward. That is the foundation that we share."



**Cheryl
Linnert**

**Jan
Fransman**

The inspectors

Cheryl Linnert still vividly remembers her first visit to Freudenberg. She was just a child when she attended an open house, where her father worked at the time as a production operator. 18 years later, Cheryl followed her father by applying for a job at Freudenberg.

Linnert now works as an inspector for Freudenberg Performance Materials in Cape Town, South Africa, in the same job as her father did. As inspectors, they ensure during the production process that the length and width of the nonwoven material meets the customer's specifications. **Jan Fransman** is thrilled to watch his daughter's career grow at Freudenberg. "Whether it's as a workforce or for us personally as a family, Freudenberg has always been there for us since I started in 1979, and I am glad to see my daughter getting that same support today," says Fransman.

The referees

The urge to stand up for fairness is in the **Krastels'** genes. Until their retirement, the brothers **Klaus** and **Bernd** were members of works councils for Freudenberg companies in Weinheim, following the example of their father Walter. "As his sons, it was the most natural thing in the world for us to do our training at Freudenberg and later work on behalf of the company and its employees," said Bernd Krastel. In their work, they have helped to actively shape the company's transformation from a venerable, quite manageable Weinheim firm into a global technology company.

So it's no surprise that Freudenberg was a main topic of conversation at home after work and that Bernd's son would work at Freudenberg today. "I was always impressed by the deep sense of belonging – both on site and internationally," said **Christopher Krastel**. The young man has something else in common with his grandfather and his uncle. As football referees, they all stand for fairness on the pitch.

Support also comes from the female side: Christopher Krastel's cousin, **Anja Krastel** provides the family with sustenance in the Weinheim cafeteria.

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**From left to right:
Christopher Krastel,
Bernd Krastel,
Anja Krastel,
Klaus Krastel**



**Aparecido
Emidio
Galhardi**

**Emidio
Galhardi**

**Maria Cecilia
Xavier**

The team spirit enthusiasts

For this family, team spirit comes first: **Maria Dolhainé Orgovan**, her husband **Norbert Dolhai** and their son **Milan** appreciate their employer Vibracoustic above all, because of the sense of togetherness. “The site here in Nyiregyhaza, Hungary, is comparatively small and everyone knows each other,” says Norbert, who started working for Vibracoustic more than 20 years ago as a production employee. After holding positions in assembly, vulcanization and the warehouse, Norbert is now a shift supervisor.

“The atmosphere is excellent, and many colleagues have become our friends,” says Norbert’s wife Maria Dolhainé Orgovan, who has worked for Freudenberg for around 14 years in quality control and assembly.

Milan grew up seeing the positive impressions Freudenberg left on his parents and joined the company two years ago. “If someone has a problem, they get help here. That’s something I really appreciate, in addition to the flexibility and the numerous job opportunities.”

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The musicians

Emidio Galhardi and his father **Aparecido Emidio Galhardi** share a passion for music. The two play the horn together in their church choir.

Emidio not only picked up his father’s love for music, but he also followed in his father’s footsteps by working at Freudenberg in Taubaté, Brazil. Emidio started as a production assistant at Freudenberg Performance Materials at the age of 18. He then worked as a production engineer and now works in purchasing at the Vibracoustic Business Group. “My father always enjoyed working for Freudenberg. He was with the company for 22 years until he retired,” says Galhardi. “And I can see why: it’s the good and strong relationships that make working here special. The relationships with colleagues, customers and partners.”

Emidio also credits his time at Freudenberg for helping him find the love of his life, **Maria Cecilia Xavier**. The two met at work and now have two children.

**From left to right:
Norbert Dolhai,
Maria Dolhainé Orgovan,
Milan Dolhai**



The chemistry enthusiasts

Chemistry seems to be in the Kilian/Hallstein family's blood. When he was offered a position in the main laboratory shortly after his apprenticeship as a dyer in the 1950s, **Manfred Kilian** didn't need to consider it for long. A champion swimmer, he loved a good challenge. And soon tanning trials, analyses and microscopes were part of his daily routine. Even his daughter followed him into the company several years later and met her future husband, a chemical technician, there.

So with so much enthusiasm for chemistry, it was no surprise that granddaughter **Katharina Hallstein** would pursue a scientific career. She has worked as a technician in chemical technology since 2009 – today on the same team where her dad once worked. “Freudenberg always loomed large in our home,” Hallstein said. “I often visited my father here and spent time in Houston, Texas with the former exchange program TANNER. Freudenberg has now become a family to me.”

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The sales engineers

Juliana Matos got her first taste of the international world of Freudenberg with the help of TANNER. She was the first young person from Brazil to travel abroad with the company's then brand-new exchange program in 1999. Her father, **Carlos Matos**, worked as an engineer for Freudenberg Filtration Technologies and built up the Brazilian sales team. A few years later, when an account manager was needed for Freudenberg-NOK Sealing Technologies in Diadema, Brazil, her father encouraged her to apply. “I remember my father always worked wholeheartedly for Freudenberg,” Juliana Matos says. “He often invited colleagues, supervisors and business partners to our home, because he didn't like sterile business dinners in restaurants. So, I was familiar with the company from an early age.”

Matos has since followed in her father's footsteps, graduating with a degree in engineering and – like her father – is responsible for sales and customer topics. She has also retained her love of travel. After working in the USA and Brazil, she is currently based in Weinheim.



Manfred Kilian

Katharina Hallstein

Carlos Matos

Juliana Matos

FORGING THE FUTURE

604 million

EUROS – THAT'S WHAT
FREUDENBERG INVESTED IN
RESEARCH AND DEVELOP-
MENT IN 2023.



Battery systems – Midland, USA
The airlock connects the changing room with the battery cell production facility. Nozzles blast air from all sides for 15 seconds, removing any dust particles from protective clothing. Then the airlock door re-opens and the cleanroom can be entered.

Battery systems – Midland, USA
120 battery cell modules is the daily output of this Freudenberg facility. A test station examines the cells for defects and plays a key role in optimizing the modules' charging capacity.



About
5 percent

OF REVENUE GOES
INTO NEW IDEAS AND FUTURE
PRODUCTS EVERY YEAR.

The future emerges when people get excited about an idea. Designing products for the future takes precise analyses and the courage to let technology and the intellect interact. We go where Freudenberg is shaping the future.



Smart medical products – Kaiserslautern, Germany
Freudenberg is developing digital products for the healthcare of the future. The “Bambi Belt” is a skin-friendly silicone belt that replaces the cumbersome monitoring of newborns with electrodes and wires.

32 percent

OF TOTAL REVENUE IN 2023
CAME FROM PRODUCTS THAT ARE
LESS THAN FOUR YEARS OLD.

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Fuel cell systems – Munich, Germany
Semiautomated assembly with integrated pressure testing of fuel cells at the Innovation Center II: The stack – the core of every fuel cell system – is based on a standardized platform and can be constructed in modular form for a range of different output categories, depending on the customer's specifications.



Fuel cell systems – Munich, Germany
The Membrane Electrode Assembly (MEA), consisting of an ion-conducting electrolytic membrane, catalyst layers on the anode and cathode sides, and gas diffusion layers (GDLs), is produced under cleanroom conditions. Freudenberg enlarges the MEA and directly integrates an innovative sealing concept promoting a long operating life for the cells.

**Related
Story**



The striking images in a video clip from Munich show fuel cells being manufactured.

[CURIOUS]
**SINCE
1849**

SPECIAL PAGES ON THE
175TH ANNIVERSARY

 **FREUDENBERG**
INNOVATING TOGETHER



ANNUAL REPORT
FREUDENBERG GROUP

2023

HIGHLIGHTS

[€ million]	2019	2020	2021	2022	2023
Sales					
Germany	1,477	1,378	1,584	1,736	1,761
EU (excluding Germany)	2,445	2,133	2,411	2,706	2,753
Other European countries	412	605	743	797	910
North America	2,526	2,259	2,599	3,458	3,515
South/Central America	284	194	247	333	360
Asia	2,115	2,073	2,244	2,481	2,380
Africa/Australia	209	199	211	242	224
Total sales	9,468	8,841	10,039	11,753	11,903
Consolidated profit	611	366	587	640	831
Cash flow from operating activities	957	1,139	862	608	1,404
Cash flow from investing activities	-601	-241	-534	-434	-515
Balance sheet total	11,355	11,855	12,921	13,151	13,439
Equity	5,820	5,696	6,491	7,108	7,536
Equity ratio	51 %	48 %	50 %	54 %	56 %
Workforce (as at Dec. 31)	48,851	47,777	49,836	51,462	52,241
Workforce (annual average)	49,108	47,909	48,787	50,598	52,035

2023 FREUDENBERG ANNUAL REPORT

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FREUDENBERG EMBRACES RESPONSIBILITY

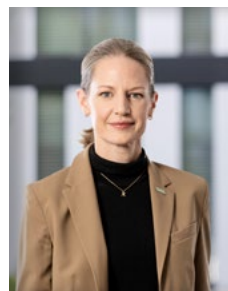
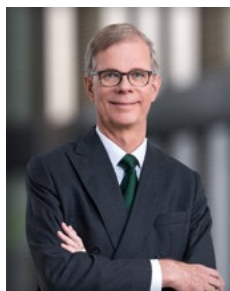
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COMPANY BOARDS

SUPERVISORY BOARD



1st row from left:
Wentzler, Schücking, Thielen, Beecroft, Braun

2nd row from left:
Cardoso, Freudenberg-Beetz, Haas-Wittmüß,
Kairisto, Pott

3rd row from left:
Schildhauer, Towfigh, Zeschky

Martin Wentzler, Großhesselohe
Chairman of the Supervisory Board
at Freudenberg SE, Attorney

**Dr. Christoph Schücking,
Frankfurt am Main**
Deputy Chairman of the Supervisory
Board of Freudenberg SE
Attorney and Notary Public (retired)

**Mathias Thielen, Zürich,
Switzerland**
Deputy Chairman of the Supervisory
Board Freudenberg SE
Managing Director of UBS/Credit
Suisse AG

Dr. Richard Beecroft, Bruchsal
Sustainability Scientist, Karlsruhe
Institute of Technology

Anna Maria Braun, LL. M., Melsungen
Chief Executive Officer of B. Braun SE

**Carlos M. Cardoso, Incline Village,
Nevada, USA**
Principal of CMPC Advisors LLC

**Dr. Maria Freudenberg-Beetz,
Weinheim**
Biologist

Martin Haas-Wittmüß, Dreieich
Vice President of Springer Nature AG
& Co. KGaA

Essimari Kairisto, Korschenbroich
Member of the Supervisory Boards
of Applus+ Services S.A.,
Fortum Oyj, TenneT Holding B.V.,
Iveco Group N.V. and Fugro N.V.

Dr. Richard Pott, Leverkusen
Chairman of the Supervisory Board
of Covestro AG

Walter Schildhauer, Stuttgart
Managing Partner of
speedwave GmbH

**Professor Dr. Emanuel V. Towfigh,
Bad Soden**
University Professor,
EBS University Law School

Dr. Jürgen Zeschky, Aurich
CEO Enercon

BOARD OF MANAGEMENT



From left: Krauch, Sohi, Loidl and Krieger

Dr. Mohsen Sohi, Frankfurt am Main
Chief Executive Officer

Dr. Tilman Krauch, Heidelberg
Member of the Board, CTO

Dr. Ralf Krieger, Leimen
Member of the Board, CFO

Esther Maria Loidl, Heidelberg
Member of the Board, CHRO

EXECUTIVE COUNCIL

Members	Business Groups
Claus Möhlenkamp (CEO)	Freudenberg Sealing Technologies
Dr. Andreas Raps (CEO)	EagleBurgmann
Frank Müller (CEO)	Vibracoustic
Dr. Frank Heislitz (CEO)	Freudenberg Performance Materials
Karin Overbeck (CEO)	Freudenberg Home and Cleaning Solutions
Filip Krulis (CEO)	Freudenberg Chemical Specialities
and the Board of Management	
Membership of the above-mentioned six senior executives in the Executive Council takes stronger account of the perspectives of the Business Groups with regard to overarching issues.	

MANAGEMENT OF THE BUSINESS GROUPS

Management	Business Groups
Claus Möhlenkamp (CEO and Member of the Executive Council), Ludger Neuwinger-Heimes (CFO), Dr. Matthias Sckuhr (COO/CTO)	Freudenberg Sealing Technologies
Jason Kollatschny (CEO), Bozidar Grcevic (CFO)	Freudenberg Oil & Gas Technologies
Dr. Andreas Raps (CEO and Member of the Executive Council), Dr. Sebastian Weiss (CFO), Dr. Kai Ziegler (CTO)	EagleBurgmann
Frank Müller (CEO and Member of the Executive Council), Marco Altherr (CFO), Dr. Jörg Böcking (CTO), Axel Wersel (COO)	Vibracoustic
Dr. Frank Heislitz (CEO and Member of the Executive Council), Thomas Herr (CFO), John McNabb (CTO)	Freudenberg Performance Materials
Dr. Andreas Kreuter (CEO), Dr. Matthias Götzfried (COO), Frank Reuther (CFO), Dr. Alexander Rozmán (Member of the Management Body)	Freudenberg Filtration Technologies
Satoshi Kawamura (CEO), Yasuhiro Esaki (COO), Yukiyasu Izuta (CFO), Takuya Yakata (CTO)	Japan Vilene Company
Karin Overbeck (CEO and Member of the Executive Council), Dr. Arman Barimani (CTO), Kerstin Borrs (CFO)	Freudenberg Home and Cleaning Solutions
Filip Krulis (CEO and Member of the Executive Council), Dr. Jörg Matthias Großmann (CFO)	Freudenberg Chemical Specialities
Dr. Mark Ostwald (CEO), Michael McGee (COO), Kurt Ziminski (CFO)	Freudenberg Medical
Dr. Max Gisbert Kley (CEO), Dr. Jan Kuiken (CTO), Jason Meier (CFO)	Freudenberg e-Power Systems

REPORT OF THE SUPERVISORY BOARD



Martin Wentzler (Chairman)

2023 was shaped by factors such as economic and geopolitical uncertainty as well as high inflation that still persists to a certain extent. Management of the Freudenberg Group was adapted flexibly to these and further factors. At the same time, there was a focus on delivering on the strategic goals. The Supervisory Board was closely involved in these processes, and was kept informed of developments by the Board of Management. There was intensive coordination between the Chief Executive Officer and the Chairman of the Supervisory Board. Furthermore, the Supervisory Board advised the Board of Management in the management of the Group and oversaw and monitored the conduct of business. In addition, the Chairman of the Supervisory Board, the Chairman of the Audit Committee and the Board member responsible for Finance exchanged information on a regular basis. At the beginning of 2024, the Supervisory Board approved the strategic planning of the Freudenberg Group for the period 2024 to 2026.

The Supervisory Board held six meetings in 2023. The markets, sales and earnings development, the financial situation, the strategy and the risk management of the Group were analyzed and discussed in detail at all the meetings.

An important topic for the Supervisory Board in the year under review was the development of the new **Freudenberg e-Power Systems** Business Group founded in April 2022. Freudenberg e-Power Systems has extensive

expertise in battery and fuel cell technology and supplies energy systems for heavy-duty applications.

The Supervisory Board was also involved in the founding of the new **Freudenberg Flow Technologies** Business Group effective January 1, 2024 and in the preparations for the celebrations marking **Freudenberg's 175th anniversary** in 2024 and in the **DIALOG senior management event** in June 2024.

Furthermore, the Supervisory Board addressed various **investment projects** as well as **acquisitions and their integration** in the Group. **Freudenberg e-Power Systems** acquired the outstanding ownership interest in XALT Energy, LLC, Wilmington, Delaware, USA, in early January 2023. Until then, Freudenberg had held a 50.1 percent stake. XALT Energy produces lithium-ion battery cells, its subsidiary Freudenberg Battery Power Systems, LLC, Wilmington, Delaware, USA, develops and produces complete battery systems. In addition, **Freudenberg Home and Cleaning Solutions** acquired Vermop GmbH, Gilching, Germany, in July 2023. Vermop offers cleaning professionals modular cleaning systems and products that are well established on the market.

The **Audit Committee** met four times in the year under review. The first two meetings focused on the annual financial statements and the consolidated financial statements as at December 31, 2022, and the report concerning these annual financial statements prepared by the auditor. The auditor also presented its opinion on the standard internal controls applied by Freudenberg. Other issues addressed by the Audit Committee included risk management in the Group, the management of cybersecurity risks, the work of the Ethics Office, the Group-level compliance management system, and the implementation of EU sustainability reporting standards. Corporate Audit reported to each meeting of the Audit Committee on the status and findings of the internal audits.

The **Personnel Committee** met twice in 2023. Important topics were the implementation of succession planning in the Board of Management and guidance on important personnel decisions at Business Group and corporate function level. The Committee also addressed leadership development and the talent management process.

The **Innovation and Technology Committee** held four meetings. The topics on the agenda included the “Global Innovation Forum”, an internal Freudenberg event: the theme of the 2023 event was the opportunities offered by data-assisted automation of production processes. Other items were KPIs for measuring the efficiency of research and development, and the protection of intellectual property. The Committee also addressed the issue of quality assurance in various Business Groups and the comprehensive sustainability activities of the Group, whose ambition is to become carbon neutral by 2045 at the latest.

The annual financial statements, the consolidated financial statements compiled pursuant to IFRS, the consolidated management report for Freudenberg SE and the Group as well as the dependent company report 2023 for Freudenberg SE were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Germany, and were approved without reservation. The members of the Supervisory Board were provided with the documentation for the annual financial statements and the audit reports in due time. The Supervisory Board approved the consolidated financial statements and the combined management report of Freudenberg SE and the Group as well as the annual financial statements of Freudenberg SE and, following examination, concurred with the auditor’s findings. The annual financial statements of Freudenberg SE as at December 31, 2023 are therefore adopted. The report drafted by the Freudenberg SE Board of Management in compliance with Section 312 AktG (German Stock Corporation Act) regarding relations with affiliated companies (dependent company report) was audited by the auditor, who issued the following opinion:

“Pursuant to Section 313 AktG, we have been engaged to audit the report of the Board of Management on relations with affiliated companies for the financial year from January 1 to December 31, 2023, prepared in accordance with the provisions of Section 312 AktG. Based on the results of our audit, the dependent company report does not give rise to any reservations. In accordance with Section 313 (3) 1st sentence AktG., we have therefore issued the following opinion:

Based on our audit and assessment which were carried out in accordance with professional standards, we confirm that:

1. The factual statements made in the report are correct,
2. The payments made by the company in connection with legal transactions detailed in the report were not unreasonably high,
3. There are no circumstances in favor of a significantly different assessment than that made by the Board of Management in regard to the measures listed in the report.”

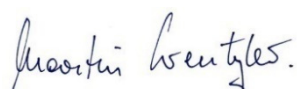
The Supervisory Board examined and approved the report on relations with affiliated companies and signed off on the auditor’s report. The Supervisory Board’s examination of the report on relations with affiliated companies did not result in any objections to the concluding statement by the Board of Management in the dependent company report.

Martin Haas-Wittmüß, Essimari Kairisto, Walter Schildhauer and Mathias Thielen were reelected to the **Supervisory Board of Freudenberg SE** in 2023. Their term of office had duly expired. Dr. Richard Beecroft was elected as a new member.

In addition, the Supervisory Board approved the **realignment of the Freudenberg Board of Management** as of January 1, 2024. After a transition period, Dr. Frank Heislitz and Thomas Herr will succeed Dr. Tilman Krauch as Chief Technology Officer, respectively Dr. Ralf Krieger as Chief Financial Officer on July 1, 2024, after both retire at the expiration of their contracts at the end of June 2024.

The Supervisory Board expresses its thanks to the Business Group managing bodies and the Board of Management for successfully overcoming numerous challenges in the year under review, for their prudent and decisive actions and successful management of business. Special thanks go to all Freudenberg employees for their proactive and successful commitment during another challenging year.

Weinheim, March 15, 2024
For the Supervisory Board



Martin Wentzler
Chairman

FOREWORD OF THE BOARD OF MANAGEMENT

Recent years have been shaped by uncertainty in many areas – geopolitical, economic and health-related. Freudenberg has stayed a strong and healthy company in spite of these difficult conditions. We are well positioned and can be proud of our Group’s operating and strategic performance in 2023. There are many reasons for this achievement. One of the most important is our workforce of over 52,000 people – they deserve a big thank you!



Dr. Mohsen Sohi (CEO)

What makes Freudenberg strong

Freudenberg celebrates its 175th anniversary in 2024. Ever since it was founded, **technological expertise, innovative strength and the willingness to change** have been hallmarks of the company. Freudenberg is a leader in many areas. Time and again, we offset crises in one sector or region through success in other markets or countries. This **diversity** makes us strong.

Our **company’s anniversary** is a good reason to celebrate and at the same time it gives us the opportunity to reflect: have we laid the right groundwork? Are we ready to adapt to new requirements and embrace change? Do we put our customers at the center of our activities?

DIALOG, the global leadership event, will answer these and other questions in June 2024. For the first time in six years, about 450 Freudenberg managers will be meeting in-person.

Among them will be **two new Board of Management members**: after a transition period, Dr. Frank Heislitz

and Thomas Herr will succeed Dr. Tilman Krauch as Chief Technology Officer (CTO), respectively Dr. Ralf Krieger as Chief Financial Officer (CFO) on July 1, 2024, after both retire at the expiration of their contracts at the end of June 2024. Both new Board of Management members are “home grown”, in other words, they come from within our own ranks. That is a sign of our **effective talent management**. The leadership changes in the Business Groups are further confirmation that Freudenberg has excellent employees with very good prospects for career development within the company. All new leaders come from within the Freudenberg Group.

Our **products and services** also stand for the **highest quality**. That is appreciated by our customers and partners. To keep things that way, we constantly work to expand and renew our portfolio.

We therefore engage in a permanent dialog, not only with industry and science, but also within the Freudenberg Group. The Group’s **innovation community** meets regularly and discusses current issues and developments. In the year under review, this dialog focused on data- and AI-assisted automation of production processes, a key to making Freudenberg fit for the future. Some 20 projects submitted for the internal **“Freudenberg Innovation Award”** highlight the innovative strength of the Group today. More information is available on page 20.

Thinking and acting with foresight are in the best Freudenberg tradition. This is what makes us so resilient and strong. Alongside a **future-oriented portfolio of products**, our ambition is also to achieve a **balanced regional presence**. America, Europe and Asia should each account for one third of sales. The Freudenberg Regional Corporate Center in Kuala Lumpur, Malaysia, will help us achieve this goal. Founded in the year under review, it is designed to serve the Southeast Asia region, a regional with significant growth potential.

Financial KPIs

Sales

11,902.8

Previous year: 11,753.1
(€ million)

In a challenging market environment, Freudenberg grew by some 1.3 percent; organic growth, i.e. growth achieved by the company's internal resources, was even higher and came in at some 3.5 percent. Exchange rate effects, however, had a negative effect on sales.

Operating result

1,081.6

Previous year: 941.8
(€ million)

The operating result grew by some 15 percent, and therefore came in well above the level for the previous year. Key success factors include in particular the innovative product offering, customer-oriented and flexible solutions for various sectors, and structured expansion in attractive markets and strategic business areas.

Return on sales

9.1%

Previous year: 8.0%

Consolidated profit

830.8

Previous year: 639.6
(€ million)

Equity ratio

56.1%

Previous year: 54.0%

CAPEX

452.7

Previous year: 401.5
(€ million)
(investments in property, plant and equipment, inter alia)

Research and development

Investments

603.6

Previous year: 576.8
(€ million)

R&D ratio

5.1%

Previous year: 4.9%
(share of R&D investment in sales)

New products

32.4%

Previous year: 31.6%
(share in sales of products introduced less than four years ago)

Strategic planning approved

The Supervisory Board approved the Freudenberg Group's **new strategic planning** in January 2024. The focus in this regard is on some 50 strategic business units that have developed their own very detailed strategies tailored to the relevant customer, market, and technology environment. Strategy development is based on the Freudenberg Group's vision: Freudenberg's ambition is to be one of the most innovative and diversified globally active technology groups.

In the current period up to 2026, sustainability, electromobility and digitalization – alongside customer centricity – will remain key issues for the entire Freudenberg Group.

On the path to carbon neutrality

Climate change is one of the greatest challenges of our time. That is why **sustainability** has very high priority at Freudenberg: efforts focus on resource efficiency with regard to energy and materials. The Group drives the energy transition systematically forward – with its products and within the company itself. Our goal is to reduce our CO₂ emissions to zero by 2045, primarily through energy conservation, electrification, and the purchase and self-generation of green power.

The “Be energy efficient” initiative lays the foundation for these efforts. It is an important component of the overarching “Sustainability drives Climate Action” project, uncovering **energy-saving potential** at Freudenberg locations and focusing in particular on energy consumption, process electrification, and the energy efficiency of buildings.

Freudenberg has been using **green power** from photovoltaic arrays and wind turbines for several years. To optimize the integration of renewable energy in the electric power system, Freudenberg installed its first micro-grid in 2023. This is a **battery system** that works like a virtual power plant. Freudenberg uses the microgrid to cover its peak loads, thereby stabilizing the public grid and reducing the cost of electricity. The first microgrid in Berlin will be followed by similar systems at other sites.

Portfolio management

Development of Freudenberg e-Power Systems

Mobility and sustainability are closely-linked issues. The mobility sector is facing a fundamental transformation to carbon-neutral transportation. Freudenberg is making massive investments in the mobility of the future – in battery, hydrogen and fuel cell technology as well as in the development of high-tech components for electric vehicles. The **Freudenberg e-Power Systems** Business Group established in 2022 expanded its activities further in the year under review. Among other things, the development of fuel cell systems continued and a partnership with LG Energy Solution for the supply of battery cell modules was agreed.

Acquisitions

As regards **acquisitions**, Freudenberg focuses on companies with extensive technical expertise that can help us reinforce our market position in highly-specialized segments. For example, **Freudenberg e-Power Systems** acquired the remaining ownership interest in XALT Energy, LLC, Wilmington, Delaware, USA, in January 2023. Until then, Freudenberg had held a 50.1 percent stake. XALT Energy produces lithium-ion battery cells. Furthermore, **Freudenberg Home and Cleaning Solutions** acquired Vermop GmbH, Gilching, Germany, in July 2023. Vermop offers cleaning professionals modular cleaning systems and products that are well established on the market.

New Business Group founded

Freudenberg founded a new Business Group named **Freudenberg Flow Technologies** with effect from January 1, 2024. It comprises the former EagleBurgmann and Freudenberg Oil & Gas Technologies Business Groups. This move enables us to realize innovation and sales synergies for sustainable sealing solutions. Freudenberg Flow Technologies also provides the organizational framework for further growth.

Sustainability at Freudenberg

In the year under review, the Group continued to improve its energy efficiency and increased the share of renewable energies. Especially as a result of these efforts, Freudenberg reduced its relative CO₂ emissions per million euro sales to about 51 tonnes. Over the coming years, Freudenberg intends to continue this development and consistently remain under the target for 2025 of 65 tonnes of CO₂ emissions per million euro sales. Since 2020, the relative Scope 1 and Scope 2 emissions have each decreased by more than five percent per year. Total Scope 1 and Scope 2 emissions have also decreased significantly, from 649 to 605 kt/year, while at the same time business has grown.

Energy use

883
(direct, GWh)

1,602
(indirect, GWh)

36%

(renewable energy as a proportion of total electricity consumption)

2,485
(total, GWh)

These values represent energy consumption in 2023, including self-generated and purchased energy.

0.21

(energy efficiency in kWh/euro sales)

CO₂ emissions

These values represent the total global CO₂ emissions of the Freudenberg Group in 2023 (market-based) as a result of the use of self-generated and purchased energy.

605
(total, 1,000 t)

50.8

(t/million euro sales)

Waste

11.8

(t/million euro sales)

Freudenberg employees

One of the Group's strengths is its diversity. People from some 150 nations work together at Freudenberg – in international projects and interdisciplinary teams.

No matter where Freudenberg employees are located around the world, their actions are based on the values that go back to the company founder Carl Johann Freudenberg. Surveys are regularly conducted among all Freudenberg employees to find out how these principles are put into practice on a day-to-day basis. A good 81 percent of employees responded to the survey conducted in the year under review. Also of note is that 79 percent of respondents are proud to work for Freudenberg. That percentage highlights employees' close emotional connection with Freudenberg.

The converse is also true: the company cares about its employees, their safety in the workplace has top priority. The LDIFR metric (accidents with at least one day of work lost per million hours worked) improved once again, coming in at 1.4 in the year under review (previous year: 1.8).

The employer brand was revamped to ensure that Freudenberg remains attractive for new employees going forward. The slogan "Working at Freudenberg: We will wow your world" and the matching visuals are designed to epitomize Freudenberg's product diversity, career opportunities and values as an employer – and, of course, the numerous wow moments.

Corporate citizenship

Freudenberg helps where help is needed – that may take the form of immediate aid for the earthquake victims in Turkey in 2023, or a global program to support education and environmental protection. Since the program was launched in 2015, the Group has provided a total of €21 million to fund not-for-profit projects and has already supported some 190 projects. The special feature of the program is that thousands of Freudenberg employees are involved, and every cent donated is used directly to fund projects.

Outlook

We expect the economic and geopolitical uncertainty to continue. Challenges such as energy supply risks, raw material bottlenecks, price increases, suppliers' delivery difficulties, and the labor shortage will persist and, to some extent, even intensify due to the wars in Ukraine and the Middle East. To master these challenges, we will stay agile at all our sites throughout the world and keep on responding swiftly and flexibly to the ever-changing requirements. Customer orientation will be a permanent focus of all efforts. This principle applies for every sector and region. We will continue to invest in long-term projects. Our key strategic issues remain unchanged – the mobility transformation, digitalization and sustainable solutions.

Thanks to employees and customers

The entire Freudenberg Group impressively proved its ability to deliver in 2023. Our managers and employees played their part with considerable personal dedication and great reliability. On behalf of the entire Board of Management, I would like to thank them most sincerely for their efforts.

We would also like to express our appreciation to all our customers and business partners for their confidence and trust and their excellent cooperation. They can count on our full support. Together, we will continue to overcome all challenges as we move into the future.

Weinheim, March 15, 2024

For the Board of Management



Dr. Mohsen Sohi
CEO

People at Freudenberg

Employees worldwide

52,241

As at December 31, 2023, Freudenberg employed 52,241 people.

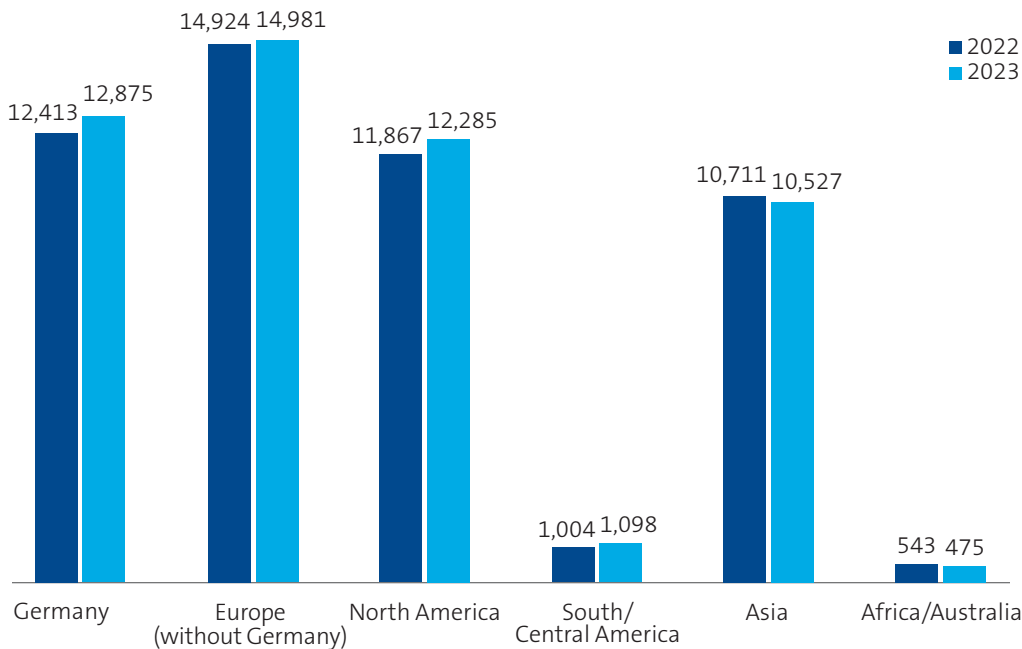
148

Freudenberg Group employees come from 148 different countries.

60

There are Freudenberg sites in 60 countries.

Employees by regions



Survey of employees

79%

(79 percent are proud to work for Freudenberg)

80%

(80 percent believe in Freudenberg's Guiding Principles)

81%

(response rate)

LDIFR

(Lost Day Incident Frequency Rate)

1.4

(all accidents at work with at least one day lost per million hours worked)

COMBINED MANAGEMENT REPORT

FUNDAMENTAL INFORMATION

BUSINESS MODEL

Organizational structure

The Freudenberg Group (Freudenberg) is a global technology group whose goal is to strengthen its customers and society long-term through forward-looking innovations.

At year-end 2023, the number of companies in Freudenberg totaled 465 located in 56 countries, 423 of these companies were included in the consolidation. 400 companies, including 150 sales companies and 170 production companies, were fully consolidated. The remaining companies were holding or management companies.

Freudenberg founded the Freudenberg e-Power Systems Business Group in April 2022. Because the new Business Group was a spin-off from the Freudenberg Sealing Technologies Business Group, it was initially included in the Seals and Vibration Control Technology Business Area. Given that Freudenberg e-Power Systems is active in the field of energy systems for heavy-duty applications, the Business Group was transferred to the Specialties Business Area in the year under review.

Together with partners, customers and the world of science, Freudenberg's eleven Business Groups aspire to develop cutting-edge products, excellent solutions and services for some 40 market segments and for thousands of applications: seals, batteries, fuel cells, vibration control components, technical textiles, filters, cleaning technologies and products, specialty chemicals, and medical products.

STRATEGIC MANAGEMENT FREUDENBERG & CO. KOMMANDITGESELLSCHAFT			
BUSINESS OPERATIONS FREUDENBERG SE			
Business Area Seals and Vibration Control Technology	Business Area Technical Textiles and Filtration	Business Area Cleaning Technologies and Products	Business Area Specialties
Business Groups	Business Groups	Business Groups	Business Groups
Freudenberg Sealing Technologies	Freudenberg Performance Materials	Freudenberg Home and Cleaning Solutions	Freudenberg Chemical Specialities
Freudenberg Oil & Gas Technologies	Freudenberg Filtration Technologies		Freudenberg Medical
EagleBurgmann	Japan Vilene Company		Freudenberg e-Power Systems
Vibracoustic			

As at December 31, 2023

For further details on Freudenberg companies, please refer to the chapter entitled "Review of Operations by Business Area".

Freudenberg builds on lasting and reliable relationships with customers and partners. The partnership with NOK Corporation, Tokyo, Japan, for example, already spans more than 60 years. Numerous activities in the Americas, Asia and Europe have been jointly established during the decades-long partnership.

Freudenberg and NOK Corporation jointly hold shares in several companies. Particularly worthy of mention are Freudenberg-NOK General Partnership, Wilmington, Delaware, USA, which is fully consolidated in the consolidated financial statements, as well as NOK-Freudenberg Singapore Pte. Ltd., Singapore, which is disclosed at-equity as a 50:50 joint venture in the consolidated financial statements.

Further details can be found under “Investments in joint ventures” and “Investments in associated companies” in the Notes to the Consolidated Financial Statements.

Across the globe, the Freudenberg Group’s products and services make a valuable contribution to the success of its customers – rarely visible, but always indispensable, in the spirit of the positioning that reads **“Freudenberg is a values-based technology group that best serves its customers and society”**.

It is Freudenberg’s goal to offer **customers** in the passenger car and commercial vehicle industry, mechanical and plant engineering, textile and apparel industry, construction, mining and heavy industry, energy, chemical, oil and gas industry, medical technology, civil aviation and rail vehicles sectors, as well as end users excellent technological and innovative products as well as services.

Innovation strength, strong customer orientation and close collaboration as well as diversity and team spirit are the cornerstones of the Group. Commitment to excellence, reliability and pro-active, responsible action have belonged to the company’s core values ever since it was founded in 1849.

Freudenberg introduced the “Strategic Guide” **leadership structure** in 2013. Under this concept, the Board of Management concentrates on developing the Freudenberg Group strategy, approves major investments, draws up strategic guidelines, and defines strategic planning. The Business Groups are responsible for operational business.

Freudenberg has two **parent companies**: Freudenberg & Co. Kommanditgesellschaft (Freudenberg & Co. KG), Weinheim, Germany, is the strategic parent company, Freudenberg SE, Weinheim, Germany, is the parent company with responsibility for managing business operations. The corporate bodies of Freudenberg & Co. KG are the Management Board, the Board of Partners and the General Meeting. The corporate bodies of Freudenberg SE are the Board of Management, the Supervisory Board and the Shareholders Meeting. The composition of the Management Board of Freudenberg & Co. KG and the Board of Management of Freudenberg SE is identical. This also applies to the Board of Partners of Freudenberg & Co. KG and the Supervisory Board of Freudenberg SE.

Freudenberg is a **family company** and is currently owned by some 360 heirs to the founding father Carl Johann Freudenberg.

Organizational changes

Acquisitions and disinvestments and discontinued operations

Freudenberg e-Power Systems acquired the remaining ownership interest in XALT Energy, LLC, Wilmington, Delaware, USA, from co-owners MBP Investors, LLC and TK Advanced Battery, LLC, in early January 2023. Until then, Freudenberg had held a 50.1 percent stake. XALT Energy produces lithium-ion battery cells, its subsidiary Freudenberg Battery Power Systems, LLC, Wilmington, Delaware, USA, develops and produces complete battery systems.

Furthermore, **Freudenberg Home and Cleaning Solutions** acquired Vermop GmbH, Gilching, Germany, in July 2023. Vermop, with its nearly 330 employees, offers cleaning professionals modular cleaning systems and products that are well established on the market. The company with production facilities in Wertheim, Baden-Württemberg, Germany, has a strong culture of customer proximity and is highly innovative. Vermop's annual sales in 2022 ran at some €46 million.

Business processes

In the year under review, Freudenberg conducted **operational excellence activities** in all areas with a view to making processes, services and products better, more efficient and safer.

Important goals for the Freudenberg Group are the **automation** and **digitalization** of production processes. To this end, data are collected from smart manufacturing processes and analyzed with the aim of achieving optimal and self-adaptive control of production steps in the future using advanced methods such as artificial intelligence. The 2023 Global Innovation Forum, a regular gathering of the innovation community at Freudenberg, was devoted to the topic of data- and AI-assisted automation.

With regard to digitalization, the basic approach adopted by Freudenberg is that digital technologies must either offer the customer added value or significantly improve internal efficiency.

Furthermore, all Business Groups continued to work on responding to **customer needs** even more effectively and optimizing business processes. One example is the organizational changes at Japan Vilene Company designed to ensure more efficient business processes.

Details of this project, together with further examples, can be found in the chapter entitled "Review of Operations by Business Area".

RESEARCH AND DEVELOPMENT

Freudenberg steadily expands its technological competence and continuously strengthens its innovative strength. To that end, the Group systematically promotes technologies and innovation processes of key relevance to the Business Groups and sets high standards for the quality and reliability of its products and services. Freudenberg delivers on its claim of “Innovating Together” through project-based cooperation with customers, scientific institutions and other partners.

In the 2023 financial year, Freudenberg conducted research and development activities in the amount of €603.6 million (previous year: €576.8 million). This represents 5.1 percent of sales (previous year: 4.9 percent). Research and development activities also include development expenses for customer-specific development projects disclosed under cost of sales in the consolidated statement of profit or loss. The Business Groups account for the largest share of funds for research and development activities.

Freudenberg measures the effectiveness of its research and development activities as the share of new products (products less than four years old) in total sales. In 2023, this share was 32.4 percent (previous year: 31.6 percent).

Synchronizing needs and competences for innovation

In its function as a strategic guide, Freudenberg Technology Innovation plays an essential role in the Group’s innovation management. The corporate function engages in medium- to long-term innovation projects to move forward in finding answers to strategically relevant issues of the Business Groups. In order to stay competitive in the fast-moving world of technology, trends are jointly identified and innovative solutions found with the help of the Business Groups’ strategic technology road maps and Freudenberg’s technology platforms. Freudenberg Technology Innovation has extensive knowledge of materials and processes, high competence in digital methods, and an open-minded approach to new technologies and markets.

The **Global Innovation Forum** brings together Freudenberg’s innovation community once every three years. The 2023 event was devoted to the topic of data-assisted automation. Presentations, discussions and an exhibition of Business Group activities highlighted the opportunities offered by data- and AI-assisted (artificial intelligence) automation for Freudenberg to respond to the shortage of skilled labor, demographic change and growing pressure from costs and competition.

“Regional Scouts” began supporting Freudenberg’s research and development activities in 2023. In North America and China, they promote strategic innovation issues: AI, e-mobility, energy transition, automation (with the focus on machine vision), and sustainability. They also cooperate with renowned universities, research institutions and startups to promote knowledge transfer on relevant innovation topics and with regard to product development.

Drawing on the Business Groups’ technology roadmaps, Freudenberg bundles the strategic research issues from the Business Groups into four overarching competence fields known as **flagships**:

“Data Driven Automation” flagship

The “Data Driven Automation” flagship focuses on the data driven automation of manufacturing processes to further enhance flexibility, speed and efficiency. The basis is understanding data as raw material with specific quality characteristics. This is addressed in the multi-year “Data-Driven Manufacturing and Optimization” project. One particular focus of the project is the simulation of production processes in the pre-investment phase. Another project uses data such as machine data from injection molding processes to compensate for the effects of materials and environmental variations. The findings are scalable and will be transferred to future core processes in the Freudenberg Group. This flagship is also working on digital twins with real-time data transfer and on solutions to improve process control through AI-assisted computerized image recognition.

“Virtualization of Material & Product Development” flagship

The “Virtualization of Material & Product Development” flagship uses data-based simulation and AI tools to optimize material, product and process design. For example, algorithms are used for the automation of optimization processes in product development. Furthermore, the findings from this flagship project can be used to determine the properties of elastomer-lubricant combinations as well as accelerating the development of a digital twin for fuel cells. The flagship also identifies alternative raw materials and formulations in the event of supply bottlenecks.

“New Mobility & Energy Transition” flagship

The “New Mobility & Energy Transition” flagship provides strategic and technological support for the development of new products in the e-mobility and energy markets. The flagship focuses on new materials, and on manufacturing, test and simulation methods. Work in the year under review centered on battery components, such as the development of Quantix Ultra, an extremely heat-resistant material. Freudenberg is also expanding its expertise in the field of hydrogen, incorporating findings on the interaction between materials and hydrogen into materials development. The further development of fuel cell systems and components using data-driven methods is another focus of activities. In addition, Freudenberg Technology Innovation coordinates the Group’s participation in hydrogen technology standardization activities.

“Sustainable Materials & Processes” flagship

The “Sustainable Materials & Processes” flagship concentrates on bio-based raw materials, new recycling processes and efficient manufacturing methods. Freudenberg collaborates with various companies and institutes to identify recycling technologies and close material life cycles. Projects under this flagship help the Business Groups solve their challenges, for example regarding the search for alternatives to critical raw materials such as compounds with a high carbon footprint or restricted availability, including per- and polyfluoroalkyl substances (PFAS).

Selected innovations

Mobility and energy

Freudenberg Sealing Technologies launched a new sealing solution for e-mobility in 2023: an impermeable overmold for rectangular conductors that provides a reliable seal despite the challenging geometry and thus prevents associated damage to the power electronics. Another innovation from the Business Group protects the flanges of offshore wind turbines against the ingress of salt water and other environmental conditions.

High-voltage direct current transmission over long distances places high demands on cable manufacturers. Specially developed for this particular application, nonwoven tapes from **Freudenberg Performance Materials** protect the cables in a number of ways, thereby contributing to the more efficient and intensified use of renewable energies. The Business Group qualified for important energy infrastructure projects with this innovation.

Freudenberg e-Power Systems developed further solutions for battery and fuel cell systems for heavy-duty applications in 2023. The Business Group supports customers throughout the entire life cycle – from application development to manufacturing, commissioning and servicing of its systems. The Business Group developed a recyclable cathode material for battery cells. The new purpose-fit XRANGE battery pack meets high standards in terms of safety and range and can be installed in buses and trucks.

Products and solutions from the **Freudenberg Chemical Specialities** Business Group meet the challenges of new mobility:

One example is the new synthetic greases from **Klüber Lubrication** for various applications in electro-mechanical steering systems.

In e-mobility, aluminum is a popular metal for battery housings. However, its native corrosion protection is not sufficient when the battery is located in the underbody of the vehicle. **SurTec's** innovative trivalent chromium passivation technology improves the corrosion resistance of aluminum.

Release agents from **Chem-Trend** improve the efficiency of the wind turbine rotor blade production process and prevent the formation of fungus and deposits.

Freudenberg's **Vibracoustic** Business Group developed a battery pack isolation system for large body-on-frame electric vehicles, thus making a contribution to the electrification of pick-ups, off-road vehicles, large SUVs and light commercial vehicles. The system is designed to protect battery packs weighing up to 800 kilograms from unwanted loads and vibrations.

Freudenberg Oil & Gas Technologies developed the first all-electric metal-to-metal seal well head connector for land-based drilling and completion. The Vector E Connector meets the product design and performance specifications of the American Petroleum Institute. It is a safe and reliable well head connector for high pressures. Moreover, it can be operated remotely and in all electric mode, thus enhancing occupational safety.

New products and materials

The new spiderMaxx cassette filter from **Freudenberg Filtration Technologies** makes a significant contribution to more sustainability. The unique design has the positive effect of minimal flow resistance when installed in the air intake systems of gas turbines and compressors. The Business Group uses a new simulation tool developed in-house to optimize process speed and stability during the development of filter elements. The digital innovation fosters more efficient cross-functional development work and shortens the sampling and testing process.

Digitalization and miniaturization are global trends in the medical products industry. **Freudenberg Medical** developed a medically approved electrically conductive silicone compound enabling the integration of electronic components in the smallest spaces. In addition to its electrical and mechanical properties it also meets the aesthetic requirements of a medical product. The material is used in the mouthpiece of a product to treat mild sleep apnea. The mouthpiece stimulates the tongue muscle with minimal electric shocks and can help to reduce snoring.

The “EB Smart Seal” from **Eagle Burgmann** is a sealing solution with integrated sensor technology. This enables the measurement of operating conditions such as the temperature and pressure of mechanical seals, allowing even more accurate monitoring of the condition and operating performance of the seals. The Business Group flanks its product portfolio with digital services for its customers, such as predictive maintenance monitoring.

The wishes of end users and cleaning professionals are a valuable stimulus for **Freudenberg Home and Cleaning Solutions** when it comes to new developments: examples include the “Pet Pro” product series from **Vileda**, specifically designed to meet the needs of pet owners, or **Vileda Professional’s** EvoControl400 validated sterile cleanroom wipes. Furthermore, an innovation from **O-Cedar** helps wet mops give floors a powerful clean: small capsules containing plant-based enzymes dissolve when added to the water in the cleaning bucket and are safe to use around humans and pets.

Japan Vilene Company took a further step towards the circular economy and developed a mono-PET carpet for automotive interiors that is made from a single high-performance thermoplastic polymer rather than a mix of polymer fibers.

Prizes and awards

In the year under review, the Group presented the internal **Freudenberg Innovation Award** for the fourth time since 2014. The award honors outstanding commercialized product, process and service innovations from Freudenberg. The jury vetted 19 entries for their innovative achievement, customer and economic benefit, sustainability, and contribution to “Innovating Together”. The 2023 award went to Freudenberg Home and Cleaning Solutions for its new cleaning system RinseClean. The ingenious 2-tank bucket system to separate clean and dirty water fulfills an important demand made by customers.

Freudenberg also recognizes external innovative achievements, for example by presenting the **Karl Freudenberg Prize** for the promotion of young scientists in Baden-Württemberg. The prize is awarded annually in close cooperation with Heidelberg Academy of Sciences. The 2023 award was presented to Dr. Sylvain Delaunay for his work to prevent the spread of cancer cells.

In addition, a further prize, the **Freudenberg Award – Mobility**, was presented in December 2023. With this biennial award, the company honors scientific work by doctoral students at Karlsruhe Institute for Technology in the field of mobility systems. The award winners were Mr. Lucas Giroto de Oliveira (1st place), Ms. Yunying Zeng (2nd place), Mr. Peter M. Tröster and Ms. Anna Reiffer (both 3rd place).



A symbolic photo: The students who won the “Freudenberg Award – Mobility” with a statue of Pallas Athena, the goddess of wisdom, in the background.

REPORT ON ECONOMIC CONDITIONS

MACROECONOMIC ENVIRONMENT

Faced with persistently high inflation, several central banks throughout the world stepped up their restrictive monetary policy in 2023 and raised key interest rates to a level not seen for many years. The success of this strategy became increasingly obvious in the second half of the year even though inflation rates did not return to within the target corridors. Pressure from inflation and interest rates noticeably slowed economic activity. As a result, global gross domestic product (GDP) only grew 2.6 percent in the full year 2023.

In Europe, access to energy sources returned to normal. However, energy costs remained at a comparatively high level, worsening Europe's position in international competition. Challenges such as the transformation to a climate-friendly economy or the influx of refugees unsettled potential investors and private households. This was particularly apparent in Germany, with the country failing to live up to its role as an important economic driver in the region.

The US economy profited from the administration's decisive spending program, the robust labor market, and private savings remaining from the Corona period. This encouraged investment as well as private consumption. Brazil already began cutting interest rates in August as economic momentum remained high on the back of a record-setting harvest and a significant rise in oil exports.

In India, foreign investment and flourishing foreign trade bolstered economic growth against the negative effects of inflation and interest rates. Japan continued with its low interest rate policy despite marked rises in consumer prices. This weakened the domestic currency and facilitated export business. The Chinese government persevered with its plans for structural change in the domestic economy to move away from volume-driven and towards more pronounced technology-driven growth. However, China had to cut the key interest rate and shore up giant property developer Country Garden to meet its 5 percent GDP growth target.

EUROPE		
Region	GDP growth 2022	GDP growth 2023
Eurozone	3.3 %	0.5 %
Germany	1.9 %	-0.3 %
France	2.5 %	0.8 %
Greece	5.3 %	2.4 %
Ireland	9.4 %	-1.6 %
Italy	3.7 %	0.7 %
Portugal	6.5 %	2.2 %
Spain	4.7 %	2.3 %
United Kingdom	4.2 %	0.4 %

Sources: Consensus Inc., national statistical offices
GDP growth 2023: as at February 2024
GDP growth 2022: as at date reported in previous year

WORLD REGIONS		
Region	GDP growth 2022	GDP growth 2023
Argentina	5.3 %	-1.6 %
Brazil	2.9 %	3.0 %
China	2.9 %	5.2 %
India	6.9 %	6.9 %
Japan	1.2 %	1.9 %
Mexico	2.9 %	3.3 %
Russia	-2.2 %	2.6 %
Taiwan	3.1 %	1.2 %
USA	2.0 %	2.4 %

Sources: Consensus Inc., national statistical offices
GDP growth 2023: as at February 2024
GDP growth 2022: as at date reported in previous year

Sector-specific environment

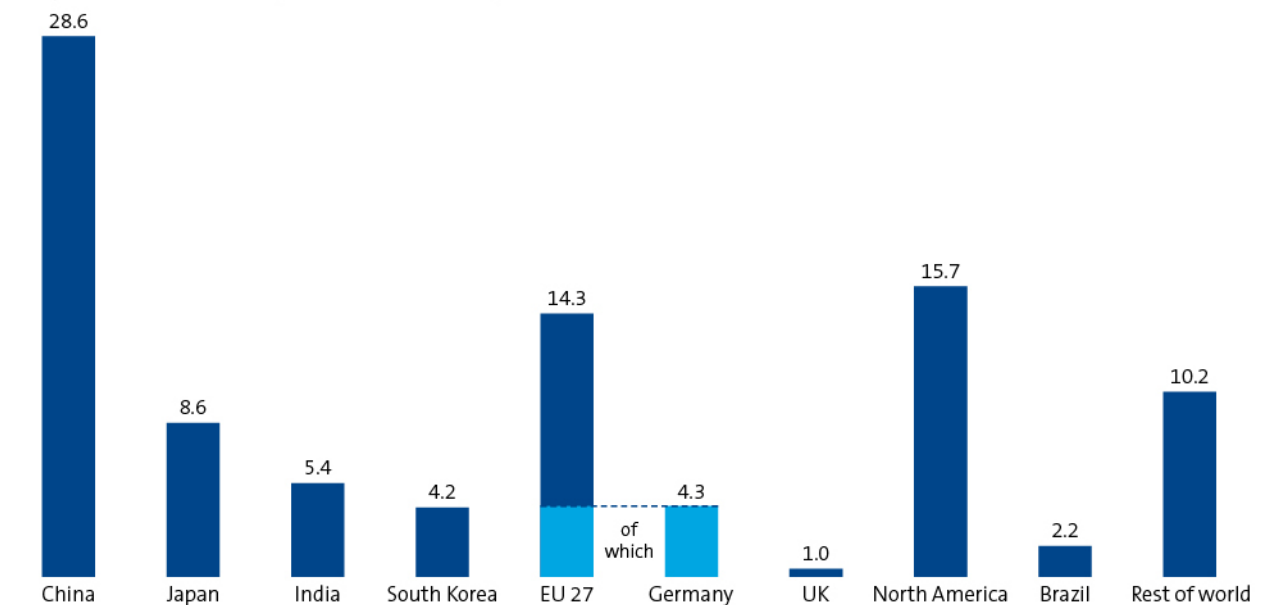
The changes in the macroeconomic environment also had an impact on the Freudenberg Group’s main sales markets.

Delivery bottlenecks in the **automotive industry** were in the main resolved during the course of 2023. As a result, the order processing and delivery backlogs accumulated in previous years were gradually eliminated. Despite declining demand, global production of light vehicles grew 9 percent year-on-year to just short of 90 million units. In the major manufacturing regions of China (9 percent) and North America (10 percent), growth came in close to the global average, while growth rates in the EU-27 (13 percent), United Kingdom (17 percent) and Japan (15 percent) were noticeably higher. India, which saw an enormous increase in 2020, still managed growth of more than 6 percent in the year under review. This contrasted with comparatively weak momentum of around 1 percent in Brazil (Source: IHS Markit). The share of all-electric vehicles in global production rose to 12 percent in 2023 and the share of high-voltage hybrid vehicles grew to 11 percent (Source: Globaldata).

The **mechanical engineering industry** also drew more on order backlogs from previous years in 2023 than on new orders placed during the year under review. Despite the need for investment in many areas, demand remained subdued and ultimately led to stagnating global production (0 percent). There was even negative growth in Germany (-1 percent), USA (-3 percent) and Japan (-10 percent). Positive growth momentum came primarily from China (2 percent) and India (9 percent) (Sources: VDMA, national statistical offices).

The downward trend in the **textile and apparel industry** continued in many regions. High inflation entrenched the reluctance to buy on the part of both private consumers and industrial customers. Global market leader China reported a return to slight growth in production towards the end of the year, but the annual average nevertheless edged into negative territory (-1 percent). The decline was much more striking in many other major economies: just short of 3 percent in India, 4 percent in Japan, 6 percent in the USA and also 6 percent in the EU-27 (Source: national statistical offices).

LIGHT VEHICLE DOMESTIC PRODUCTION
2023 production in million units (90 million units worldwide)



Source: IHS Markit, February 2024

Regional developments in the **construction industry** presented a very mixed picture. Production in the USA rose by a good 7 percent on the back of a robust labor market and government spending programs. The EU-27 saw stagnation (0 percent) after several years of growth – although developments in the member states varied significantly. Annual average production in China was 17 percent down on the level of the previous year. In contrast, production boomed in India, with growth running at 17 percent (Source: national statistical offices).

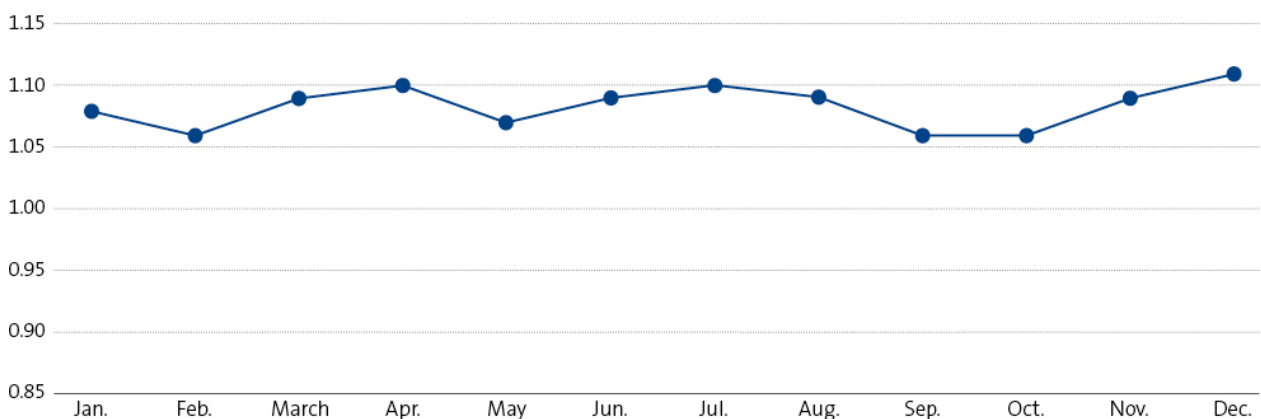
Development in the **medical technology industry** returned to normal in the wake of the pandemic and its aftermath. Momentum in the major manufacturing countries was somewhat subdued. Production in the USA grew by some 2 percent, in the EU-27 and in Germany each by some 3 percent (Source: national statistical offices).

Inflation and tougher financing conditions impacted **private consumption** in many countries. There were, however, significant regional differences. For the main part, however, the dynamic was noticeably lower than that of the gross domestic product (Source: national statistical offices).

The **oil price** was once again very volatile during the course of the year. Attention focused intermittently on OPEC’s strategy of throttling production. However, this strategy was not always applied consistently and was increasingly eclipsed by reduced demand due to the economic situation. The average annual price was US \$ 77.6 per barrel (WTI), just under 18 percent lower than the previous year (Source: Handelsblatt).

Following the sharp fall of the previous year, the annual average **euro exchange rate** only recovered slightly in 2023. At US \$ 1.08 per euro, it was some 2.9 percent above the previous year’s level (Sources: Deutsche Bundesbank / European Central Bank).

EURO EXCHANGE RATE DEVELOPMENT IN 2023
US dollar per euro



Source: European Central Bank; month-end rates

BUSINESS DEVELOPMENT AND POSITION

For Freudenberg, sales, operating result and return on sales are the key financial performance indicators. The key performance indicator of operating result describes the result before income tax without special effects (for example, significant restructuring expenses), the profit or loss on disposals of assets, impairment of goodwill, or results of major associated companies. The return on sales is calculated from the two key performance indicators of sales and operating result.

In its internal reporting, Freudenberg uses the LDIFR (Lost Day Incident Frequency Rate) as a non-financial key performance indicator. It measures all accidents at work with at least one day of work lost per million hours worked. The indicator also includes data for temporary employees and agency staff.

The forecasts made at the beginning of the year with respect to the financial and non-financial key performance indicators are regularly reviewed and updated in the course of the year. The financial and non-financial key performance indicators presented are made available to the Board of Management on a monthly basis. This allows trends and changes to be identified in good time so that measures can be taken to counteract any detrimental developments.

The key financial performance indicators are used for assessing business success, the position and development of the Group, and focus on sustainable growth and a continuous increase in enterprise value as indicators for steering future, value-driven success.

Our performance indicators developed as follows:

FORECAST/ACTUAL COMPARISON FREUDENBERG				
	ACTUAL 2022	Forecast for 2023	Change	ACTUAL 2023
Sales [€ million]	11,753.1	slightly above prior-year level	+1.3 %	11,902.8
Operating result [€ million]	941.8	slightly increased	+14.8 %	1,081.6
Return on sales [percent]	8.0	at prior-year level	+1.1 % points	9.1
LDIFR [LDI per million hours worked]	1.8	at prior-year level	-0.4	1.4

At €11,902.8 million, sales were slightly higher than the prior-year level of €11,753.1 million, and as a result the forecast development was met. The increase despite challenging market conditions is mainly attributable to the continued positive effects of sales prices and positive effects from acquisitions.

At €1,081.6 million, the operating profit was noticeably higher than the prior-year level of €941.8 million and therefore above the forecast development. The rise is attributable to positive price effects as well as a slight year-on-year reduction in material and energy costs.

Once more, one focus at all levels of the company in the 2023 financial year lay on occupational safety. Measures in this area in 2023 again concentrated on rules for correct conduct and designing safe work systems. The internal Safety Boost initiative also continued in 2023. Under this initiative, occupational safety activities are continually intensified and focused. The further development of site safety culture at cross-Business Group level was strengthened. Progress in this regard is documented by the Group's lower accident rate, with most Business Groups recording an improvement in 2023. The LDIFR in the 2023 financial year was 1.4 (previous year: 1.8), slightly better than the forecast development.

Sales

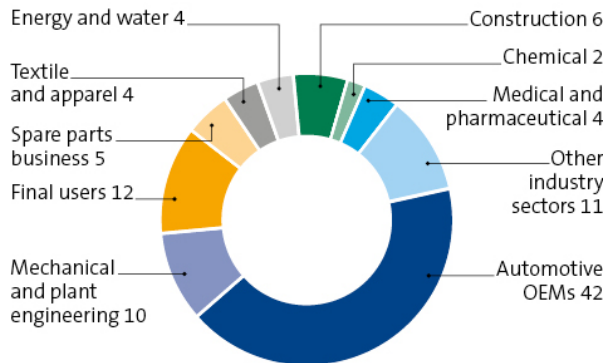
Freudenberg aims for profitable growth achieved both through its own efforts (organic) and through acquisitions (external). Key success factors are, in particular, the innovative product range, customer-oriented, flexible solutions to problems in the different sectors of industry, and structured expansion into attractive markets and strategic business areas.

In the 2023 financial year, Freudenberg generated sales of €11,902.8 million (previous year: €11,753.1 million). Exchange rate effects totaling €316.0 million had a negative effect on sales. These effects were primarily attributable to developments in the exchange rates of the US dollar and the Chinese renminbi. Positive developments in the exchange rate of the Mexican peso had an offsetting effect. Acquisitions in the year under review accounted for sales of some €46.9 million. Disinvestment effects amounted to some €1.8 million. This includes sales of acquired or disinvested companies for the period until they are included or not included, as the case may be, in the consolidation of the Freudenberg Group for a full twelve months.

Sectors and regions

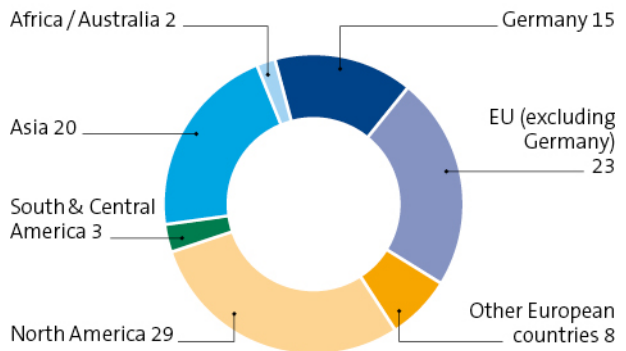
Sales distribution by sectors remained generally stable in the 2023 financial year. The share of sales to automotive OEMs rose slightly to 42 percent (previous year: 39 percent). In contrast, there was a year-on-year decrease of one percent in each of the following sectors: other industry with a share of 11 percent, textile and apparel with a share of 4 percent, and chemical with a share of 2 percent. There was no change in the share in total sales compared with the previous year for the remaining sectors.

SALES BY SECTOR [in %]



The North America region accounted for 29 percent of total sales (previous year: 29 percent). Freudenberg generated a share of 23 percent (previous year: 23 percent) of total sales in the European Union excluding Germany. The Asia region accounted for 20 percent (previous year: 21 percent) of total sales.

SALES BY REGION [in %]



Earnings position

[€ million]	2022	2023
Sales	11,753.1	11,902.8
Cost of sales	-8,259.5	-8,195.2
Gross profit	3,493.6	3,707.6
Selling expenses	-1,535.7	-1,584.3
Administrative expenses	-702.5	-731.7
Research and development expenses	-506.6	-524.7
Other income and expenses	51.6	82.5
Income from participation in joint ventures	23.3	23.4
Profit from operations	823.7	972.8
Financial result	33.3	50.8
Profit before income taxes	857.0	1,023.6
Income taxes	-217.4	-192.8
Consolidated profit	639.6	830.8

At €11,902.8 million, sales in 2023 were above the level of the previous year. Gross profit rose by 1.4 percent. The selling expenses ratio increased to 13.3 percent and the administrative expenses ratio to 6.1 percent.

The ratio of research and development expenses to sales rose by 0.1 percentage points to 4.4 percent compared with the previous year. The research and development expenses reflect the continued growth in battery cell and fuel cell business.

The financial result rose by €17.5 million compared with the previous year, chiefly as a result of the rise of €29.7 million in other investment result; this was partly offset by the fall of €6.4 million in the pro rata share in the results of associated companies.

The consolidated profit was €191.2 million higher than the figure for the previous year.

Financial position

Financing management

Freudenberg SE and the central financing company Externa Handels- und Beteiligungsgesellschaft mit beschränkter Haftung, Weinheim, Germany, steer all the financing activities of Freudenberg, thus ensuring that Freudenberg has sufficient liquid funds. As a general principle, companies obtain the financing they require via cash pool agreements or internal loans – for legal, fiscal and other reasons, financing in some countries also takes the form of bank loans guaranteed by Freudenberg SE.

Freudenberg does not expose itself to financial risks through speculation with derivative financial instruments but uses such instruments only for hedging, and therefore reducing, risks in connection with underlying transactions and items. Future transactions are only hedged if there is a high probability of occurrence. In order to ensure the identification and management of all financing risks, the Freudenberg Group pursues a holistic approach to financial risk management. The existing financial risks are identified and limited in an institutionalized control loop.

Exchange rate risks on currency markets remain high. In addition, there continues to be volatility on the credit and capital markets. This also impacts the financing conditions for industrial companies. In the opinion of the Board of Management, Freudenberg is in a good position to tackle these challenges thanks to its conservative finance policy. Liquidity measures include high reserves of liquid funds and committed credit lines with core banks. Liquid funds are always invested on the basis of internal directives. These call for the risk-based, limit-oriented diversification of financial investments between issuers with an investment grade rating and for investment only for short terms.

A key element in external borrowing is a long-term shareholder loan where the interest payable is oriented towards market interest rates for the same terms plus a premium.

As at December 31, 2023, Freudenberg had undrawn committed credit lines amounting to about €815 million. The interest payable on the certificates of indebtedness (“Schuldscheindarlehen”) included in the liabilities to banks is based on variable and fixed components. Further details on interest rate structure can be found in the section on interest rate risks in the Notes to the Consolidated Financial Statements.

In the year under review, Moody’s Deutschland GmbH, Frankfurt am Main, Germany, rated Freudenberg SE, Weinheim, at “A3”, with a stable outlook. The Group therefore continues to hold a single-A rating.

This gives Freudenberg very good creditworthiness at investment grade level.

STATEMENT OF FINANCIAL POSITION STRUCTURE				
	Dec. 31, 2022	Dec. 31, 2023	Change	
	[€ million]	[€ million]	[percent]	[€ million]
Assets structure				
Non-current assets	7,299.0	7,307.7	0.1%	8.7
Current assets	5,851.9	6,131.5	4.8%	279.6
Assets	13,150.9	13,439.2	2.2%	288.3
Capital structure				
Equity	7,108.0	7,536.1	6.0%	428.1
Non-current liabilities	2,558.5	2,457.2	-4.0%	-101.3
Current liabilities	3,484.4	3,445.9	-1.1%	-38.5
Equity and liabilities	13,150.9	13,439.2	2.2%	288.3

Capital structure

In the 2023 financial year, the statement of financial position total rose by €288.3 million. The **equity ratio** increased from 54.0 percent to 56.1 percent. **Equity** rose by €428.1 million. This increase is chiefly due to the positive consolidated result. It was partly offset by actuarial losses and dividend payments to the parent company Freudenberg & Co. KG and holders of non-controlling interests.

Non-current liabilities amounted to €2,457.2 million (previous year: €2,558.5 million). This development was chiefly due to a reduction of €77.5 million in long-term financial debt; it was partially offset by the rise in provisions for pensions and similar obligations from €604.9 million in the previous year to a total of €655.6 million. The reason for this development was the use of a lower interest rate for calculations, resulting in actuarial losses.

The €38.5 million fall in **current liabilities** to €3,445.9 million was chiefly the result of the decrease in trade payables and short-term financial debt. This was partially offset by increased short-term other provisions.

Adjusted for exchange rate effects and changes in the consolidated group, non-current liabilities fell by 3.5 percent, while current liabilities decreased by 1.7 percent. As regards the currency structure, reference is made to the currency risk section of the Notes to the Consolidated Financial Statements.

Investments

Adjusted for acquisitions, investments in intangible assets, tangible assets and investment properties amounted to €452.7 million (previous year: €401.5 million).

The Freudenberg Group invested worldwide. Freudenberg e-Power Systems continued to invest in the expansion of its manufacturing and production facilities for battery systems at Midland, USA. At Parets des Valès in Spain, Freudenberg Sealing Technologies commissioned its new plant to manufacture elastomer products for the automotive industry. In Morinda, India, investments were made in the construction of a new production plant for the Vibracoustic Business Group and the Freudenberg-NOK India Joint Venture. The Vibracoustic Business Group expanded its tube production and assembly capacities for the air spring division in China and Mexico.

Investments in Germany totaled €174.1 million (previous year: €144.3 million). In Germany, too, Vibracoustic made further investments in tube production. Freudenberg Performance Materials commissioned its new plant for gas diffusion layers (a key component of fuel cells) at its Weinheim location and also expanded production capacities for fuel cell applications in Weinheim. EagleBurgmann started work on the construction of a new research and development center in Wolfratshausen and continued projects for the modernization, automation and digitalization of the production of mechanical seals and other products at Eurasburg. Freudenberg Medical invested in the development of the new production location for Hemoteq in Alsdorf.

Investments planned for 2024 are likely to be financed from cash flow from operating activities and to have no major effect on net assets.

Liquidity

Cash flow from operating activities in the 2023 financial year amounted to €1,403.7 million, corresponding to an increase of €796 million compared with the previous year. This rise was chiefly due to a significant increase in profit before tax and a decrease in working capital.

As a result of higher cash outflows for investments in tangible assets as well as acquisitions, there was a higher negative **cash flow from investing activities** of €-515.3 million (previous year: €-434.2 million).

Cash flow from financing activities in the year under review was €-415.6 million (previous year: €-522.2 million). The cash outflows mainly concerned the repayment of financial debts.

On the basis of the assessment of the Board of Management, the Group can meet all of its payment obligations without any restrictions.

Assets

The total assets of Freudenberg increased by €288.3 million to €13,439.2 million (previous year: €13,150.9 million).

Non-current assets increased slightly from €7,299.0 million to €7,307.7 million. This development was chiefly due to a rise in tangible assets and deferred tax assets. These increases were partially offset by the falls in intangible assets and financial assets. Adjusted for exchange rate effects and changes in the consolidated group, non-current assets increased by €119.4 million.

Current assets rose by €279.6 million to €6,131.5 million. This rise was due chiefly to an increase of €409.5 million in cash and cash equivalents. The increase was partially offset by a fall of €106.8 million in inventories and €63.3 million in short-term receivables. Adjusted for exchange rate effects and changes in the consolidated group, current assets rose by a total of €470.8 million.

Overall assessment

The 2023 financial year was shaped by a difficult economic and geopolitical environment chiefly affected by the consequences of the war in Ukraine and persistent high inflation. Nevertheless, both the sales and the operating result of the Freudenberg Group were above the level of the previous year. The Business Groups benefited from higher sales prices. On the other hand, exchange rate effects had a negative impact.

As in previous years, Freudenberg continued to invest in the future viability of the Group in 2023. In addition to customer orientation, key strategic topics were the transformation in mobility, digitalization and sustainability. Special mention should be made of investments in the battery and fuel cell business. Freudenberg aims for profitable growth which may come both from its own resources and from acquisitions. In a volatile environment and especially in times of crisis, it is beneficial to be a broadly diversified company. We continue to aim for a balanced portfolio of cyclical and non-cyclical business with sales distributed evenly between North and South America, Europe and Asia. Against this backdrop, we strengthened various Business Groups through acquisitions in the year under review. The liquidity situation of Freudenberg remains solid.

Furthermore, occupational safety continued to be one of the main focuses of the Group in the 2023 financial year. To ensure continuous improvement, development work continued on existing measures and innovative approaches were added. In the year under review, the non-financial performance indicator LDIFR was 1.4 (previous year: 1.8).

Against the backdrop of our solid net assets and financial position and our high-earnings business, our overall assessment of the economic position of the Group is positive.

REVIEW OF OPERATIONS BY BUSINESS AREA

The Freudenberg Group's eleven Business Groups are divided into four Business Areas: "Seals and Vibration Control Technology", "Technical Textiles and Filtration", "Cleaning Technologies and Products", and "Specialties". They focus on long-term, sustainable and profitable growth.

Together with its partners, customers and the world of science, the Freudenberg Group aspires to develop cutting-edge products, excellent solutions and services for some 40 market segments and thousands of applications in the spirit of the positioning that reads "Freudenberg is a values-based technology group that best serves its customers and society".

Seals and Vibration Control Technology Business Area

In the year under review¹⁾, the Seals and Vibrations Control Technology Business Area comprised the following Business Groups:

- Freudenberg Sealing Technologies (from page 31)
- Freudenberg Oil & Gas Technologies (from page 34)
- EagleBurgmann (from page 36)
- Vibracoustic (from page 39)

Sales in this Business Area amounted to €6,301.5 million (previous year: €5,979.7million). The headcount at the close of the financial year was 29,748 (previous year: 29,698).

Technical Textiles and Filtration Business Area

In the year under review, the Technical Textiles and Filtration Business Area comprised the following Business Groups:

- Freudenberg Performance Materials (from page 42)
- Freudenberg Filtration Technologies (from page 45)
- Japan Vilene Company (from page 48)

In total, the Business Area generated sales of €2,587.7 million (previous year: €2,760.2 million) in the last year. At year-end 2023, the headcount was 11,026, compared with 10,943 at the end of the previous year.

Cleaning Technologies and Products Business Area

In the year under review, the Cleaning Technologies and Products Business Area comprised the following Business Group:

- Freudenberg Home and Cleaning Solutions (from page 50)

Sales in this Business Area amounted to €1,240.7 million (previous year: €1,285.4 million). The headcount at the close of the financial year was 3,682 (previous year: 3,300).

Specialties Business Area

In the year under review¹⁾, the Specialties Business Area chiefly comprised the following Business Groups:

- Freudenberg Chemical Specialties (from page 53)
- Freudenberg Medical (from page 56)
- Freudenberg e-Power Systems (from page 59)

Overall, the companies in this Business Area generated sales totaling €2,022.2 million (previous year: €1,989.6 million). At year-end 2023, the headcount was 7,785, compared with 7,521 at year-end 2022.

¹⁾The Freudenberg e-Power Systems Business Group was included as part of the Seals and Vibration Control Technology Business Area in 2022. The prior-year figures were adjusted to take account of inclusion in the Specialties Business Area in the year under review.

FREUDENBERG SEALING TECHNOLOGIES



	2022	2023
Sales [€ million]	2,455.5	2,554.2
Workforce	13,384	13,163

Freudenberg Sealing Technologies employees in Reichelsheim with overmolds for rectangular busbars

Business Group profile

Freudenberg Sealing Technologies is a long-standing technology expert and global market leader for demanding and novel sealing technologies for applications in several different industries, and in particular in e-mobility and renewable energies.

With its unique materials and technology expertise, the company is a proven supplier for high-quality and complex products, as well as a development and service partner to customers in the automotive industry and in general industries.

The Corteco brand is a specialist for the independent automotive spare parts market.

Business development (summary)

- Challenging market environment – inter alia due to rising costs, geopolitical crises and an incipient recession in some sub-markets
- Business Group nevertheless grew sales year-on-year
- Freudenberg Sealing Technologies grew business in Europe, North America and India
- Freudenberg Sealing Technologies business in China again below expectations

Business development (in-depth)

Market conditions for the Business Group in 2023 were challenging. The year was shaped by high inflation-driven increases in wage and salary costs and the cost of materials, geopolitical crises, an incipient recession in some sub-markets, and the transformation in the automotive industry and the energy sector.

Freudenberg Sealing Technologies reported satisfactory business development in 2023 in spite of all the challenges. Overall, the Business Group saw slight sales growth compared with the previous year.

Europe and North America recorded year-on-year sales growth of 4 percent, respectively 5 percent. At minus 9 percent, business in China was below expectations. Although there was positive development in demand on the automotive market, business in industry segments, particularly the construction sector, came under strong pressure. In India, on the other hand, sales grew 9 percent year-on-year.

Key events

- Further realignment of portfolio following analysis of core markets
- Innovations, for example for electric vehicles and offshore wind turbines
- Numerous awards – including accolades as outstanding supplier and top employer

In 2022, Freudenberg Sealing Technologies conducted an in-depth analysis of its core markets and industries covering the period until 2035: against the backdrop of expected market changes, the analysis focused on the shape of the transformation the company must undergo in order to respond to new trends and to be a player in technological developments in the target markets. Based on the findings, the company will continue to realign its portfolio over the coming years, with the emphasis on new products and applications in defined focus areas. Even though many of these products are no longer classic seals, Freudenberg Sealing Technologies nevertheless sees opportunities in terms of its materials and technological competence.

Organizational changes within Freudenberg Sealing Technologies were defined in order to leverage the identified growth potentials. The company's divisional structure is to be streamlined effective January 1, 2024: the present "Oil Seals Powertrain & Driveline" and "Oil Seals Industry" divisions are to be combined to form the new "Dynamic Sealing" division. The present "Gaskets" and "O-Rings" divisions are to be combined to form the new "Static Sealing" division.

As a further outcome of the analysis project, dedicated incubator teams have been set up to concentrate specifically on the new technologies and develop products to market maturity.

Freudenberg Sealing Technologies launched several product innovations in the year under review:

One example is an impermeable rectangular busbar overmold that seals reliably and helps prevent damage to an electric vehicle's power electronics. The solution also reduces assembly complexity by combining the busbars, seal and guide in one complete package that is ready for installation on the vehicle assembly line. The new product was showcased for the first time at the Battery Show in Detroit, Michigan, USA, in 2023.

Plastic parts installed near the battery of an electric vehicle must be flame resistant and must not lose their original geometry. Freudenberg Sealing Technologies therefore developed Quantix Ultra – a new class of plastic materials. Quantix Ultra can withstand the stress test for 20 seconds. More specifically, Quantix Ultra can be used for the busbar overmolds described above.

A further innovation from the Business Group protects the flange of protect offshore wind turbines from the ingress of water.

Low-friction seals ensure that engines and machines run with greater energy efficiency. Freudenberg Sealing Technologies wants to live up to its responsibility as a manufacturer of such seals and is now developing a method to determine the carbon footprint from the production of seals and other components.

The Business Group was again recognized with various awards in the year under review:

Freudenberg Sealing Technologies in Santa Ana, California, USA, was recognized with the “Performance und Platinum Award” from aerospace manufacturer Pratt & Whitney for achieving the highest standard in industrial excellence. Only 15 suppliers were honored with this award in 2023.

For the sixth year in a row, Freudenberg Sealing Technologies in Plymouth, Michigan, USA was honored with a “Top Workplace Award”. Once again, employees’ positive responses to a survey conducted in a competition organized by Detroit Free Press ranked the company as one of the top places to work in the US State of Michigan.

The British engine manufacturer Perkins Engines recognized Freudenberg Sealing Technologies for its outstanding performance for the seventh time in a row, honoring the company with its highest accolade – the “Supplier Excellence Recognition Award”.

The Freudenberg Sealing Technologies facility in Chennai, India, was recognized by two external organizations for its achievements in both occupational safety and maintenance.

Location changes

The Freudenberg-NOK India joint venture is building a new production facility in Morinda, northern India. Commissioning is scheduled for the end of 2024 and the new plant will take over from the present operation in Basma. Sustainability plays an important role in this construction project: a photovoltaic system will be installed on the available roof area and fully-insulated buildings will be standard at the new facility.

Freudenberg Sealing Technologies moved into a new factory in Parets del Vallès, Spain, at the end of 2023. Construction work begun in 2022 has now been concluded. The plant has 6,600 square meters of floor space, with production taking up 3,700 square meters, warehousing accounting for 1,600 square meters, and 1,300 square meters being used for offices. The new facility is one of the most modern and sustainable production plants operated by the company.

Furthermore, in March 2023 Freudenberg Sealing Technologies commenced operations at a new production factory in Changchun, northern China, after an 18-month construction period. The 20,000 square meter facility brings together the two previous plants under one roof and with seal manufacturing focusing on the automotive industry, in particular new mobility.

In October 2023, the Accumulator Division opened a modern manufacturing complex – also located in Changchun – to meet growing demand for accumulator solutions from customers in the automotive, wind power, construction machinery and hydraulics industries in China. The complex covers an area of about 8,500 square meters and will significantly increase production capacity.

FREUDENBERG OIL & GAS TECHNOLOGIES



	2022	2023
Sales [€ million]	97.5	104.0
Workforce	398	404

Shining bright: a smiling Freudenberg employee and a gleaming Vector E Connector

Business Group profile

Freudenberg Oil & Gas Technologies is a global solutions provider of critical sealing and connector solutions, niche products and services for the global energy market, including the oil and gas, alternative energy and flow control market segments. The products are used within drilling, extraction and the processing of oil and gas, enabling power generation from geothermal, tidal and solar sources.

Freudenberg Oil & Gas Technologies designs and supplies products, technologies, and services to a wide range of customers – including oil and gas producers, original equipment manufacturers as well as engineering and service companies that in turn provide technology, equipment and services for oil and gas production, energy generation facilities and pipeline applications. The Business Group has a material and product testing facility in Houston, Texas, USA and has manufacturing and service centers in Canada, Malaysia, Norway, Singapore, the United Kingdom, the United Arab Emirates and in the United States of America.

Business development (summary)

- Upstream sector continued recovery in 2023
- However, market level still noticeably down versus 2019 level
- OPEC+ countries cut production quotas in September 2023
- Sales development of Freudenberg Oil & Gas Technologies better than expected
- Growth in “Connectors” business unit

Business development (in-depth)

Recovery in the upstream sector of the oil and gas industry continued in 2023. Overall investments in this sector were 13 percent up on the 2022 level.

Measured by the total number of drilling rigs in operation globally, activity grew some four percent year-on-year, however, the level is still some 17 percent lower than the pre-COVID-19 level in 2019.

Throughout 2023, oil and gas supply was actively managed by the OPEC+ countries. In September, OPEC+ cut production quotas due to a slowing global economy and the resulting drop in oil consumption.

Sales development by the Business Group was better than expected. Growth in the “Connectors” business unit is especially notable. This is in part due to the increase in offshore project development and continued market diversification efforts resulting in sales in sectors such as “chemical processing”, “refining”, “geothermal”, and “solar energy”.

Key events

- Focus on product and market diversification in all three strategic business units
- Product approvals from key customers
- Organizational change announced

In the year under review, Freudenberg Oil & Gas Technologies continued to focus on product and market diversification in all three strategic business units, which resulted in new product commercialization and market share growth.

The “Engineered Seals” unit worked with a customer in the year under review to qualify the Business Group’s FKM 030 elastomer seals for pressures up to 10,000 psi. Additionally, Freudenberg Oil & Gas Technologies worked with multiple wellhead original equipment manufacturers to qualify the Business Group’s proprietary spring seals to the new requirements of the American Petroleum Institute. Both applications are anticipated to support sales growth in the coming year.

In the “Connectors” unit, Freudenberg Oil & Gas Technologies continued with its strategy to bring its offshore and subsea products onto land-based applications. One example is the new Vector E Connector, a well head connector that can be operated remotely.

In the year under review, the Freudenberg Group announced the founding of a new Business Group named Freudenberg Flow Technologies effective January 1, 2024. It consists of the two previous Business Groups of EagleBurgmann and Freudenberg Oil & Gas Technologies as strategic business units. Freudenberg Oil & Gas Technologies will operate in the market as Freudenberg Flow Technologies from January 1, 2024.

EAGLEBURGMANN



	2022	2023
Sales [€ million]	917.7	964.7
Workforce	5,883	5,897

Seals from EagleBurgmann are inspected with a keen eye for excellence.

Business Group profile

EagleBurgmann is one of the leading international manufacturers of industrial sealing technology. The Business Group develops, manufactures and markets a broad range of high-quality products for pumps, compressors, agitators and special equipment. These sealing solutions are used where safety and reliability are most important, for example, in the (petro-)chemical industry and refineries, the pharmaceutical as well as the food processing industry, power plant technology or water applications.

A dense sales and service network ensures the best possible customer proximity and is complemented by digital offerings.

Business development (summary)

- EagleBurgmann again global market leader in first fit market
- Stable growth in original equipment manufacturer market and aftermarket
- EagleBurgmann again reports high order intake

Business development (in-depth)

EagleBurgmann once again expanded its position as the global market leader in the first fit market (business with original equipment manufacturers). The Business Group thus laid the groundwork for robust development in the profitable aftermarket business with services and spare parts. In the year under review, EagleBurgmann reported further stable growth in both the first fit market and the aftermarket.

The company saw high sales growth in 2023, mostly in the pump and compressor product ranges. Furthermore, the Business Group was particularly successful in the core market segments of “refinery” and “pharmaceuticals”, recording double-digit growth rates in these sectors. Performance in other market segments such as “food & beverage”, “chemicals”, and “energy” underpinned the positive business development.

The Business Group’s order intake for the full year was again high and therefore built on the successes of previous years.

The main challenges in the 2023 financial year were the tense situation on global raw material and supplier markets and exchange rate fluctuations.

Key events

- Several new contracts in the “Major International Projects” business area
- Further automation of manufacturing processes

In parallel with the digital sales channels, EagleBurgmann also offers products and services under Business Group’s digital transformation strategy. One performance package is the Smart Seal Sensor product line. Intelligent product packages fitted with sensors enable EagleBurgmann customers to digitally monitor the operating parameters of mechanical seals, visualize their performance and process data on web-based platforms. Successful projects in this context include installing this smart technology along the pipeline network of a Canadian energy infrastructure company.

EagleBurgmann concluded several new contracts in the important “Major International Projects” business area. In Saudi Arabia, EagleBurgmann was awarded

the contract for first installation of the NEOM Green Hydrogen Project. The plant will produce carbon-free hydrogen from ammonia. Saudi Arabia is seeking to position itself as a market leader for climate-neutral energy production with projects like this.

Also in the Middle East, EagleBurgmann secured the contract for first installation at the “Borouge 4” petrochemical complex. The fourth expansion stage of this complex will produce 11 million tonnes of plastic per year.

In Europe, the company won a major order from the consortium that operates a Transalpine oil pipeline to transport energy from the port of Trieste to refineries in the heart of Europe.

Activities under the EagleBurgmann “Complexity Management Program” include the automation of manufacturing processes at production locations. The aim is to save costs, increase flexibility and counteract bottlenecks in raw materials and manufacturing capacity thanks to shorter delivery times.

With regard to personnel development and corporate culture, EagleBurgmann believes that workforce diversity is a key success factor. One example of the activities and communication campaigns under the diversity strategy is a network for women.

In the year under review, the Freudenberg Group announced the founding of a new Business Group named Freudenberg Flow Technologies effective January 1, 2024. It consists of the two previous Business Groups of EagleBurgmann and Freudenberg Oil & Gas Technologies as strategic business units. EagleBurgmann’s branding will remain unchanged.

Location changes

Construction of a new research and development center at EagleBurgmann headquarters in Wolfratshausen, Germany, has begun. From 2024, the new building will have space for 330 employees. The technologies installed will include geothermal heat pumps and photovoltaic arrays.

A major project for the future continued at EagleBurgmann's largest manufacturing location in Eurasburg, Germany. Over the period up to 2027, production of mechanical seals and other products is to be modernized, automated and digitized.

VIBRACOUSTIC



	2022	2023
Sales [€ million]	2,509.0	2,678.6
Workforce	10,033	10,284

A steady stream of customized components and solutions for the automotive industry – courtesy of Vibracoustic

Business Group profile

Vibracoustic is a global leading NVH (noise, vibration, harshness) expert for the automotive industry and provides customized solutions that offer more comfort, while contributing to efficiency, safety and the operating life of vehicles. Thanks to its know-how throughout the entire product life cycle and in all vehicle systems, as well as its broad product portfolio, Vibracoustic provides solutions to current and future NVH challenges in all vehicle segments.

With a global network of production and engineering sites, the Business Group supplies components to almost all light and commercial vehicle manufacturers as well as their direct suppliers worldwide.

Business development (summary)

- Challenging market environment for Business Group persists
- Recovery in global vehicle production remains subdued
- Vibracoustic growth above plan
- New business in all regions, customer groups, vehicle segments and product groups

Business development (in-depth)

As in previous years, the automotive industry faced major challenges in the year under review. Issues such as supply chain bottlenecks alongside higher personnel costs and rising material costs created a challenging market environment.

Moreover, recovery in global vehicle production remained subdued; it is not expected to return to the 2017 level before 2027.

In the year under review, all Vibracoustic sites concentrated on alleviating this pressure by controlling costs and adjusting prices.

Business Group growth in 2023 was above plan and Vibracoustic saw positive development in most regions, customer groups, vehicle segments and product groups. As a result, the order situation improved.

Key events

- New structure with four business units came into effect at beginning of 2023
- Investment in developing new TechCenter and vulcanization plant in Morinda, India
- Numerous product innovations, such as new bracket for air spring compressors specially developed for battery electric vehicles

At the beginning of 2023, Vibracoustic expanded its organizational structure from two to four business units. The four business units are “Mounts”, “Air Springs”, “Damping and Decoupling”, and “Commercial Vehicles”.

The Business Group launched solutions for some product groups in the year under review. These include solutions for electric vehicles from German, US and Chinese premium brand carmakers, electric commercial vehicles from European manufacturers, large SUVs and commercial vehicles from US customers, and compact cars from European carmakers.

Global investments by Vibracoustic in 2023 included technical infrastructure for the plant in Morinda, India, that will support Vibracoustic’s rubber-to-metal business. The Business Group also made investments in manufacturing and assembly capacities for sleeve production in Hamburg (Germany), Wuxi (China), and Lerma (Mexico), to support further growth in the “Air Springs” business unit.

Furthermore, Vibracoustic launched product innovations, such as a new bracket for air spring compressors specially developed for battery electric vehicles. This tunable bracket for the air supply unit (which carries the compressor) improves NVH (noise, vibration, harshness) performance with radial and axial damping. It provides reduced weight and complexity and reduces the resonance caused by the compressor excitations.

Other innovations include an encapsulation and mounting solution for the electric refrigerant compressors found in electric vehicles. The encapsulated eCompressor bracket provides substantial NVH improvements over conventional mounts while also improving compressor protection and efficiency.

The Business Group also launched two networks for employees in 2023: “Women@Vibracoustic”, a network focusing on fostering gender diversity within the organization, and “Pride@Vibracoustic”, a network aimed at creating a safe and open environment for all employees irrespective of their sexual orientation or gender identity.

Location changes

Vibracoustic continuously reviews the long-term structure of its worldwide network and its organization in order to maintain its global competitiveness in the face of growing challenges in the marketplace.

For this reason, the Business Group announced in November 2023 that it had decided to consolidate the European TechCenters in the “Mounts” business unit and set up a leading TechCenter in Nantes, France. Under the consolidation process, it is planned to relocate all test and prototyping functions in the “Mounts” business unit currently located in Weinheim and Hamburg, both Germany, to Nantes, France.

It is also planned to relocate some product engineering activities in the “Mounts” business unit from Germany to India.

FREUDENBERG PERFORMANCE MATERIALS



	2022	2023
Sales [€ million]	1,571.5	1,427.7
Workforce	5,058	5,071

Hands-on excellence: Dripstop, a product developed by Freudenberg, makes condensation control on uninsulated metal roofs simpler and more economical.

Business Group profile

Freudenberg Performance Materials is a leading global supplier of innovative technical textiles for a wide range of markets and applications, including automotive, construction, apparel, energy, filter media, healthcare, building interiors, shoe and leather goods, as well as special applications.

Business development (summary)

- Challenging environment for most Freudenberg Performance Materials segments
- The “Building Materials”, “Apparel”, “Coated Textiles” and “Carpet” segments particularly affected by sales downturn
- Positive impact of cost management and lower material and energy costs
- Demand for gas diffusion layers for fuel cells remained high

Business development (in-depth)

Sales by Freudenberg Performance Materials in the year under review were down on the previous year, mainly due to lower volumes.

The general market environment was characterized by a persistently high level of uncertainty attributable to factors such as geopolitical risks, high inflation, and rising interest rates. Demand for products from Freudenberg Performance Materials was also affected by high customer inventory levels. The drop in sales was particularly pronounced in the “Building Materials”, “Apparel”, “Coated Textiles” and “Carpet” segments.

Cost management as well as lower material and energy costs had a positive impact on the business performance of Freudenberg Performance Materials.

The “Apparel” segment felt the effects of weak demand in 2023. One possible reason for this is the general rate of inflation for consumers. Demand in many regions was down on prior-year levels. This was exacerbated by high customer inventory levels, and affected functional and high-performance sportswear in particular.

The high price and interest levels impacted the construction sector. The business situation for Freudenberg Performance Materials was tense. Both sales and demand were down on the previous year.

Demand for technical textiles in the automotive market in Europe showed a slight improvement compared with the previous year. Business in the Asia region failed to match the previous year.

Demand for carpet components in the year under review presented a mixed picture as regards both regions and market segments: demand for carpet tiles in the construction sector in Europe and North America did not match the prior-year levels. The Asia region was the only region to report slight growth.

Demand in the global “Healthcare” market segment remained high in the 2023 financial year. Customers were able to expand their market shares, and Freudenberg Performance Materials business also benefited from this trend.

Demand for filter media in the filtration market was below expectations in the year under review. In a challenging market environment, business was down on the prior-year level, particularly with regard to liquid filtration media business in Asia.

Business in the “Coated Technical Textiles” segment was also down on the previous year, particularly in the “Boat & Pool” segment. Furthermore, business in the core segment of truck tarpaulins also failed to meet expectations.

The “Condensation Control” segment recovered from a weak second half of 2022 at the beginning of the year under review and benefited from low steel prices. In addition, progress was made in segment globalization.

Demand for gas diffusion layers for fuel cells remained high in the period under review and business in the “Fuel Cell Components” segment saw a significant year-on-year increase. This segment now serves numerous players in various regions across the value chain. However, it is clear that customers and business partners are concerned about the technological uncertainty in this market and that long-term planning is therefore challenging.

Demand in the market for sports footwear components continued to flatten throughout the period under review. This is in part attributable to persistently high inventory levels.

Key events

- Line for 3D mats in Changzhou, China, starts production
- New facility for gas diffusion layers commissioned

A new line for EnkaMat products was commissioned at the facility in Changzhou, China. Production commenced in July 2023. EnkaMats are 3D mats with reinforced fabric for erosion protection.

A new facility for the production of gas diffusion layers was commissioned in Weinheim, Germany. In addition, production capacities in Weinheim are to be expanded further to meet future demand in the rapidly-growing market for fuel cell applications.

Apparel's "Chennai 2.0" project was approved in October 2023. Under this investment project, Freudenberg Performance Materials will complete the expansion of its production location in India to manufacture PES interlinings for the entire South Asian apparel market by the end of 2025, thus supplying customers faster and with greater cost efficiency.

An additional new laminating line in Macon, USA, was approved in November 2023 as part of the globalization strategy for the Dripstop business. Expansion of laminating capacities is designed to generate additional market shares.

Apparel business in Indonesia was transferred to Freudenberg Performance Materials from Japan Vilene Company effective January 1, 2023.

Freudenberg Performance Materials completed the Global Recycled Standard certification process for the Evolon microfilament textiles manufactured at the facility in Colmar, France. The Global Recycled Standard is an international, voluntary standard developed and managed by the Textile Exchange non-profit organization. The standard sets requirements for third-party certification of recycled materials and product chains.

Location changes

The relocation of parts of Apparel production from Weinheim to the Sant'Omero facility in Italy was successfully concluded. Cost-effective finishing of products for the European interlinings business is now carried out at the Italian site.

FREUDENBERG FILTRATION TECHNOLOGIES



	2022	2023
Sales [€ million]	677.0	638.2
Workforce	3,552	3,621

A breath of fresh air: Freudenberg employees with some air filter samples

Business Group profile

Freudenberg Filtration Technologies is a development, production and application specialist for air and liquid filtration. The Business Group’s solutions help make customers’ industrial processes more efficient, conserve resources, and protect people and the environment.

As a globally active partner for energy-efficient filtration, Freudenberg Filtration Technologies is dedicated to competency in the automotive & transport, energy & resources, hygiene, comfort & health, production & building technology industries and in technologically-sophisticated special applications.

System solutions such as the development, installation and operation of complete filtration solutions as well as wide-ranging services for air and water quality management complement the innovative product portfolio.

Business development (summary)

- Overall, Business Group sales below prior-year level
- Developments in divisions presented mixed picture
- Slight sales growth in “Automotive” division despite intensively competitive environment
- Sales in “Industrial Filtration” division similar to previous year
- However, sales in “Consumer” and “Residential & Commercial” divisions failed to match prior-year levels

Business development (in-depth)

Despite difficult economic conditions, the global filtration market proved generally robust in 2023, although developments in the individual segments were mixed. This was mainly attributable to the generally higher awareness of air quality, stricter legislative requirements, and the target set by manufacturing companies to make their processes resource-friendly and efficient.

For Freudenberg Filtration Technologies, business in the 2023 financial year was unsatisfactory, with sales below the prior-year level. The contributions of the individual divisions to the overall result varied.

Sales in the “Automotive” division developed well, with increases in the key segment of cabin air filters for passenger cars in Europe, the USA and China. As a result, the good position in OEM and independent aftermarket business in this vehicle category was consolidated.

Development in the Industrial Filtration business in the year under review was stable. Slight sales decreases due to structural changes (such as exiting business activities in Russia) were offset by growth in other segments. This is chiefly attributable to continued high demand for filtration solutions for gas turbines and compressors in North America. Mining industry business in Australia proved challenging, with low demand for air filters to protect miners.

There was a sharp downturn in sales in the “Consumer” division. This is mainly due to continued weak demand for indoor air filters. Higher sales in new applications such as drinking water filtration or vacuum cleaner filters could only partially offset these losses. Freudenberg Filtration Technologies is responding to this development by adjusting cost structures and intensifying sales activities, particularly outside Asia. Furthermore, the division continues to drive innovation – one example is the development of a new reverse osmosis filter element for household water purifiers with a significantly longer service life than conventional products thanks to special anti-limescale technology.

In the “Residential & Commercial” division that sells air filters direct to end users via retail or e-commerce platforms, the cancellation of a program to supply a

major retail customer led to a noticeable drop in sales. Successful new business in the second half of the year generated positive sales momentum.

Key events

- Investments in smart automation in production
- Automotive filtration team recognized by Honda
- Successful production start for spiderMaxx cassette filters
- Organizational structure in Residential & Commercial division realigned

Freudenberg Filtration Technologies continued its focus on key future topics in 2023: these topics included the expansion of smart automation in production and Six Sigma Green and Black Belt training for the efficient design of business processes. The use of digital solutions and further improvements in customer relationship management are other important areas of development for the Business Group.

In the “Automotive” division, sales activities were intensified in the off-highway vehicles and commercial vehicles segments. In Europe, for example, Freudenberg Filtration Technologies won an order for the complete cabin air filter program for what is currently one of the largest agricultural tractor platforms.

The American Honda Motor Company recognized Freudenberg Filtration Technologies’ automotive filtration team in the USA with the Service Parts Supplier Award; in China, Mahle acknowledged the “Automotive” division with the Strategic Supplier Award 2023.

The entire mobility sector is undergoing fundamental change, and that also impacts filtration solutions for vehicles. Freudenberg Filtration Technologies responded to the challenges of this dynamic business environment and realigned its organizational structure in the “Automotive” division accordingly in 2023. The three essential aspects of the new structure are strengthening operations in the regions, rolling out a global key account management, and global market segments.

In the “Industrial Filtration” division, production of the spiderMaxx cassette filters made a successful start. The spiderMaxx product range stands for a new generation of cassette filters that sets standards in terms of stability and torsional rigidity thanks to the filter frame design. Mainly used in power plants, these extremely mechanically stable filters reliably ensure clean air, thereby helping power plant operators to generate energy and minimize downtimes. With the “ChemWatch S Air Corrosivity Monitor”, also launched in 2023, users can identify leaks, gas breakthroughs or other sources of error. Countermeasures can thus be initiated to prevent corrosion and damage to electronic components.

The “Industrial Filtration” division made progress in strengthening customer orientation, for example, by partial automation of the ordering process in Germany, resulting in swifter reaction times.

The Business Group realigned the organizational structure of the “Residential & Commercial” division effective December 1, 2023, in order to meet the specific requirements of customers in the US consumer goods market, in particular as regards fast and reliable availability of goods at the point of sale. Functions such as operations or supply chain management previously managed centrally, as well as other functions, have been integrated alongside sales in a divisional organizational structure. These changes do not affect the organizational structures in place in the other divisions.

JAPAN VILENE COMPANY



	2022	2023
Sales [€ million]	511.7	521.8
Workforce	2,333	2,334

All eyes on the material: a team of air filter engineers at Japan Vilene Company in Tokyo inspecting a nonwoven

Business Group profile

Since it was established in 1960, Japan Vilene Company has been one of the leading nonwoven manufacturers on the Japanese market. The company's motto "Engineering Fabric Innovation" exemplifies the Business Group's long-standing material expertise and extensive know-how in production processes and technologies as well as nonwoven processing.

The Business Group's "Automotive", "Medical", "Electrical" and "Industrial" divisions offer a broad portfolio of products for a wide range of applications. The company has also expanded its business to include floor mats for the global automotive industry.

Business development (summary)

- Year-on-year increase in Business Group sales
- High material and energy prices remain challenging
- Mixed developments in individual sectors and world regions
- Further increase in sales of filters for use on buildings and factories

Business development (in-depth)

Year-on-year sales by Japan Vilene Company rose in 2023. Higher sales volumes, price adjustments and exchange rate effects contributed to sales growth. The Business Group benefited from the gradual recovery in the automotive industry in the year under review. Increased material and energy prices remained challenging.

Sales developments by the Business Group in the various world regions were mixed. While business in Europe, North America and the home market of Japan saw growth, in some cases quite significant, sales in the rest of Asia (excluding Japan) declined.

Japan Vilene Company's performance in the various units and sectors was similarly mixed. There was a drop in sales in the "Apparel & Amenity" division, for example. The COVID-19 pandemic had a positive impact on sales in this division in previous years. In contrast, sales in the "Electrical & Industrial" division grew on the back of higher demand for separators. In the automotive industry, demand for floor mats from Japan Vilene Company revived; this is in particular attributable to recovery on the North American market. There was a further rise in Business Group sales of filters for use in buildings and factories.

Key events

- Various restructuring measures for more efficient business processes
- Mono PET carpet is innovation highlight at Japan Vilene Company
- Recognized by Nissan for eighth consecutive year

The "Apparel & Amenity" division of Japan Vilene Company will undergo a major reorganization starting in January 2024, with preparations underway in the year under review. Among other measures it is planned to set up a "Global Apparel Sales Development" department. Under this reorganization, Japan Vilene Company will focus on bidding for projects with the potential to bring further growth.

Japan Vilene Company's "Medical" division restructured the production and sales of angiography kits in the year under review. These kits are used in hospitals and contain nonwovens from the Business Group. From January 2024, the subsidiary Vilene Create Co., Ltd., Tokyo, Japan, will manufacture and market the sets. This will improve efficiency and serve customer needs more effectively.

Furthermore, Japan Vilene Company bundled sales activities in the new "Healthcare Sales" department in the year under review.

Japan Vilene Company constantly works on new products and services. In the year under review, for example, the Business Group took another step towards circularity by developing a mono PET carpet. This carpet for use in automotive interiors is made from a single polymer instead of a mix of polymer fibers.

Japan Vilene Company was again recognized for its achievements in 2023. In September 2023, automobile manufacturer Nissan presented the Business Group's floor mat division with its "Best Performance Excellence Award" for the eighth consecutive year.

FREUDENBERG HOME AND CLEANING SOLUTIONS



	2022	2023
Sales [€ million]	1,285.4	1,240.7
Workforce	3,300	3,682

Freudenberg Home and Cleaning Solutions employees at the plant near Bologna, Italy

Business Group profile

Freudenberg Home and Cleaning Solutions is a leading international company for branded cleaning products and systems as well as laundry care products. The products are sold inter alia under the brand names Vileda, Vileda Professional, O-Cedar, Gimi, Oates, Gala, Wettex and Marigold.

Detailed market expertise, innovations, effective new products and a strong customer focus all help the company succeed. International market and customer research, innovation centers and production facilities in all regions of the world, as well as a dedicated sales network in more than 35 countries, also help the company thrive.

Business development (summary)

- Overall consumer climate subdued
- Sales downturn at Freudenberg Home and Cleaning Solutions due to decrease in sales volumes
- Overall, Business Group nevertheless able to win market share in its product segments – in particular with product enhancements and new products on US market
- Market position in wholesale business expanded

Business development (in-depth)

Overall, the consumer climate in 2023 was subdued. One reason for this was persistent inflation, which led to a reluctance to buy and heightened price sensitivity on the part of consumers. In addition, retailers deprioritized non-food products, with Freudenberg Household Products retail sales dropping as a result.

The Business Group was nevertheless able to win market share in its product segments – in particular thanks to product enhancements and new products on the US market.

There was a decrease in Freudenberg Home and Cleaning Solutions consumer business in the EMEA region, i.e. the economic region comprising Europe, the Middle East and Africa. The termination of consumer business in Russia in 2022 also had a negative impact on sales. This was offset by price increases.

In America, sales by Freudenberg Home and Cleaning Solutions in the year under review were slightly down on the successful performance in 2022. The Business Group nevertheless continued to expand its market share. Lower prices for overseas transport had a positive impact. Furthermore, as part of its strategy, Freudenberg Home and Cleaning Solutions no longer outsources the purchase of a larger proportion of products, but manufactures these products itself. Overall, this means the company is less dependent on imports. As in the previous year, innovations in floor cleaning such as the O-Cedar EasyWring RinseClean, drove business in the region further.

Sales by Freudenberg Home and Cleaning Solutions declined in the Asia-Pacific region. Price increases were one positive factor for business development. At the same time, there are openings in India for future growth through investments and the expansion of key strategic products such as the Gala brand Spin Mop and No Dust Broom.

In the wholesale business, Freudenberg Home and Cleaning Solutions Professional grew sales in 2023 despite significant challenges. The Business Group's development in almost all sales channels was positive in the year under review. These sales channels include the "Catering and Hotels", "Cleanroom" and "Healthcare" customer segments.

Key events

- Acquisition of Vermop in July 2023
- Numerous innovations in end user business and Professional sector
- Freudenberg Innovation Award for the O-Cedar EasyWring RinseClean cleaning system

Freudenberg Home and Cleaning Solutions acquired Vermop, Gilching, Germany, in July 2023. Vermop with its nearly 330 employees and production facilities in Wertheim, Baden-Württemberg offers modular cleaning systems in the marketplace. With the acquisition, Freudenberg Home and Cleaning Solutions is continuing its growth strategy in the professional cleaning segment and tapping into new potential. Vermop had sales of around €46 million in 2022. Integration of the company in the Business Group has already commenced and is scheduled to be concluded by the end of 2024.

Innovations once again provided a stimulus at Freudenberg Home and Cleaning Solutions in 2023: in the end user business, for example, innovations included capsules containing plant-based enzymes that dissolve when added to water in the cleaning bucket. A further example is the PetPro product series.

The Professional Division also launched innovations in 2023. One particularly noteworthy example is the creation of a whole new series of knitted microfiber cloths manufactured mainly from recycled fibers.

Freudenberg Home and Cleaning Solutions was again recognized with various awards in the year under review: a special highlight is the Freudenberg Innovation Award that was awarded to the O-Cedar EasyWring RinseClean cleaning system. With its two-tank bucket system, it separates clean and dirty cleaning water. The product also won the "Coolest Thing Made In The USA" award from the German American Chamber of Commerce.

In addition, Vileda in the Czech Republic was again recognized with the “Superbrands” retail award. The Professional Division of Freudenberg Home and Cleaning Solutions was presented with the “Purus Innovation Award 2023 CMS” at the CMS international cleaning trade fair for the Vermop Universal One Mop. In India, Freudenberg Home and Cleaning Solutions was honored with the prestigious “Great Place to Work” employer award.

FREUDENBERG CHEMICAL SPECIALITIES



	2022	2023
Sales [€ million]	1,457.2	1,423.6
Workforce	3,991	3,981

The right chemistry: Chem-Trend employees checking a material for quality.

Business Group profile

The Freudenberg Chemical Specialities Business Group comprises the operationally autonomous divisions of Klüber Lubrication, Chem-Trend, SurTec, OKS and CAPOL.

Klüber Lubrication is a leading manufacturer of specialty lubricants.

Chem-Trend is a supplier of release agents used to manufacture composite, rubber, plastic, metal and polyurethane molded parts.

SurTec is a globally active supplier of chemical specialties for surface treatment and electroplating.

OKS specializes in performance lubricants and in repair and maintenance products.

CAPOL is a specialized provider of surface treatment products for the confectionery industry and pigments and natural flavors for the food industry.

Business development (summary)

- Freudenberg Chemical Specialities sales below prior-year level
- Lower sales attributable to lower demand in key market segments
- Patchy regional developments
- High inflation rates and logistics and supply chain problems proved challenging

Business development (in-depth)

In a challenging economic environment, the five divisions of Freudenberg Chemical Specialities held up well, even though product volumes sold were not as high as anticipated.

While automotive industry sales developed as expected, lower demand for most of the year in various market segments prevented overall growth from overtaking the previous year's level.

The divisions were able to implement price increases in the year under review to offset the high purchase prices for energy, external services, materials and other consumables. However, it became increasingly difficult to secure further price increases in the marketplace. Developments in raw material and energy prices continued to require close monitoring, even as the market situation eased.

Exchange rate effects against the euro had a negative effect on sales.

Persistently high inflation rates had an adverse effect on customers' purchasing power – even though inflation eased during the course of the year. Logistics and supply chain problems also proved challenging.

Regional developments for Freudenberg Chemical Specialities were patchy. Sales in North America and Europe stayed at a low level throughout the year, while business in South America and Asia was positive. Sales in Eastern Europe suffered from the discontinuation of business with Russia.

Developments in the various divisions were as follows:

Klüber Lubrication recorded a fall in sales volumes of its specialty lubricants and associated services.

Chem-Trend, a specialist in release agents and process consumables, also fell short of the sales level of 2022. This was in part attributable to weak demand in the tire industry.

The total sales volume of SurTec in the market for chemical surface treatment products grew significantly. This positive development was in part due to the contributions of omniTECHNIK Mikroverkapselungs GmbH, Munich, Germany, and Precote USA LLC, East Lansing, Michigan, USA, acquired in 2022.

selungs GmbH, Munich, Germany, and Precote USA LLC, East Lansing, Michigan, USA, acquired in 2022.

CAPOL, a supplier of confectionery finishing products and other food additives, failed to match prior-year sales levels.

The same applied to OKS, a specialist in products for chemo-technical maintenance and repair. The lack of demand for lubricants and repair and maintenance products in core segments had an impact here.

Key events

- Two acquisitions in Italy by SurTec Group in year under review
- Chem-Trend added new mold release agent brand to its portfolio
- Awards for CAPOL and Klüber Lubrication
- Operational Excellence Awards presented

SurTec International GmbH, Bensheim, Germany, acquired TF Chemical srl., Borgomanero, Italy, in the year under review. The company is a supplier of chemical products for surface treatment. TF Chemical will be fully integrated in the Italian company of the SurTec Group in the first quarter of 2024.

In addition, the SurTec Group acquired Aluservice srl., Lainate, Italy, in December 2023. Aluservice specializes in research and development as well as the distribution of chemical specialties for surface treatment of alloys made of aluminum, zinc, steel and iron. The portfolio includes products for aluminum coating, electroplating of ferrous metals, and coating of other metals.

Furthermore, SurTec integrated omniTECHNIK Mikroverkapselungs GmbH, Munich, Germany and Precote USA LLC., Romeo, MI, USA, acquired in 2022.

Chem-Trend Limited Partnership, East Lansing, Michigan, USA, expanded its portfolio with a new mold release agent brand for processing a variety of materials such as polyurethane, rubber or thermoplastics. The company acquired the Mavcoat brand from Maverix Solutions, Inc., USA.

CAPOL was presented with the “World Confectionery Supplier Award” at the World Confectionery Conference held in the United Kingdom. VIVAPIGMENTS White, part of the CAPOL natural pigments portfolio, won the award as an alternative to products containing titanium dioxide.

Klüber Lubrication won the “European Responsible Care Award” presented annually by Cefic, the European Chemical Industry Council. The specialty lubricants manufacturer was recognized in the category “Climate Neutrality” for its “Climate Protection by Solvent Replacement” project and for its Climate Action Plan.

In addition, Klüber Lubrication received the “ESG Transparency Award” in the “Excellence” class from the EUPD Research organization. This award honors the transparency and quality of Klüber’s Sustainability Report.

Freudenberg Chemical Specialities presented “Operational Excellence Awards” for the second time. The initiative seeks to bring about the improvement and sustained optimization of products, services and processes in the five divisions. Five awards for outstanding achievements were presented in 2023.

Location changes

The Traxit site in Tianjin, China, was closed in the year under review. Activities were relocated to the Traxit facility in Huzhou, China. The Tianjin plant had reached its capacity limits with no prospect of further expansion. Traxit is part of Klüber Lubrication.

FREUDENBERG MEDICAL



	2022	2023
Sales [€ million]	327.2	363.3
Workforce	2,404	2,594

Complex catheters are developed at the R&D Innovation Center in Carrick-on-Shannon, Ireland.

Business Group profile

Freudenberg Medical is the global partner for the design, development and production of innovative medical devices that play a critical role in a variety of medical and pharmaceutical procedures. All products help improve people’s health every day – everywhere around the globe.

The portfolio includes complex catheter solutions, hypotubes, specialty needles, medical balloons and coatings for minimally invasive surgery, as well as precision-molded parts and medical tubing made of silicone and thermoplastic.

Business development (summary)

- Significant rise in global healthcare spending
- Freudenberg Medical has established itself as outsourcing partner to medical technology manufacturers
- Freudenberg Medical has production locations throughout the world
- Further double-digit sales growth for the Business Group

Business development (in-depth)

Global healthcare spending is rising as the population ages and lifestyle diseases increase. In the USA, for example, healthcare spending already accounts for some 17 percent of gross domestic product. This share is expected to increase to 20 percent by 2030.

The resulting cost pressure on health systems also impacts medical technology manufacturers, or "MedTech OEMs".

Freudenberg Medical has established itself as an outsourcing partner. The Business Group's customer base includes 23 of the 25 largest MedTech OEMs. With its eleven production locations in medical technology clusters on the East and West Coast of the USA, in Ireland, Germany, Costa Rica and China, Freudenberg Medical is globally active.

The Business Group offers its customers a broad range of services from product design and development through series production to compliance with requirements for the regulatory approval required for bringing medical devices to the market.

Freudenberg Medical has recorded double-digit growth in each of the last three years and again outperformed the market in 2023 with growth of some 11 percent.

Key events

- Catheters for innovative treatment of cardiac arrhythmias developed
- The Bambi Belt, a skin-friendly silicone belt with integrated electronic sensors for monitoring the vital signs of premature babies, received the CE mark for medical devices in May 2023
- Centers of Excellence for Automation and Robotics strengthened
- Roll out of virtual reality training in catheter manufacturing continued

Freudenberg Medical constantly strives to expand its portfolio of products and services. In the year under review, examples of these efforts included the

development of catheters to treat cardiac arrhythmias carried out in collaboration with customers. This new catheter ablation technology belongs to a branch of cardiology called electrophysiology, a strategic growth market for Freudenberg Medical with a market volume of some nine billion US dollars.

Another example is drug coatings for balloons and stents that are used to treat cardiovascular diseases by reopening narrowed coronary arteries and preventing them from renarrowing. In October 2023, Boston Scientific presented the findings from the first clinical study in the USA to evaluate the safety and effectiveness of this drug-coated balloon. These devices are coated at the Freudenberg Medical facility in Würselen, near Aachen, Germany. To serve growing demand, Freudenberg purchased a new site in Alsdorf, also near Aachen, in 2023 and operations there are scheduled to commence in March 2024.

Biocompatible silicones encapsulate the electronic components and sensors in wearables (medical devices worn directly on the body), thus protecting them from water, dirt and sweat. This ensures reliable operation and durability. The Bambi Belt, a skin-friendly silicone belt with integrated electronic sensors for monitoring the vital signs of premature babies, received the CE mark for medical devices in May 2023. The innovative belt was developed in Kaiserslautern, Germany, by Freudenberg Medical in cooperation with the customer Bambi Medical.

InHealth Technologies, a business unit of Freudenberg Medical, develops, manufactures and distributes branded Blom-Singer voice restoration products for cancer patients who have undergone a total laryngectomy to remove their larynx or vocal cords. A surgical procedure inserts a voice prosthesis, connecting the trachea and the esophagus. Freudenberg Medical launched the FirstFit Surgical Kit in December 2023. The kit helps surgeons to position the pre-loaded sterile Blom-Singer voice prosthesis included in the package.

The Centers of Excellence for Automation and Robotics in Baldwin Park, California, USA, and Würselen, Germany, were further strengthened in the year under review.

Rollout of the virtual reality training in catheter manufacturing launched in Carrick-on-Shannon, Ireland, in 2022 continued in the year under review. Training in a virtual environment has proved to be more efficient: new employees can already hit takt time on the production line within three days instead of the three to four weeks it used to take. Virtual reality training also significantly reduces scrap during training. Freudenberg Medical introduced this training at a site in the USA in 2023.

Location changes

In the year under review, Freudenberg Medical expanded the manufacturing footprint at the location in Galway, Ireland, by 50 percent and created 100 new jobs in technology, research and development, manufacturing operations, quality, and support services.

Freudenberg Medical employs more than 900 people in Ireland, operating from a combined 20,000 square meter manufacturing footprint at facilities in Galway and Carrick-on-Shannon. Together, the Irish operations manufacture more than 16 million complex catheters each year, serving a global customer base.

FREUDENBERG E-POWER SYSTEMS



	2022	2023
Sales [€ million]	87.4	107.4
Workforce	751	827

A clear focus on the future: energy systems from Freudenberg e-Power Systems

Business Group profile

The Freudenberg e-Power Systems Business Group was founded in April 2022. Freudenberg e-Power Systems is a leading global supplier of energy systems for heavy-duty applications. With its experience and expertise in battery and fuel cell technology, the company offers combined solutions for sustainable and cost-efficient e-mobility.

Freudenberg e-Power Systems supports its customers from application development to production, commissioning and service.

Business development (summary)

- Stable growth again characterized market for battery and fuel cell systems for heavy-duty applications in 2023
- Freudenberg e-Power Systems benefited from market environment and grew sales
- Sales drivers were battery systems for school and transit buses in North America

Business development (in-depth)

Stable growth again characterized the market for battery and fuel cell systems for heavy-duty applications in 2023. Decarbonization legislation in the transport sector and the allocation of government funding stimulated growth in the end user market.

Freudenberg e-Power Systems benefited from this favorable market environment and grew sales to €107.4 million. Key sales drivers were battery systems for school and transit buses in North America.

Key events

- Acquisition of remaining ownership interest in XALT Energy at beginning of 2023
- Partnership with LG Energy Solution agreed
- Development work on fuel cell systems for ships as well as heavy-duty trucks and buses continued

Freudenberg e-Power Systems acquired the remaining 49.9 percent of the membership units of the XALT Energy, LLC, Wilmington, USA, at the beginning of 2023. XALT Energy produces battery cells and battery packs for trucks, buses and special-purpose vehicles as well as maritime applications. The company employs over 550 people at its sites in Midland and Auburn Hills, Michigan, USA.

In February 2023, XALT Energy agreed a partnership with the Korean battery cell manufacturer LG Energy Solution. The multi-year contract provides for the supply of up to 19 GWh lithium-ion battery cell modules produced by LG Energy Solution. XALT Energy will integrate these cells in high-performance battery solutions for heavy-duty applications. Development of the first product named XRANGE commenced in 2023, with production scheduled to begin in 2024.

In September 2023, the Business Group signed a contract with the US-based company Ascend Elements to engineer and supply recycled cathode material from batteries. Ascend Elements will design a cathode material custom-engineered to the material specifications of Freudenberg e-Power Systems. The recycled material is made from production waste and end-of-

life batteries, thereby reducing the environmental impact.

Freudenberg e-Power Systems continued its development work on fuel cell systems for ships as well as heavy-duty trucks and buses throughout the year. The company began assembling two 500 kW methanol systems for a superyacht being built by the partner Lürssen Werft for a private client under a project named "Cosmos". Fuel cell delivery is scheduled for the second half of 2024.

Freudenberg e-Power Systems introduced 100 kW hydrogen fuel cells for road-based applications.

REPORT ON EVENTS AFTER THE DATE OF THE STATEMENT OF FINANCIAL POSITION

Major events after the date of the statement of financial position which are not included either in the statement of profit or loss or the statement of financial position are explained in the Notes to the Consolidated Financial Statements under the section “Major events after the date of the statement of financial position.”

REPORT ON OPPORTUNITIES AND RISKS

Freudenberg is exposed to numerous opportunities and risks inseparably associated with business activities. Monitoring technological, political and social changes in particular is part of proactive entrepreneurship. This often generates opportunities to be harnessed in order to secure and specifically improve the company's competitiveness. Opportunities are addressed in the context of the annual planning process and pursued and reported throughout the year. Long-term opportunities for profitable growth are, *inter alia*, identified as part of the strategy process. Freudenberg operates a Group-wide risk management system to identify risks in a timely fashion and respond to them appropriately. Newly-acquired companies can temporarily increase the Group's risk profile as described below until the integration process has been completed. The following presentation is in line with the assessment of the Board of Management.

Opportunities

Global presence

Due to its global presence, Freudenberg has for many years been able to offer products and services at uniform worldwide standards. As a result, Freudenberg can keep pace with the international strategies of its customers, for example in production or research and development. Freudenberg has a tradition of leveraging this expertise in trusting working relationships with many customers from Europe or North America, as well as from other continents. Vice versa, Freudenberg also successfully supports the international strategy of customers from emerging economies on European or North American markets.

Investments in strategic growth areas and regions

A central element of strategic planning is the continuous evolution of existing business through product and process innovations with a view to achieving profitable, significantly faster-than-market growth in existing business areas. This is accomplished by expanding the portfolio through selective, targeted acquisitions, closing identified technology gaps and gaining access to new markets. The successful growth strategy in the defined areas therefore continues. Examples in 2023 include the acquisition of Vermop GmbH, Gilching, Germany. Options to acquire new areas of business that complement Freudenberg are also examined. In the long term, Freudenberg's goal is a strategically balanced portfolio of cyclical and noncyclical businesses with sales distributed evenly among the regions of North and South America, Europe and Asia.

Forward-looking product development

Social trends, ecological imperatives and the regulatory environment demand constant change. Changes in consumer behavior and growing expectations of products and services, for example with regard to the sustainability of products and their manufacture or to ensure compliance with human rights throughout the supply chain, are key drivers in the search for

innovative solutions, new raw materials and recycling opportunities. Significant market potential and opportunities for the future lie in the systematic focus on such changes and the Group's ensuing innovation activities at as early a stage as possible. Numerous product developments incorporate sustainability criteria such as material consumption, waste and energy saving together with emissions reduction. The Group-wide "Sustainability drives Climate Action" program coordinates the special focus on saving energy and reducing CO₂ as well as the Group's positioning on climate protection and climate change. One approach is to replace fossil resources by sustainable materials. Several Business Groups offer new products that reduce fugitive emissions by up to 99 percent compared to conventional sealing solutions, thereby reducing the release of toxic substances into the environment or increasing the process efficiency or longevity of future-oriented facilities.

Mobility

The term "new mobility" as used by Freudenberg describes solutions offered to customers spanning the entire spectrum of drive technologies, such as optimized internal combustion engines, hybrid solutions, battery electric vehicles and fuel cell systems. Gas diffusion layers from Freudenberg are a performance-defining component in fuel cells. Traditional products such as the classic Simmerring have been advanced further through targeted efforts to develop special conductive properties for applications in electric motors. Special seals for use in fuel cells, and components for the electromagnetic shielding of high-voltage parts in electric powertrains open up further fields of application, some of them entirely new. New thermal barriers help reduce the risk of ignition or explosion of a battery cell in an electric vehicle. A sealing innovation that protects a battery component can prevent damage to the power electronics in electric vehicles. Filter systems from Freudenberg can be found in all vehicle types, including battery and fuel-cell drive systems.

Applications for trucks, buses and ships are developed in collaboration with partners. Freudenberg's strength as a partner lies in its broad-based line-up, together with its industrialization know-how and its technology and materials competence, such as its battery and fuel cell expertise.

Freudenberg regards itself as well prepared for the changes in drive technologies in a range of applications, given that other components and systems offset reductions in demand for products such as conventional seals. Going forward, Freudenberg will remain a competent provider of solutions for high-tech innovations for all types of drivetrains.

Digitalization

At Freudenberg, digitalization centers on gaining a better understanding of customers' wishes, reducing cycle times, updating products and making them more innovative, and commercializing products faster. All efforts pursue at least one of two objectives: to enhance customer benefit or to leverage internal efficiencies.

The smart measurement of lubricating oils ensures efficient maintenance work based on real requirements. Examples of new digital applications include sensor technology that can continuously monitor the condition of a seal with integrated predictive spare parts management and documentation. An electrically-conductive biocompatible silicone can direct electric currents to specific areas of the body, for use in applications such as neurostimulation for pain treatment.

The practical execution of upcoming projects is supported by a "Digitalization Hub" that structures and implements digitalization projects. Parallel to this, a key focus lies in knowledge transfer and networking with business units.

Further development of strategic issues

Throughout the world regions, Freudenberg's know-how and innovative capability are used in some 40 market segments and for thousands of applications. The company engages in numerous activities specifically targeted at pooling this knowledge, because the potential thus generated makes a key contribution to securing the future. Synergies are harnessed to drive key strategic issues such as digitalization, sustainability and material efficiency across the Business Groups. Joint projects and programs are always implemented under expert guidance and achieve concrete results.

The Freudenberg Technology Innovation corporate function focuses on the future-oriented technological development of the Group as a whole. Independently identified trends, technologies and developments, together with technology topics from within the Group, are bundled into strategic subject areas and structured for further development. This includes expertise in analyzing complex datasets and the development of AI models, new mobility topics, the energy transition, as well as sustainable materials and the associated processes. In this context, strengthening existing external and internal networks and establishing new ones is becoming increasingly important in order to identify trends promptly, evaluate them and work on solutions together with partners.

Talent management

A talent management process covering the majority of employees worldwide has been in place at Freudenberg for several years. A shared HR system landscape enables a uniform procedure for talent management throughout the entire Group. It includes harmonized assessment systems and is based on standardized skills profiles and definitions of potential. This enhances the comparability of assessments and facilitates more efficient personnel development. The process enables Freudenberg to take personnel decisions on the basis of sound and reliable information.

Corporate risk management system

The Group's risk management system is a decentralized system oriented to the organizational structure. It covers all fully-consolidated Freudenberg companies. This process in particular ensures the structured identification, assessment, control and monitoring of main risks. The process also includes appropriate risk communication and the continuous improvement of the corporate risk management system, allowing, for example, the mapping of sustainability risks.

The primary objective of the corporate risk management system is the early identification of risks that, individually or in combination, might jeopardize the continued existence of the company and the initiation of appropriate countermeasures. The intention is not to avoid all potential risks, but rather to create the leeway for taking a deliberate decision to enter into a risk backed by a comprehensive knowledge of the main factors involved.

The risk management strategy is derived from the general strategy of the Group. The risk management system is continually developed, refined and audited. Controlling, internal auditing, the compliance organization, the Code of Conduct, the internal control system, various quality assurance systems as well as several corporate functions make a significant contribution to the success of the Group's risk management.

Risks

Risks are defined as all future developments, events or actions that could have a negative impact on the targets and strategies of the Group.

The following deals with risks classified as significant for Freudenberg ranked in descending order by their importance according to the potential level of damage. These quantifiable and non-quantifiable risks can have very differing impacts. They may occur individually and independent of one another, or simultaneously. In all cases, they have the potential to impact the net assets, financial position or results of operations of the Group directly or indirectly in the short- or long-term. Quantitative data are not disclosed because qualitative factors affecting operating activities such as failure to meet corporate targets or damage to the company's reputation are included in impact classification.

Macroeconomic and sectoral risks

Freudenberg offers solutions in many customer segments and sectors and is active in more than 60 countries worldwide. The broad diversification of the Group reduces dependence on individual customers, customer groupings, suppliers, raw materials, technologies, regions and countries. Freudenberg is actively involved in the rapid development of alternative automotive drivetrain technologies through intensified research and development activities in various product groups, and tests the findings in several cooperation projects with industrial partners. Notwithstanding, Freudenberg is dependent on the general economic situation, particularly with regard to the general demand for its products and services, and also exposed to the effects of geopolitical risks. The unexpected duration and intensity of the Russia-Ukraine war has already had tangible consequences. The military escalation and the embargo measures imposed caused disruption in global supply chains with direct and indirect effects on the Group. This was evidenced by restricted availability of products, especially raw materials and bought-in parts, inflationary effects and wide-scale significant increases in the cost of energy supply and logistics that were unavoidable or could not be offset by short-term operational or strategic measures and will continue to persist. Other military conflicts, for example in the Middle East, and international trade disputes with disruptive effects on regional and global supply chains are also monitored particularly closely. In spite of sustained efforts to diversify further, a slump in demand in a specific region or sector or a persistent international trade dispute, for example, can lead to a substantial decline in sales and earnings for Freudenberg and thus pose a significant risk. The broad-based diversification of the Group with respect to geographic regions and business sectors will help to keep the overall impact on Freudenberg within manageable limits despite isolated problem areas. Permanent changes in geopolitical borderlines could require adjustments to the Group's strategic orientation.

Freudenberg has taken measures to limit the negative consequences of demand-side risks. In particular, the company has appropriate capacity flexibility and practices active working capital management. Freudenberg regularly monitors several success indicators and can thus respond promptly to negative developments. In the context of a long-term response to demand-

side risks, Freudenberg makes targeted investments in research and development, in individual regions and customer relations, as well as in selected strategic growth areas.

Legal risks and compliance

Freudenberg is a globally active manufacturer of functionally relevant technical components and system parts, including battery and fuel cell systems for the automotive industry as well as many other sectors of industry. The Group manufactures mechanical cleaning equipment and filter products for end users and is active in the manufacture and sale of medical materials and components. Freudenberg also develops and produces specialty lubricants, release agents and a broad range of specialty chemicals for very diverse applications. Wide-ranging services in the various business segments round off the Freudenberg portfolio. Consequently, Freudenberg is exposed to several legal risks. These include in particular risks in the fields of product liability, data protection, contractual warranty risks, competition and antitrust law, tax and excise duty law, M&A transactions, asset misappropriation, anti-corruption regulations, money laundering, infringements of intellectual property rights (patents and brand law), export controls, chemicals regulation as well as risks in the fields of occupational health and safety and environmental protection. These risks can affect Freudenberg to various degrees and can lead not only to fines or other penalties or compensation, for example, but can also impact the reputation and image of the Group as a whole. In extreme cases, legal risks could have a significant effect on Freudenberg.

Freudenberg has many measures in place to respond to these legal risks. These include comprehensive quality assurance mechanisms tailored to the requirements of the respective business models and value chains, product specifications, instructions, regular training for employees, documentation, and preventive contractual solutions containing provisions limiting liability and taking account of the parties' spheres of influence. These measures are flanked by customary insurance cover which is carefully analyzed on an annual basis and, where necessary, adapted to changed conditions.

The Group conducts its global business in many different jurisdictions under different legal and regulatory

frameworks that are undergoing change and becoming steadily more complex. The scale and scope of the laws and regulations that must be observed are subject to constant changes that are sometimes difficult to predict, and call for the monitoring of legislative trends, interdisciplinary and cross-border communication as well as an appropriately swift response and measures. For example, the Code of Conduct and the Rules of Procedure of the Ethics Offices were revised in order to comply with the Act on Corporate Due Diligence in Supply Chains. Furthermore, internal processes and infrastructure were expanded to incorporate measures for the systematic identification, documentation – and if necessary – remediation with regard to possible human rights violations within the company itself or along the supply chain. Preparatory measures to ensure the timely implementation of the Corporate Sustainability Reporting Directive were also taken.

By tradition, compliance with laws and regulations as well as internal guidelines and Freudenberg's own Guiding Principles and Business Principles has very high priority at Freudenberg. Employees are made aware of and trained in the relevant legal risks for their respective Business Group and the regions of relevance for Freudenberg; they are expected to observe and comply with these requirements. To communicate compliance content for training, dialog and discussions, Freudenberg makes use of both printed documents and in-person seminars as well as web-based trainings, e-learning tools and interactive video conferences to reach as many employees as possible.

Despite all carefully applied control and prevention mechanisms in our compliance structure and compliance measures, there is a residual risk that is unavoidable given the size and complexity of our global organization and the significant increase in regulatory density. Furthermore, the possibility that employees from Freudenberg or from our suppliers unconsciously infringe third-party rights cannot be entirely ruled out; this could trigger negative judicial consequences or damage the image or reputation of Freudenberg.

Information security risk

Modern business processes are to a significant extent based on information captured, processed, exchanged and stored digitally. Potential risks caused by disruptions in these processes could impact both internal business processes and communication with customers and suppliers, and could, for example, lead to the interruption of operations at Freudenberg or at a third party. Demands on the reliability and security of IT systems and cloud services used by us, our suppliers and our customers are intensifying as a result of technological progress and the trend towards greater process networking.

The aim of the guideline on information security issued by the Board of Management is to preserve the confidentiality, availability and integrity of information. Freudenberg deals with the relevant information security risks by operating information security management systems oriented to the ISO/IEC 27001:2013 international standard. The Business Groups and corporate functions conduct regular risk assessments and implement appropriate measures. For example, measures such as geographically separate, redundant data centers are implemented to deal with technical risks.

At Freudenberg, as elsewhere, the relevance of cyber risks is steadily growing. Freudenberg counters new, professional attack techniques, such as supply chain attacks or AI-generated phishing attacks, through internal training and communication measures. This also promotes a heightened awareness on the part of employees with regard to the secure handling of information and information processing systems and processes. This is flanked by the risk-based continued development of protection and response mechanisms, and the expansion of expert capacities, particularly as regards monitoring, and response capabilities in the event of an incident. In this context, the IT security level of IT service providers is regularly reviewed and aligned with Freudenberg's requirements. Despite all technical, organizational and awareness measures, significant system failures and damage to Freudenberg as the result of a cyberattack cannot be ruled out.

Interruptions of operations and long-term disruptions

The classic risk of unplanned interruptions of operations has several possible causes. The main ones are interruptions in production, for example due to uncertainty regarding the availability of specific raw materials and energy, delays in upstream stages of the supply chain or in the Group's own supply chain levels, restricted availability of IT infrastructure, damage from natural hazards, fires or explosions, or any combination of these causes. Possible consequences are loss of sales revenue and earnings, contract infringements, contractual penalties and claims for damages as well as reputational damage.

Recent years have seen an increase in natural events, probably associated with climate change. Freudenberg real estate is also affected by regional floods, fires and storms, and damage can result in an impact on sales revenue and earnings. Insurance cover has largely been arranged for actual damage and any resulting interruption of operations.

Freudenberg has taken numerous precautions to maintain and safeguard IT systems (back-up solutions, emergency data centers) as well as to meet contractual delivery obligations (dual/multi-sourcing, lead centers with interchangeable infrastructures, cross-plant tools, crisis training at relevant production locations) and to ensure delivery reliability and contract compliance, and has also insured individual risks deemed by Freudenberg to merit cover. While not universal, these concepts and their evolution have also proved their worth in particularly demanding situations. Despite all the measures that have already been taken or will be taken in the event of an emergency, there is a residual risk of a temporary interruption in operations, for example, in the event of sudden, wide-scale interruptions in energy supply, with a possible impact on the sales revenue and earnings of the Group.

Our response to demographic change and other social developments, primarily in industrialized nations, takes the form of recruiting hubs in Germany, the USA and China designed to recruit and retain appropriately trained and motivated employees with a view to maintaining competitiveness and the further development of the Freudenberg Group in the medium- to long-term.

Financial risks

As an internationally active company with major shareholdings in other countries, Freudenberg is exposed to financial risks which under certain circumstances could significantly impact the net assets, financial position or results of operations of the Group. Such risks include financial risks from the Group's M&A activities arising from the potential impairment of goodwill and investments or of unrecognized obligations. Freudenberg employs various measures to manage these risks. The Group has several expert groups specifically tasked with the identification, analysis and steering of Freudenberg's financial risk profile. This also includes the regular review of financial risk management methodology and steering.

Various measures to safeguard liquidity are in place which allow Freudenberg to react swiftly to unexpected liquidity-related risks. Such risks are hedged by solid bank and Partners' financing as well as high liquid reserves. Freudenberg has a high equity ratio, a stable level of Partners' reserves, and comprehensive credit lines.

In addition, Freudenberg is exposed to exchange rate and interest rate risks. Managing these risks is implemented by internal guidelines and processes and monitored by a treasury management system. In line with a central framework of regulations, exchange rate risks are determined locally on a cause-specific basis and steered under a consultation process. Interest rate risks arise from possible changes in the market rate and can lead to changes in the market value of fixed interest investments.

Funds for subsidiaries are made available in the form of loans or cash pool agreements. Freudenberg companies channel surplus liquidity to the central finance department.

Binding internal guidelines for Freudenberg companies clearly specify that derivative financial instruments may not be used for speculative purposes, but only for hedging risks in connection with underlying transactions and associated financing operations.

The Group's conservative finance strategy was one of several factors that led the rating agency Moody's Deutschland GmbH, Frankfurt am Main, Germany, to confirm its Freudenberg SE "A3" rating with a long-

term “stable” outlook in June 2023. This gives Freudenberg very good creditworthiness at investment grade level.

Risks from technological progress and innovations

As a highly diversified technology group, Freudenberg is active in numerous product and market segments, some of which are very different in many respects. Moreover, Freudenberg conducts its entrepreneurial activities on the basis of different business models. Consequently, Freudenberg operates in a constantly changing environment and is exposed to technological progress and a wide range of innovations. In specific terms, this means that Freudenberg comes up against new products, technologies or organizational structures.

Freudenberg addresses the implications of these customary risks in its regularly updated corporate strategy and limits these risks by various measures, in particular in-house research and development and innovation. The most important pillar and key driver of innovation at Freudenberg is to be found in the Business Groups, whose research and development activities are closely geared to their customers. In addition, the Freudenberg Group acquires companies or business units to add to the Group’s technology and product portfolio and to enhance competitiveness through innovation.

With the Freudenberg Technology Innovation corporate function, Freudenberg has created an organizational unit that pools the Group’s technical knowledge – in particular on cross-sectional technologies. At 5.1 percent, Freudenberg invested a substantial share of sales in research and development in the 2023 financial year. The share of sales attributable to new products totaled 32.4 percent.

Contractual risks

Freudenberg enters into contracts with third parties on a daily basis and makes continuous adjustments to its portfolio through acquisitions and disinvestments of companies and business units. During the course of these activities, obligations are assumed or commitments undertaken that may change as time goes by, must be complied with over a longer period of time, or may prove impossible to meet as a consequence of unforeseen events, such as the consequence of raw material supply bottlenecks. These activities could in retrospect prove disadvantageous and, above all, could negatively impact the earnings situation of the Group. Freudenberg deals with these significant risks with measures such as comprehensive upfront analyses and checks with regard to acquisitions, supported by consultations with internal and external experts and consultants and, where appropriate, plausibility checks on the outcomes of the consultation process. This is complemented by interdisciplinary and supra-regional risk management resources established at both Business Group and holding company level, as well as the continuous improvement and further development of systematic contract management and contract monitoring in line with business demands. These measures significantly reduce the risk.

Occupational safety, health protection, environmental, security and sustainability risks

Freudenberg has production sites in some 60 countries, some of which operate under very different conditions. There are operational risks with regard to production processes in particular in terms of workflows, production equipment and the processing of hazardous materials. Freudenberg trains employees to comply with safety regulations and in the use of protective equipment, and fulfills all relevant safety requirements and guidelines.

Freudenberg locations are repeatedly exposed to natural hazards as a result of the presence in different regions and climate zones. In spite of preventive measures, natural hazards such as earthquakes, floods, forest fires, mudslides or extreme snowfall can occasionally negatively impact the business operations of the units concerned. Natural hazards are taken into consideration as part of the site selection process and for acquisition projects. By using natural hazard databases, Freudenberg can conduct portfolio analyses on natural hazards as well as trends and risks relating to medium- and long-term climate risks and take appropriate action.

Freudenberg has been monitoring the risk of a global pandemic for several years (SARS, avian influenza virus H5N1, zika virus) and initiated or prepared basic protective measures. In spite of the precautions taken, with the international outbreak of the SARS-CoV-2 coronavirus it was not possible to avoid the impact on employees, working conditions or supply chains, or the effect of falling demand. Temporary plant closures and loss of sales in some areas contrasted with sales growth in other areas of the Group, highlighting the benefits of the Group's strong international and sectoral diversification.

The precautions and measures to fight pandemics have been developed further on the basis of the experience gathered to date. Nevertheless, Freudenberg employees could be personally affected by a pandemic in future, either at work or in a private context. Depending on the scale, this could lead directly or indirectly to loss of sales revenue or earnings for the Group.

Group-wide standards in the fields of occupational safety, health, site security, crisis management, environment and fire protection are defined, implemented and reviewed on the basis of the minimum requirements and guidelines for the Business Groups. Despite all preventive measures, significant occupational safety, preventive healthcare, security and environmental risks cannot be entirely ruled out. In the case of hazardous substances, efforts are, for example, made to identify substitutes for substances with proven, unacceptable risks before a statutory provision comes into effect, with a view to minimizing potential and customary risks arising in connection with such hazardous substances. This also forestalls undesirable effects through a possible ban on a given substance. In addition, many product developments are subject to a stage gate process which among other things ensures that new products have a better environmental performance than their predecessors and that certain undesirable substances are not used in the development of new products. These measures exemplify many other ideas and projects to reduce sustainability risks.

Since it was launched in 2002, the worldwide “We all take care” initiative motivates Freudenberg employees to make their work and their workplaces safer, healthier and more environmentally friendly as well as taking responsibility for society. The initiative is supported by the Group's top management, employee representatives and senior executives in the Business Groups, and the best projects are honored each year.

Internal control and risk management system (referred to the Group financial reporting process)

The Group internal control and risk management system for the financial reporting process at Freudenberg is tasked with ensuring the functionality, compliance and effectiveness of financial reporting in the Group. The internal control system includes measures designed to ensure the complete, accurate and timely transmission and presentation of information of relevance for the preparation of the consolidated financial statements and the consolidated management report of the Group.

The consolidated financial statements and the consolidated management report of the Group are prepared centrally. The minimum requirements regarding reporting content submitted by the companies are defined and controlled centrally, and the time frame and process requirements are monitored. The regularly updated IFRS accounting guidelines form the basis for the IFRS reporting packages of the parent company and of all domestic and foreign subsidiaries included in the consolidation. There are binding instructions for Freudenberg's internal coordination and other preparatory work for the financial statements.

Freudenberg uses a standard software tool for the Group financial reporting process. This tool is used throughout the company worldwide and clearly defines user rights observing the principle of the separation of functions. The system covers both reporting by Freudenberg companies and the data for the consolidated financial statements. Additional controls are implemented in the consolidation process.

The consolidation process is also supported by a software tool for the automatic reconciliation of balances throughout the Group. The individual companies have a local internal control system which is the responsibility of the respective Business Group and which must comply with uniform minimum requirements applicable throughout the Group.

The Corporate Controlling & Accounting function organizes seminars for employees involved in this process in the event of important changes in financial reporting procedures and IT applications, thereby guaranteeing a consistently high standard of reporting.

Actuarial reports and evaluations are compiled by specialist service providers.

There is a clear demarcation of tasks between the corporate function and the companies. The segregation of functions and the dual control principle are systematically applied. It is standard procedure for the Freudenberg auditor and the auditors of the consolidated companies to review the functionality and compliance of the relevant reporting process. Suggestions for improvements are regularly discussed and optimized. In addition, the functionality and compliance of processes of relevance to financial reporting are reviewed regularly under an internal auditing process. The complete package of processes, systems and controls adequately ensures that the Group's reporting process is in accordance with IFRS and other regulations and laws of relevance to financial reporting and is reliable.

Overall assessment of the opportunities and risks

Freudenberg has an in-depth understanding of the short- and long-term opportunities necessary for the further development of existing business areas and the development of new activities to secure the future of the Group, and actively pursues these opportunities.

In our opinion, based on the probability of occurrence and potential impact of the risks described above, they do not individually or cumulatively present a risk to the continued existence of Freudenberg.

REPORT ON EXPECTED DEVELOPMENTS

The assumptions made in the report on expected developments are based on the operative planning of the Freudenberg Group for 2024 and the strategic planning for the period 2024 to 2026 adopted by the Board of Management and the Supervisory Board. This planning is premised on our underlying expectations regarding macroeconomic conditions and developments in the markets of relevance to the Group. The assessments of future business development take their orientation from the targets set by our Business Groups as well as the opportunities and risks arising from expected market conditions and the competitive situation in the planning period. Set against this backdrop, we adjust our expectations for business development on a case-by-case basis in line with the latest forecasts.

We expect the generally challenging macroeconomic environment to continue in the 2024 financial year. As in 2023, we anticipate subdued global economic growth for 2024.¹ The high economic and geopolitical uncertainty will persist in 2024. One uncertainty factor is the threat to geopolitical stability with far-reaching consequences for trade relations. In particular, further developments in the conflict between Russia and Ukraine and the conflict in the Middle East are uncertain. There are indications that economic growth in the major industrialized nations will only come in at around 1 percent. Even if increases in central bank interest rates are likely to rein in inflation, prices on procurement markets will remain high. Labor markets are faced with a shortage of skilled workers and inflationary developments. Against this backdrop, we expect modest business development in the markets relevant to the Group.

With regard to our regional core markets, we expect the German economy to recover from a slight recession of minus 0.3 percent in 2023 and return to positive territory with economic growth of 0.3 percent in 2024.

In addition to higher interest rates and a subdued global economy, persistently high energy prices are a challenge for the weak German economy.

In the eurozone, which remains the Group's largest sales region, we expect to see further slight growth of 0.5 percent in 2024 on the back on 0.5 percent growth in 2023. The increases in European Central Bank interest rates in 2022 and 2023 to curb inflation are slowing down economic development. In September 2023, the European Central Bank increased its key interest rate by a further 0.25 percent to the current rate of 4.5 percent. The inflation rate in the eurozone is expected to decrease from an average 5.6 percent in 2023 to 3.2 percent in 2024. In combination with higher real income this will strengthen private consumption.

We expect economic growth in the USA to drop from 2.4 percent in 2023 to 1.4 percent in 2024. Both private consumption and government spending will likely be lower in 2024 than in the previous year.

In Japan, growth is forecast to drop from 1.9 percent in 2023 to 0.8 percent in 2024. The November 2023 economic stimulus package is designed to bolster private households and the economy.

Economic development in the emerging economies will present a mixed picture. China remains one of the most important growth regions for Freudenberg. Following growth of 5.2 percent in 2023, we anticipate an increase of 4.6 percent in 2024. This development is to be bolstered by an expansive fiscal and monetary policy and will be mainly generated by private consumption. For India, we forecast economic growth of 6.9 percent in 2023 and 6.3 percent for 2024.

Against the backdrop of subdued global economic growth in 2024, developments in the sectors served by Freudenberg will be mixed. The automotive sector is a particularly important industry for Freudenberg. Based on 9.4 percent growth in the automotive industry in 2023, we expect to see a slight 0.5 percent dip in production worldwide in 2024. We anticipate growth of 3.8 percent in South America, 1.1 percent in North America, 0.1 percent in China, and 3.6 percent in India, as opposed to a decrease of 5.4 percent in Japan, 3.3 percent in Korea, and 1.8 percent in Europe. Global automobile production of some 90 million light

¹ Sources: In this chapter, all figures related to economic developments are based on data from Consensus Economics, the European Commission, the International Monetary Fund, the World Bank, the OECD, and the marketing research and consulting company Schlegel und Partner.

vehicles in 2023 and some 89 million in 2024 marks a return to the 2019 pre-crisis level.

We do not expect to see any growth in the mechanical and plant engineering industry, Freudenberg's second most important sector, in 2024.

Private consumption will see positive development. We expect growth of 1.5 percent in the industrialized nations in 2024, with higher rates in some of the emerging economies, for example 6.2 percent in China and 6.0 percent in India.

In the oil and gas industry, we anticipate growth rates of between 1.0 and 8.0 percent in the industry's regions in 2024.

To manage the uncertainties outlined above, we will stay agile at each of our locations throughout the world and continue to respond swiftly and flexibly to changing requirements. Customer centricity is a main focus of all our efforts. This principle applies to all sectors and regions. We will therefore continue to invest in long-term projects. The mobility transformation, digitalization and sustainable solutions will remain our key strategic themes. We will adopt a selective and focused approach to developing our portfolio further and strengthening it through acquisitions relating to promising technologies. Our efforts in this context are guided by the findings of the foresight project named "Odyssey" that examined what the world might look like in 2050 and what business opportunities this might bring for Freudenberg. The project was launched in 2015, and a follow-up project called "Janus" started in 2020 to address the impact of recent political and economic changes on the framework set out in "Odyssey". Additionally, the interdisciplinary "Janus" team was tasked in the 2021 financial year with analyzing the impact of the COVID-19 pandemic, growing protectionism, nationalism and trade conflicts on the future. Our long-term goal is a balanced portfolio of cyclical and non-cyclical businesses with equal sales contributions from North and South America, Europe and Asia.

In 2024, we will again continue to drive forward with our projects in the fields of sustainability, non-financial key performance indicators and corporate citizenship. As a responsible, innovative technology group, Freudenberg will once again implement numerous measures in environmental protection, occupational

health and safety. As in the previous year, special attention will again be devoted to occupational safety. We expect to see the Lost Day Incident Frequency Rate (LDIFR) in the 2024 financial year at the level of the previous year.

Given the opportunities and risks described in the previous chapter, or in the event that the expectations and assumptions described above do not materialize, the actual development of Freudenberg may show a positive or negative deviation from this report on expected developments.

Anticipated sales developments in our Business Groups reflect the regional and sectoral developments and challenges described above. We expect Group sales in the 2024 financial year to be slightly higher than the prior-year level. Set against the backdrop of a persistently challenging macroeconomic environment, we anticipate a slightly higher operating result. On the basis of these forecasts, we expect a return on sales for 2024 at the level of the previous year.

Weinheim, March 15, 2024

The Board of Management

FREUDENBERG SE (HGB)

Freudenberg SE is a wholly-owned subsidiary of Freudenberg & Co. KG, Weinheim, Germany, and is the parent company with responsibility for the operations of the Freudenberg Group.

The net assets, financial position and results of operations of Freudenberg SE are characterized by its holding function. The company holds interests in affiliated companies and it is the profit from these investments that dominates the earnings situation of Freudenberg SE.

The annual financial statements of Freudenberg SE are set up in accordance with the Handelsgesetzbuch (HGB – German Commercial Code) and the Aktiengesetz (AktG – German Stock Corporation Act).

EARNINGS SITUATION

[€ million]	2022	2023
Sales	46.9	61.1
Investment result	702.0	900.8
Other operating income	2.8	2.5
Material expenses	-32.7	-45.3
Personnel expenses	-18.6	-9.6
Other operating expenses	-103.8	-96.8
Financial result	-25.1	-63.9
Profit before taxes	571.5	748.8
Income taxes	-17.7	-35.0
Profit for the year	553.8	713.8

The **sales** of Freudenberg SE largely result from the charging of services and from royalties for the Freudenberg global brand amounting to €14.6 million (previous year: €12.8 million).

The **investment result** increased from €702.0 million to €900.8 million. The positive development in the results of individual affiliates had a corresponding impact on the overall result. The rise in dividend payments from €62.7 million to €143.1 million also had a positive effect.

Other operating income fell from €2.8 million to €2.5 million.

Material expenses rose from €32.7 million to €45.3 million and represent services purchased.

At €9.6 million (previous year: €18.6 million), **personnel expenses** were significantly below the level of the previous year. This decrease was chiefly due to the lower expenses incurred in connection with provisions for pensions. Expenses for salaries ran at €10.5 million (previous year: €10.2 million).

The **other operating expenses** fell from €103.8 million to €96.8 million. This fall was due to various factors, including lower consultancy expenses and fees and a reduction in miscellaneous other expenses.

The **financial result** fell by €38.8 million compared with the previous year. This decrease was chiefly the result of higher interest expenses.

Income taxes rose by €17.3 million from €17.7 million to €35.0 million. This rise was chiefly due to the higher taxable income of Freudenberg SE and affiliates forming part of its group for tax purposes and to a rise of €21.5 million in taxes for prior periods.

At €713.8 million (previous year: €553.8 million), the **profit for the year** of Freudenberg SE was above the level of the previous year.

ASSETS, LIABILITIES AND FINANCIAL POSITION

[€ million]	Dec. 31, 2022	Dec. 31, 2023
Intangible assets	6.1	4.3
Tangible assets	1.7	1.8
Financial assets	2,965.4	2,905.9
Receivables and other assets	3,226.7	3,843.0
Cash at bank and in hand	71.5	91.1
Total assets	6,271.4	6,846.1
Equity	4,296.3	4,898.2
Provisions	153.3	164.2
Liabilities	1,821.8	1,783.7
Total equity and liabilities	6,271.4	6,846.1

The assets of Freudenberg SE as the holding company chiefly consist of shares and participations in companies and amounts receivable from these companies.

As of the statement of financial position date, financial assets had fallen by €59.5 million to €2,905.9 million (previous year: €2,965.4 million).

Receivables and other assets mainly include amounts receivable from affiliates. As of the statement of financial position date, these had risen by €616.3 million to €3,843.0 million (previous year: €3,226.7 million). This is mainly the result of higher cash pool receivables from Externa Handels- und Beteiligungsgesellschaft mit beschränkter Haftung with headquarters in Weinheim, Germany.

Equity increased to €4,898.2 million (previous year: €4,296.3 million). The net retained profit rose by €601.9 million from €3,551.1 million to €4,153.0 million. The profit for the year increased from €553.8 million to €713.8 million. The retained profit was reduced by dividends paid in the amount of €111.9 million (previous year: €93.5 million).

Provisions rose by €10.9 million from €153.3 million to €164.2 million and chiefly include provisions for pensions.

Liabilities decreased by €38.1 million from €1,821.8 million to €1,783.7 million, chiefly as a result of loan repayments.

SUMMARY STATEMENT

Against the backdrop of our sound situation with respect to net assets and financial position and the high earnings of our affiliates, we assess the general economic situation of Freudenberg SE as positive. This statement is not affected by any events reported in the chapter “Report on Events after the Date of the Statement of Financial Position”.

REPORT ON EXPECTED DEVELOPMENTS

As the parent company of the Freudenberg Group responsible for business operations but without its own business operations, Freudenberg SE mainly receives income from its affiliates. As a general principle, expectations concerning business developments within the Freudenberg Group therefore also have an impact on the earnings of Freudenberg SE. For this reason, the assumptions and statements made in the report on expected developments for Freudenberg are equally relevant to Freudenberg SE.

NET RETAINED PROFIT AND DIVIDEND

In December 2023, the Shareholders Meeting resolved, as proposed by the Supervisory Board and the Board of Management, to pay a dividend of €111.9 million (previous year: €93.5 million) to the sole shareholder Freudenberg & Co. KG in 2023 from the net retained profit as at December 31, 2022, which amounted to €3,551.1 million.

The Board of Management proposes that the retained profit for the 2023 financial year, amounting to €4,153.0 million, should be carried forward to new account.

SUMMARY CONCLUDING STATEMENT OF DEPENDENT COMPANY REPORT OF FREUDENBERG SE

“We hereby declare in accordance with Sec. 312, Para 3, AktG (German Stock Corporation Act) that, on the basis of the circumstances of which we were aware at the time when transactions with affiliated companies were implemented or acts or forbearances were taken, our company received consideration comparable with that obtainable from a non-affiliated company and did not suffer any disadvantage as a result of such acts or forbearances.”

Freudenberg embraces responsibility.

Examples of how Freudenberg embraced responsibility
in 2023 can be found on the following pages:

Technology and Values	80
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Employees and Diversity	100
Health, Safety and Environmental Protection	108
Corporate Citizenship	114
Compliance	118



**SIGHTS SET ON
CARBON
NEUTRALITY**



Technology and Values

CREATIVE TECHNICAL SOLUTIONS OF EXCELLENT QUALITY

Freudenberg stands for excellent technologies and high innovative strength. Our employees are experts in products, services and solutions that are at the forefront of technology and used in thousands of applications and about 40 market segments. Our seals, vibration-control components, batteries and fuel cells, technical textiles, filters, cleaning technologies, specialty chemicals and medical products make a valuable contribution to the success of our custom-

ers around the world. The company has always been family-owned, and the values of the founder Carl Johann Freudenberg have kept it grounded. We have been true to these values since 1849.

Freudenberg is everywhere in our lives today: for example, our solutions make sure that the air in rooms is becoming cleaner, that cars can drive, or that wounds heal faster.

Freudenberg products are often invisible, but always essential – for example, in silicone belts that monitor preterm babies, in household cleaning, for emission-free mobility (top row, from left) or in a desalination plant, in the production of oxygen masks, or in outdoor clothing (bottom row). And these are just six examples from thousands of applications.



NOT JUST ABOUT FINANCIAL SUCCESS

Freudenberg defines success as achieving financial success while at the same time taking its responsibility for society and the environment seriously. The two goals are inseparably linked and firmly anchored in the company's Guiding Principles.

This responsibility comes in many forms: Freudenberg has set itself clear environmental goals, and aspires to become a carbon-neutral company by 2045.

Freudenberg also encourages diversity among the workforce and stands for a corporate culture that enables all employees to contribute their strengths. Freudenberg embraces this responsibility outside the company, too, in many areas where aid is needed. In 2023, for example, in the form of immediate aid for the victims of the earthquake in Turkey, or through a global program to support education and environmental protection.

These examples all demonstrate the depth of Freudenberg's commitment to its value orientation.



The themes of the Freudenberg Group's Guiding Principles are value for customers, leadership, responsibility, innovation, people, and long-term orientation. The "Responsibility" Guiding Principle is particularly relevant with regard to Freudenberg's responsibility for society:

RESPONSIBILITY

Our company and its family shareholders together are committed to protecting the environment and being responsible corporate citizens in all countries and communities in which we do business. We take all possible care to ensure the safety of the workplace and of our products. As a family company, we strive for the highest standards of personal behavior. Fairness and integrity guide our conduct amongst ourselves, toward our business partners and toward the general public.

Freudenberg is a values-based technology company that feels a responsibility to its customers and society.

Responsibility for society encompasses five areas at Freudenberg: **Sustainability; Health, Safety and Environmental Protection; Corporate Citizenship; Compliance; Employees and Diversity.**

By tradition, all these themes are important for Freudenberg and are also anchored in the company’s Values and Principles as well as its Code of Conduct.

For politics and society, fairer and more sustainable business is becoming increasingly important. The EU’s Corporate Sustainability Reporting Directive, for example, places a growing focus on environmental, social and governance (ESG) issues.

From the 2025 financial year at the latest, companies such as Freudenberg must report on ESG issues. Furthermore, under the EU Taxonomy Regulation, companies are required to disclose which of their products and business activities contribute to meeting the EU’s environmental objectives.



- Freudenberg Values and Principles
- Areas relevant to the “Responsibility” theme

SPEAKING OUT ABOUT VALUES-BASED ACTIONS



**Sustainable Development Goals:
Freudenberg prioritizes nine of
the 17 goals where it can make
an important contribution.**

Freudenberg has always been values-oriented. Freudenberg is a participant of the UN Global Compact, because values are non-negotiable and because communicating our actions to the public is equally important. Through its participation, the company affirms its support for the ten basic principles on human rights, labor, anti-corruption and environmental protection agreed by the United Nations.

Freudenberg is also committed to the seventeen Sustainable Development Goals that were proclaimed as a global framework in 2016, shortly after the Paris Climate Conference. Freudenberg prioritizes nine of the 17 goals where it can make an important contribution.



Freudenberg-wide initiative

GAMIFYING HSE TRAINING

We ^{all} take care!

Since its launch in 2002, the Freudenberg-wide “We all take care” initiative has honored employees and teams who are especially committed to making work safer, healthier and more environmentally-friendly. The annual “We all take care” Awards honor the achievements of the winning teams.

First place in the 2023 “We all take care” Award was shared by two teams: Freudenberg Home and Cleaning Solutions from Weinheim, Germany, and Freudenberg Filtration Technologies from Johannesburg, South Africa. Both teams focused on the gamification of HSE training in their projects.

Second place went to Freudenberg Performance Materials in Taiwan. Here, the project team significantly reduced energy consumption in the production of spunbonded nonwovens at the site.

Third place went to the team from Vibracoustic in Burgos, Spain. To help their employees, the team improved the ergonomics of the calibration machine, enhancing not only physical well-being but also increasing efficiency.



Sustainability

THE PATH TO CLIMATE NEUTRALITY IS CLEARLY DEFINED

Freudenberg's understanding of sustainability is focused: sustainability is about resource efficiency as regards the use of energy and materials.



Creating more green spaces in densely-populated areas cleans the air and converts carbon dioxide into oxygen. The vegetation insulates buildings and reduces their carbon emissions. Non-wovens from Freudenberg Performance Materials provide an effective solution for making cities greener.



Freudenberg's definition of sustainability is consistent with the UN's Brundtland definition. The company would like to keep our planet livable far into the future. That is why we want to play our part in producing as little waste and emissions as possible and minimizing the use of water, energy and materials. Our goal is to reduce our CO₂ emissions to zero by 2045.

The demand for greater transparency is not only clear from the regulatory requirements for sustainability reporting, but also evident from the global rise in the number of customer inquiries concerning product-related sustainability data.

The Group's commitment to climate protection also makes good business sense. Demand for sustainable products is rising. That calls for innovation and represents a huge opportunity for Freudenberg as a technology company. At the same time, sustainable companies are more attractive to customers, who integrate them as suppliers into their own sustainability programs. There are growing requirements for customers to prove sustainability through data such as the product carbon footprint, with the mandatory nature of these requirements increasing in 2023.

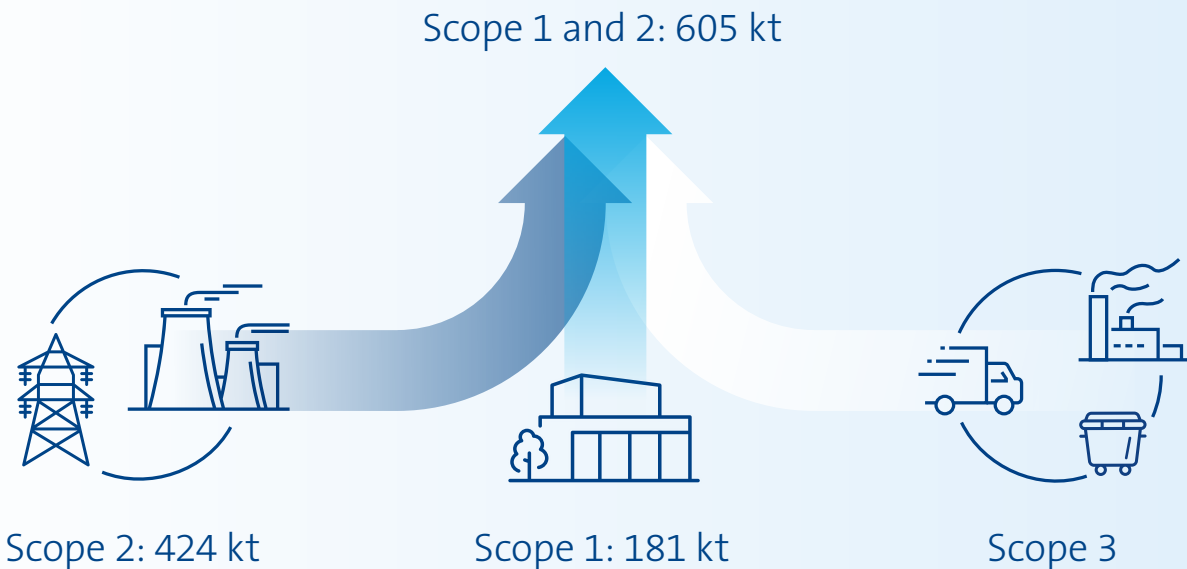
Developments on the energy market are another reason why reducing our own energy consumption pays off. This market is becoming increasingly volatile, and as a result the self-generation and storage of electricity along with flexible concepts makes sense: sites become less exposed to energy market risks such as electricity rationing, blackouts or extremely volatile energy costs.

Climate change is one of the greatest challenges of our time. That is why Freudenberg's sustainability strategy is currently focused on the path to climate neutrality.

As a company whose Business Groups operate in several industries and use various production methods, Freudenberg defines key goals and the overarching path towards climate neutrality at Group level. The Business Groups have the flexibility to implement the strategy and goals in keeping with their specific business models. If they so wish, they can pursue more ambitious goals than those set at Group level.

The goals set by Freudenberg address what are known as Scope 1 and Scope 2 emissions: these are emissions where the company can exert a direct influence through its own energy consumption and through purchased energy. The first milestone on the path to climate neutrality is to reduce relative CO₂ emissions, measured per million euros of sales, by 25 percent by 2025 compared to 2020. Freudenberg aspires to be a carbon-neutral company by 2045 at the latest.

Freudenberg's CO₂ emissions in 2023 (Scope 1 and 2)

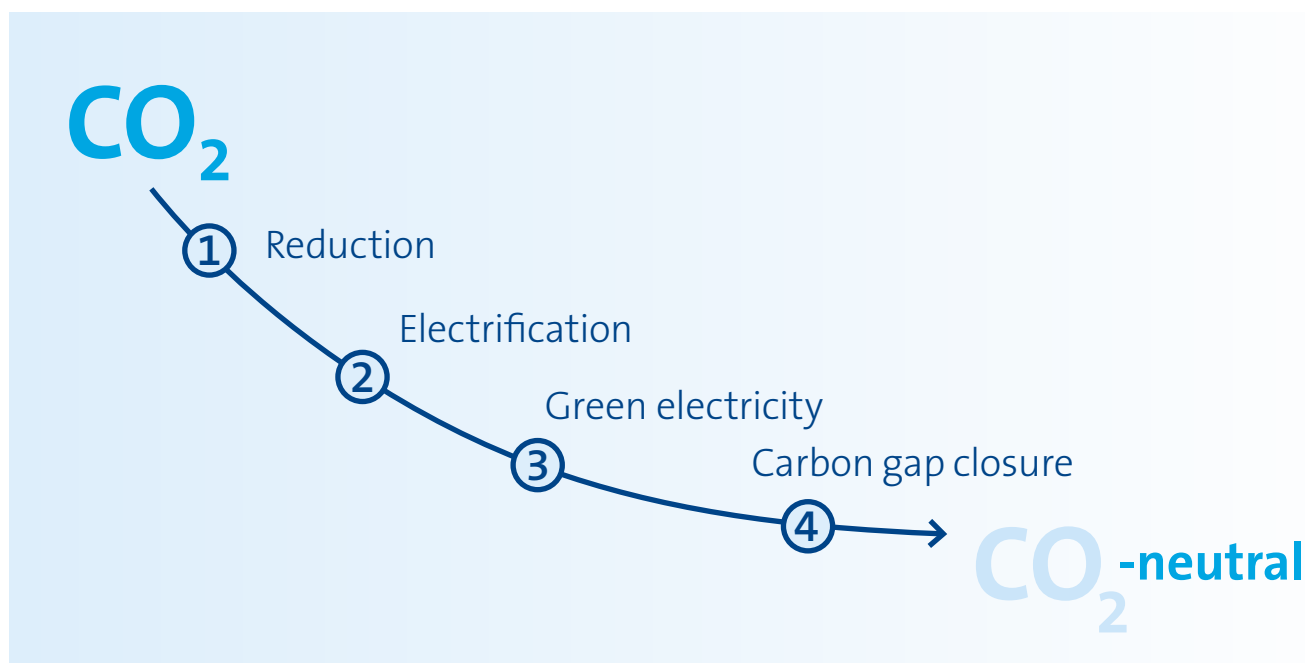


Scope 2:
Greenhouse gas emissions from energy generated by an energy supplier (e.g. electricity)

Scope 1:
Greenhouse gas emissions generated directly by the Freudenberg Group

Scope 3:
Greenhouse gas emissions associated with upstream or downstream value chain activities

4 steps to carbon neutrality



The first steps in the multistep strategy on the path to climate neutrality are reductions in energy use, electrification, and the purchase and self-generation of “green” electricity. Even with these steps, certain residual emissions are likely in 2045 because not all countries are expected to be able to purchase 100 percent “green” electricity by then, given their different carbon neutrality goals (for example, China: 2060).

Moreover, the electrification of some processes is not meaningful or economically viable. To take the last step to climate neutrality, Freudenberg therefore focuses on new technologies and markets to manage these residual emissions that cannot be reduced by means of today’s established approaches (carbon gap closure). For example, adequate volumes of “green” hydrogen or biogas may be available at acceptable costs in future to replace the residual demand for fossil energy. A further possible development is a globally-regulated system for tradable green electricity certificates similar to the system already in place in the EU, enabling a transparent process for trading emissions in countries with limited green electricity availability. Freudenberg will not engage in any CO₂ offsetting in the foreseeable

future given the quality and acceptance problems of the present voluntary carbon markets.

The first three steps – reductions in energy use, electrification, and green electricity – are already being implemented throughout the Freudenberg Group. The Business Groups adopt various approaches, depending on technology, local availability and price structures for energy.

The “Sustainability Drives Climate Action” project is the motor for Group-wide initiatives to implement the path to climate neutrality. In addition, the Business Groups’ key initiatives are defined and tracked within the strategic planning process.

Freudenberg aspires to be a carbon-neutral company by 2045 at the latest.

The “Be energy efficient” initiative, or “Bee” for short, lays the foundation for uniform and comparable energy standards within the Freudenberg Group. It is an important component of the “Sustainability drives Climate Action” project and has been uncovering energy-saving potential at Freudenberg locations since 2019. It focuses in particular on the issues of energy consumption, process electrification, and the energy efficiency of buildings. So far, around one-third of the Freudenberg Group’s entire CO₂ emissions have been analyzed under the initiative.

Freudenberg is convinced that reducing CO₂ emissions first and foremost means saving energy, process electrification, and the purchase and self-generation of green electricity.

Energy-saving potential of up to 30 percent has been identified through reductions in energy consumption. As in the previous year, efforts in 2023 concentrated in particular on compressed air, heat recovery and cooling/refrigeration: energy monitoring also helps to save energy through organizational measures. In some cases, if the know-how for identifying improvement potential is available, small-scale investment is all it takes to save significant amounts of energy. What matters are a structured analysis and well-trained employees.

Activities to familiarize the individual Business Groups with the flexible consulting approach for sites developed by Freudenberg’s energy efficiency experts as part of the “Bee” initiative were stepped up in 2023, for example through the services offered by the Bee Academy – a comprehensive training program covering the fundamentals of energy management and energy efficiency.

Renewable energy is one of the most important pillars for greater climate protection and meeting Freudenberg’s climate neutrality goals. The gradual transition to electricity from renewable sources continued in 2023 and is paying off, not only in terms of sustainability, but also financially given volatile markets. The focus of long-term supply contracts to purchase energy under what are known as “power purchase agreements” has shifted from solar power to wind power. Furthermore, Freudenberg commissioned its first microgrid at its site in Berlin in January 2023 – this is a battery system that works like a virtual power plant. Initial experience indicates that a combination of power from photovoltaic arrays and wind power plus flexible batteries delivers fully sustainable and cost-optimized electricity.

In addition to purchasing power supplies, the self-generation of non-fossil fuel-based electricity is an important component. 2023 saw significant progress in expanding the number of photovoltaic systems at Freudenberg sites. Some 20 new arrays were commissioned worldwide. Moreover, around 60 further photovoltaic systems are currently at various stages of planning and construction. Depending on the local situation and the availability of external developers, there are essentially two business models for realizing these systems: they are either self-financed or financed by third-party investments.

Concepts for gradually making building stock climate-neutral are developed on the basis of detailed as-is analyses. A pilot project in this context was implemented at the Freudenberg Sealing Technologies site in Hamburg, Germany, in 2023. A critical success factor is an integrated and holistic approach to production-specific infrastructure, the technical facilities and the building itself. The increasingly stringent requirements for energy standards are taken into account for new buildings. These standards are covered in our construction guideline for new buildings.

Group-wide Key Performance Indicators on Sustainability

In the year under review, the Group continued to improve its energy efficiency and increased the share of renewable energies. Especially as a result of these efforts, Freudenberg reduced its relative CO₂ emissions per million euro sales to about 51 tonnes. Over the coming years, Freudenberg intends to continue this development and consistently remain under the target for 2025 of 65 tonnes of CO₂ emissions per million euro sales. Since 2020, the relative Scope 1 and Scope 2 emissions have each decreased by more than 5 percent per year. Total Scope 1 and Scope 2 emissions have also decreased significantly, from 649 to 605 kt/year, while at the same time business has grown.

Energy use

883
(direct, GWh)

1,602
(indirect, GWh)

36%
(renewable energy as a proportion
of total electricity consumption)

2,485
(total, GWh)

These metrics show energy consumption
from self-generated and purchased
energy in 2023.

0.21
(energy efficiency
in kWh/euro sales)

CO₂ emissions

These metrics quantify the Freudenberg
Group's global CO₂ emissions in 2023
(market-based) from self-generated and
purchased energy.

605
(total, 1,000 t)

50.8
(t/million euro sales)

Waste

11.8
(t/million euro sales)

Sustainability has two dimensions for the Freudenberg Group. First, the way the company shapes its own processes and uses its systems to reduce resource consumption (**footprint**). Second, Freudenberg offers numerous products and solutions that enable customers to manufacture more efficiently and sustainably or to make their products more resource-efficient (**handprint**).



By reducing its footprint and expanding customers' handprints, Freudenberg is contributing to greater sustainability worldwide.

Handprints and footprints are always a matter of resource and energy efficiency, and that invariably means technology. Examples of successful sustainability projects from the Freudenberg Business Groups can be found on **pages 94 to 99**.

There is a wide range of footprint and handprint improvements in the areas of **energy, emissions, materials, waste, and water**. The following pages present several examples.



Materials

Materials efficiency
Recycled, renewable and substitute materials
End of life (EOL) product handling



Waste

Waste handling



Energy

Energy efficiency
Renewable energy



Emissions

Air pollution/
emissions



Water

Water pollution
Water use

THE MANY FACES OF SUSTAINABILITY AT FREUDENBERG

Examples of successful projects

Buffering power, managing peak loads, trading energy

In January 2023, Freudenberg Sealing Technologies commissioned a microgrid – a battery system that works like a virtual power plant – at its site in Berlin, Germany. With the microgrid, Freudenberg is helping to stabilize the public grid, clearing the way for renewable energies and reducing its electricity costs.

The weather and the time of the day determine how much electricity is generated from wind power or solar energy. But where does the electricity go if the middays sun shines too brightly or the wind blows too strongly? And conversely, where does the electricity for the kettle or the coffee machine come from on a winter's morning when it's dark outside and there's a lull in the wind? Microgrids help to temporarily offset fluctuations in the power grid or stabilize utility frequency. Their battery systems make power available in line with demand. Or they store electricity ready for the next time it is needed: in other words, the microgrid functions as a battery backup system. Just such a microgrid with a capacity of 556 kilowatt hours and an output of 704 kilowatts went online at the Freudenberg site in Berlin in January 2023.

There are advantages for network operators because they can decide whether to buy power from the microgrid under electric power bidding processes. And there are advantages for users, who have access to power 24/7. Freudenberg also benefits, because the company can use the electricity stored at the Berlin site to smooth out load curves and balance peak loads. These spikes occur when many users at the plant all need power at the same time. Peak loads

determine the price of electricity: the lower the peak loads, the lower the grid fees, i.e. the price, Freudenberg has to pay. The site has been using the microgrid to cover peak loads since January 2023 – and thus permanently cut its energy costs.

Freudenberg's microgrid not only delivers on sustainability and reduces costs, it also boosts trading. Arbitrage is the term used for buying and selling electricity on the spot market. The basic principle is to buy electricity at times when the price is low and to sell it a few hours later at a profit when the price is higher.

Freudenberg collaborates with several project partners on the microgrid, with one of these partners supplying the stationary energy system. What is special about this system is that the company in question uses batteries from XALT Energy, in other words, from Freudenberg. So the circle of this successful project has been closed.



The energy storage system comprises switchgear cabinets, battery modules, inverters and plenty of cables.





“Dropping” the ceiling between the 2nd and 3rd floors made it possible to decouple temperature control on the two floors.

High impact, low investment

Often, it does not take much in the way of investment to save energy. Instead, what really counts is a thorough as-is analysis and a structured approach. A project from Freudenberg Performance Materials in Changzhou, China, is a textbook example of how this works.

The site had a problem to solve: the temperature on the 2nd floor of the production hall was too low for the manufacturing process, while the ambient temperature on the 3rd floor was too high. Not only that: the monitoring system to track energy consumption was outdated.

The first step towards optimization involved distinguishing between winter and summer operation to prioritize the use of the ambient temperature rather than resorting to cooling or heating. The project team also established that air conditioning on the third floor was only required for the electronics cabinet and a small workstation and not for the entire floor.

So the team set about adjusting room temperature on the various floors. The stairway between the 2nd and 3rd floors was insulated so that the temperature on the 2nd floor could be controlled separately from the 3rd floor. The 3rd floor was decoupled from the cooling systems and only the two critical components on that floor were air-conditioned.

Other improvements included replacing the condenser in the cooling system with a model with a high efficiency, and systematically identifying and remedying leaks in the compressed air system. In addition, electricity consumption was tracked on a daily basis.

As a result of all these improvements, the site has reduced its electricity consumption by 24 percent compared to 2019, even though 2022 production volumes were slightly higher.



Degreasing metal at low temperatures

Before metal can be overmolded with rubber it needs to be cleaned and pre-treated. Freudenberg Sealing Technologies uses phosphate baths for pre-treatment. These chemical baths are one step in the metal degreasing process. The baths have a temperature of between 65 and 80 degrees Celsius, so they are energy-intensive.

The team from Freudenberg Sealing Technologies and their colleagues from SurTec set out to reduce energy input. SurTec also belongs to the Freudenberg Group and is a specialist for chemical surface finishing solutions. Using one of SurTec's special chemical cleaning agents, it was possible to reduce the temperature of the degreasing bath from 65 degrees Celsius to 45 degrees Celsius while maintaining the

same performance level. Furthermore, less cleaning agent was needed to produce the same result.

Thanks to this technology, 44 percent less energy is used in the degreasing process at the plant in Weinheim alone, and CO₂ emissions are cut by 50 percent. There are also significant cost savings. And this is just the beginning, because the standardized degreasing process used throughout Freudenberg Sealing Technologies means that using the SurTec product at all of the Business Group's phosphating units worldwide does not present a problem.

A further bonus is that new technologies such as heat exchangers or solar cells can now be used to operate the plant. That was only partly possible at the higher temperatures previously required.



HANDprint
FOOTprint

Circular economy in the automotive industry: biotechnical recycling of natural rubber waste

Sustainability is high on the agenda of the automotive industry. Much of the focus is on emissions reduction. But equally critical is optimizing materials sourcing, making progress with recycling and contributing to a circular economy. This is where the "Green Rubber" project from Freudenberg's Vibracoustic Business Group comes in. Natural rubber is to be sourced sustainably and biotechnical recycling is to be used to process natural rubber waste.

Central to the circular economy is effective and comprehensive recycling. To date, this is one of the greatest challenges facing the global rubber industry, particularly with regard to automotive applications.

Biotechnical recycling offers great potential in this context.

Under the process used by Vibracoustic, vulcanized grinded rubber is treated with enzymes, converting it into valuable material that can be reused for new rubber compounds and products.

By reusing its own rubber waste, Vibracoustic can simultaneously reduce the carbon footprint of new products while cutting the waste generated by its own production processes, thereby contributing to a circular product lifecycle.



HANDprint
FOOTprint



Every drop counts: EagleBurgmann helps customers save water, for example in the paper industry.

Saving water in the paper industry

Global water scarcity and its effects are one of the greatest challenges of the coming decades. EagleBurgmann, a company belonging to Freudenberg and the EKK Group, has sustainable solutions in its portfolio that help reduce industrial water consumption in many different sectors.

High water consumption in pulp and paper production, for example, can be reduced to a fraction of the quantity normally required with a special operating mode for mechanical seals. To explain how this works: double mechanical seals in pumps in the paper industry are usually supplied with fresh water from an open barrier fluid circuit. After passing through, the water is drained off. In Nonflow operation, on the other hand, the water circulates in a closed system. Water is filled in once and remains in the system, shut off by the valves throughout the entire service life of the seal. Only a negligibly small

amount of freshwater is fed from the production plant's water network.

Paper mills with pumps equipped with Nonflow seals can save up to six-figure cubic meters of water each year. The enormous reduction in water consumption reduces costs for plant operators. A further advantage is that Nonflow seals are less susceptible to contamination, thereby extending their service life.

EagleBurgmann cooperates with numerous customers in the paper industry, including the German company Schoellershammer, a leading producer of corrugating medium. Modification of some of Schoellershammer's pumps and agitators already saved 13.3 million liters of water in 2021. 66.5 million liters of water will be saved each year once all of the planned modifications have been completed.



New battery pack for CO₂-free drives for trucks and busses

The Freudenberg Group plays a major role in shaping the development of sustainable mobility with its products and services. One example is the new XRANGE battery pack for CO₂-free drives for trucks and busses. With this new battery system, Freudenberg e-Power Systems strengthens its positioning as one of the world's leading suppliers of emission-neutral energy solutions for heavy-duty applications.

Freudenberg will assemble the battery pack in its state-of-the-art factory in Midland, Michigan, USA, with a scalable capacity of up to 6 gigawatt hours. The pack is designed to power a variety of heavy-du-

ty vehicles, ranging from school and long-haul transit buses, medium-duty trucks, to mining and construction applications. It is extremely robust and can, for example, withstand an energy throughput that is up to eleven times that of a passenger car. With a service life of well over 60 million kilometers driven, Freudenberg's battery systems are among the leading solutions on the market.

The battery pack design follows an easy to integrate solution allowing a versatile installation respecting the vehicle architecture. XRANGE comes in a fully-integrated enclosure reducing the correlated work needed for the vehicle connection.



The new XRANGE battery pack is designed to power a variety of heavy-duty vehicles, ranging from school and long-haul transit buses, to medium-duty trucks, mining and construction applications.



Sustainable carpet backing twosome

With its products and services, the Freudenberg Group supports customers in their transition towards an increasingly sustainable product offering. One example is the ECO range of sustainable carpet backings introduced by Freudenberg Performance Materials in the year under review.

Freudenberg's spunbond nonwoven carpet backings contribute to easy and efficient production processes for customers as well as to high-performance end products.

In the year under review, Freudenberg extended its portfolio of carpet backings with a further two sustainable product lines. The first is resource-efficient

backings that use less raw materials and support end product recyclability. To achieve this, Freudenberg further developed the company's proprietary yarn production technology allowing for extremely thin filaments.

Freudenberg has also added carpet backings that contain a recycled content of between 51 and 90 percent to its portfolio under the names of Colback ECO-R and Lutradur ECO-R. Replacing virgin raw materials with recycled polyester saves on natural resources and improves the carbon footprint of end products. These ECO-R backings are specifically suitable for carpet tiles, broadloom, dust control mats and automotive option mats.



Freudenberg's Colback ECO-R and Lutradur ECO-R backings contain a recycled content of between 51 and 90 percent.





Employees and Diversity

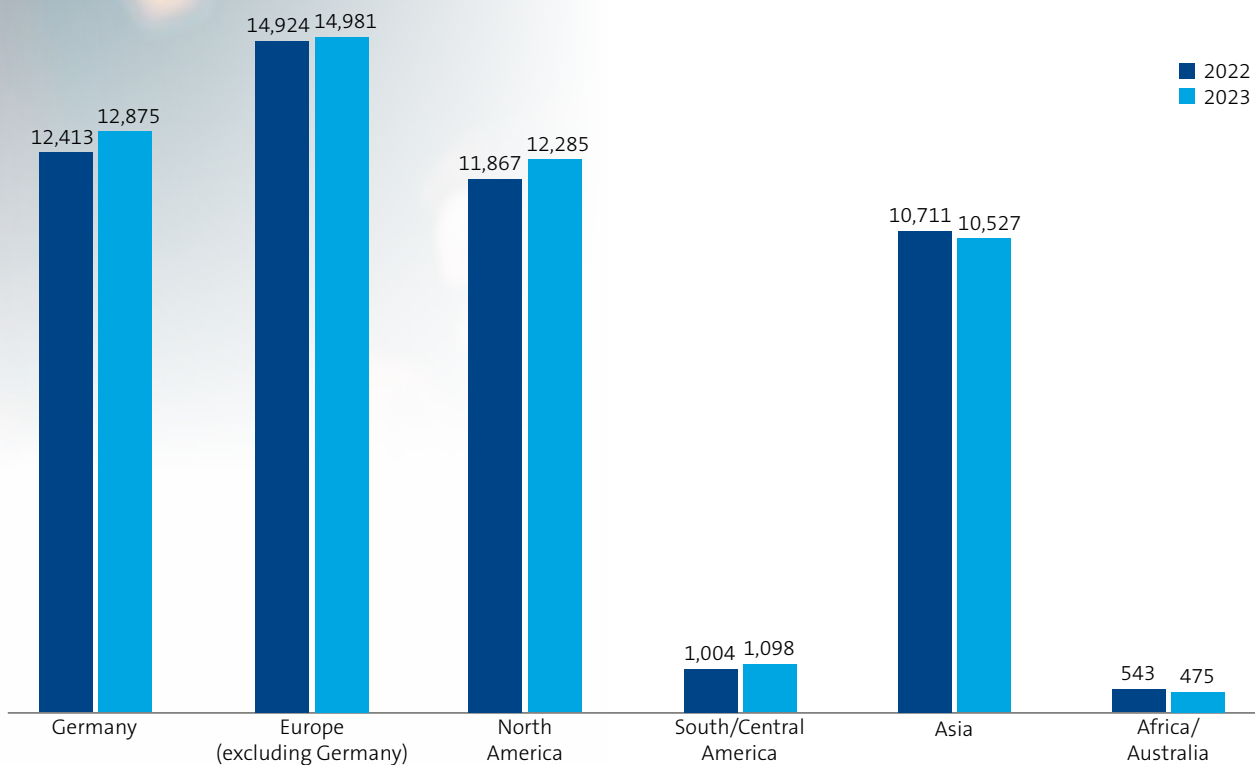
TOGETHER WE ARE STRONG

Diverse teams drive innovation at Freudenberg. The best solutions and innovations occur when employees contribute their different experiences, knowledge and skills to a collaboration. They come up with new ideas, generate imaginative solutions and create innovative products. Freudenberg employees have a common foundation: entrepreneurship in their mindset and actions. This spirit unites them around the world.

52,241

staff were employed by Freudenberg as of December 31, 2023 (previous year: 51,462 employees).

Freudenberg Group employees by region



In Germany, the employee headcount was 12,875 (previous year: 12,413), in Europe (excluding Germany) the number was 14,981 (previous year: 14,924), in North America 12,285 (previous year: 11,867), in Asia 10,527 (previous year: 10,711), in Africa/Australia 475 (previous year: 543) and in South America/Central America 1,098 (previous year: 1,004).

Strengthening the employer brand

The employer brand made further progress in the year under review. The new campaign “Working at Freudenberg: We will wow your world!” with its slogan and visuals captures the essence of the product diversity, career opportunities and values of Freudenberg as an employer. The campaign is designed to address the different target groups individually and to inspire and attract talent to join Freudenberg. The activities led to a sharp rise both in the number of followers on social networks – especially LinkedIn, WeChat and Facebook – and in the number of visitors to the Freudenberg career website. Career fairs as well as LinkedIn campaigns proved to be successful measures. The measures focused on regional offerings as well as internal employer branding to turn employees into brand ambassadors.

Attractiveness

Freudenberg provides numerous benefits that are constantly being expanded in order to become, and remain, attractive for new hires and existing employees alike. In general, the benefits we offer vary from region to region and site to site, but in the main go well beyond the statutory minimum requirements for the respective countries.

Under the talent management program, Freudenberg supports the continuous further development of its employees through numerous vocational training, advanced training and professional development programs for all hierarchical levels. The Freudenberg Group also believes a good work-life balance is important in helping to preserve and improve the health and well-being of employees. As part of an occupational health management program, the Group provides the best possible medical support and promotes a wide range of sport and fitness schemes.

Freudenberg repeatedly received awards that confirm the Group is an attractive employer. In 2023, for example, Freudenberg-NOK Sealing Technologies in Detroit, USA, was honored for the sixth time in a row by the “Detroit Free Press” newspaper as a “Top Workplace”. Freudenberg was also recognized as “Top Job Best Employer” in Italy and as a “Great Place to Work” in Spain and India.

Talent Management

The goal of the talent management process is holistic and professional personnel development of all employees as well as the successful identification and advancement of high potentials. Under the process, employees are given balanced and calibrated feedback from their line manager, who also discusses the next development steps with them. As part of the talent management process, succession candidates for specialist and leadership functions are systematically identified to ensure the long-term stability of the leadership teams. Talent development across Business Groups continued to gain ground in 2023. Regional and functional talent conferences are progressively leading to a shared understanding of key positions and high potentials in the organization, joint responsibility for talent advancement, and optimal staffing decisions.

Thanks to well-functioning talent management, all new appointments at executive level, in the main due to the retirement of the incumbents, were taken up by candidates from within the Group itself.

Personnel development

In 2023, some 20 percent of our Freudenberg employees participated in training measures – in-person or virtual – with attendance averaging 1.5 days.

More than 550 managers participated in the Group's various leadership development programs.

One particular highlight was the global rollout of the first program for production team leaders. Furthermore, over 80 top-level managers participated in the three Executive Development Programs.



Leadership development

550

(participants in programs
in all regions)



Labor shortage and fluctuation

Once again, the shortage of skilled labor associated with demographic change did not spare Freudenberg in 2023. Filling vacant posts worldwide in both direct and indirect areas remained a major challenge. However, thanks to organizational changes we are now able to fill vacant posts more efficiently and have also been able to hire numerous new colleagues through our Freudenberg Future Colleagues program (employee referral program) launched in 2023. The Freudenberg Group received over 160,000 job applications worldwide in the year under review. In all, Freudenberg was able to recruit some 10,000 new employees in 2023.

While ten percent of the workforce left the Group at their own request in 2022, the fluctuation rate fell slightly to nine percent in 2023. Once again, there were regional differences, with numbers in some cases significantly higher in North America than in Europe. Employee fluctuation in “Operations” and in some support functions was greater than fluctuation in what are termed “indirect” areas. Where fluctuation rates are high, we take specific steps at local and regional level to remedy the causes and retain the workforce.

Diversity and Inclusion

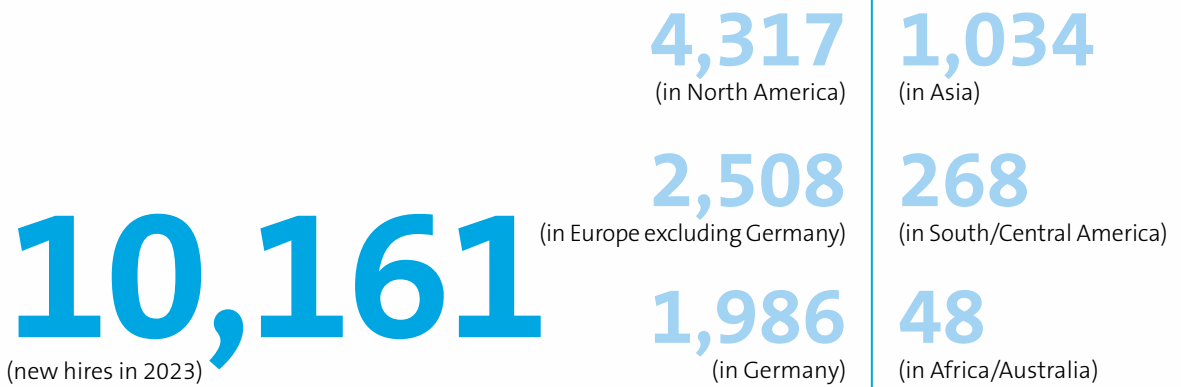
Diversity and inclusion are firmly anchored in the Group’s Values and Principles and also clearly positioned within our employer brand. We are convinced that teams made up of people of various ages, genders, cultural backgrounds and sexual orientations are not only enriching, but also more successful. In 2023, people from 148 nations worked together successfully at Freudenberg and thus underpinned the commitment to fostering an inclusive workplace.

The “Diversity and Inclusion Community” is a cross-Business Group community that proactively engages in several initiatives to ensure our employees feel valued, respected and included in our corporate culture. The goal is to create a work environment where diversity can flourish and where everyone has an equal chance to succeed. One particular focus for Freudenberg is balanced gender distribution. The share of female senior managers in the year under review was some 23 percent.

The majority of our professionals and managers are still located in Europe, particularly Germany. In the medium term, our ambition is to create more development opportunities for local talent in North America and Asia in order to set up positions for global professionals and managers outside Europe and appoint local talent in these roles. One measure implemented in 2023 is the “China Challenge Club”, a development program for high potentials from Asia designed to prepare them for future top positions through cross-Business Group projects and other senior management qualification measures.



New hires



Diversity

Freudenberg does not exclusively think of diversity in terms of gender, age or religion, but will also place a greater emphasis on geographic diversity going forward.

148

(Freudenberg employees come from 148 nations.)

60

(There are Freudenberg facilities in 60 countries.)

33%

(female professionals and managers)



Survey of employees

Since 2001, Freudenberg has conducted a survey at regular intervals to find out how the Group's values and principles are put into practice. These surveys are an essential component for the evolution of our corporate culture.

All of the Group's approx. 52,000 employees were invited to take part in the September 2023 survey. The response rate of more than 81 percent was nine percent higher than the rate for the last survey. For Freudenberg, the survey results are just as gratifying:

we were able to consolidate the good results from the last survey and even improve on them in some areas.

For example, 79 percent of the respondents reaffirmed that they are proud to work for Freudenberg. This confirms employees' high level of identification with Freudenberg.

We achieved improvements in areas such as employee/manager direct communication as well as innovation and digitalization.

Training at Freudenberg

In 2023, 158 persons (previous year: 123) began training at Freudenberg companies in Germany. A total of 373 persons in Germany and a total of 524 persons worldwide were enrolled in a training program as at December 31, 2023.

The quality of the training at Freudenberg is highly regarded by other companies. This is shown by the fact that well-respected companies in the region repeatedly send their young talent to be trained at Freudenberg in Weinheim. The training ranges from two-year technical programs to commercial courses and dual studies at cooperative state universities. In recent years, the Freudenberg Training Center has specialized in digitalization topics and is an acknowledged learning hotspot for both vocational training and continuing education.

The Training Center in Weinheim is also known for its social engagement. Since 2016, under the "Training for Refugees" project refugees have been offered a technical internship with the prospect of starting vocational training at Freudenberg. So far, a total of 63 refugees have taken up this offer, and 39 have subsequently begun their training at Freudenberg. All of the 27 trainees who have already graduated have found jobs.

When German Federal Chancellor Olaf Scholz visited the Freudenberg Group's Weinheim site in November 2023, his program also included a visit to the Training Center (photo). He answered questions from the trainees, who are sure to remember this day for some time to come.





Survey of employees

79%

(79 percent are proud to work for Freudenberg)

80%

(80 percent believe in Freudenberg's Guiding Principles)

81%

(response rate)



Training

524

(trainees at Freudenberg worldwide as at December 31, 2023)

373

(trainees at Freudenberg in Germany as at December 31, 2023)





Health, Safety and
Environmental Protection

**FOR THE WELLBEING OF
PEOPLE AND
THE GOOD OF THE
ENVIRONMENT**

The HSE (Health, Safety and Environment) Guideline includes the HSE principles and defines the Freudenberg Group's Values and Principles for HSE. The overarching goals are avoiding all accidents, preventive healthcare, and continuously reducing the negative impact of the Group's business on the environment.

Freudenberg is devoted to the well-being of its employees and their personal development. Occupational safety and health are encouraged and practiced at all hierarchy levels within Freudenberg. Health, safety and environmental protection are an integral part of all processes.

This approach has enabled the Freudenberg Group to reduce the number of accidents to a low level relative to industry benchmarks and to maintain this low level. Existing measures are reinforced and enhanced with innovative approaches to ensure continuous improvement. Success in occupational safety serves as a benchmark for other areas of HSE where Freudenberg also engages in continuous improvement. In addition to reducing environmental impacts, this is particularly relevant with regard to health protection.

The safety of employees in the workplace has top priority at Freudenberg. An HSE week is held each year, during which all Freudenberg Group sites are called on to implement HSE initiatives that go beyond daily routines. Focus topics in 2023 included sharpening risk awareness and identifying danger points, as well as preventive healthcare presentations on healthy lifestyle. Furthermore, effective communication was a topic that played a role in emergency and crisis management practical training exercises.

Internal and external audit processes and standardized HSE assessments at sites operated by all Business Groups monitor the implementation of internal standards and programs to improve occupational health, safety and environmental protection, as well as fire prevention. The findings from such audits are systematically evaluated and implemented.

For Freudenberg, accident prevention measures are just as important as schemes to encourage a healthy lifestyle.



Management systems

The roll-out of management systems for occupational safety (ISO 45001) and environmental protection (ISO 14001) continued in the 2023 financial year.

Many sites have introduced energy management systems in accordance with DIN EN ISO 50001 or conduct energy audits pursuant to EN 16246 to improve energy consumption, thereby reducing the impact of industrial activities on the environment.

Investment

The proportion of direct investment in environmental protection, occupational health and safety in overall investment in tangible assets, intangible assets and investment properties was 10.0 percent (previous year: 12.2 percent). A new category of sustainability-related investment was added in 2021. Here, the main focus is on the reduction of energy consumption and carbon dioxide emissions. In 2023, the proportion of investment devoted to sustainability was 2.7 percent.

Environmental protection

Freudenberg is committed to protecting the environment and assumes responsibility for making its activities as environmentally compatible as possible.

The goal is to continuously reduce the negative environmental impact along the entire value chain by using natural resources more efficiently, reducing emissions, saving energy, water and other consumables, and by optimizing transport processes.

Vibracoustic's "zero landfill" concept in Taubaté, Brazil, makes a valuable contribution to the circular economy. The site looked for ways to recycle all its waste and came up with a string of successful measures. Taubaté has avoided sending any waste to a landfill since 2022.

Freudenberg is committed to protecting the environment and assumes responsibility for making its activities as environmentally-compatible as possible.



Freudenberg is committed to protecting the environment, for example by saving water.

Events

In 2023, the Freudenberg Group recorded 39 (previous year: 55) environmental and crisis management events.

There were a number of fires in the year under review relating to post-heating ovens at the Freudenberg Sealing Technologies sites in Luserna (Italy), Weinheim (Germany), Bursa (Turkey), LaGrange (USA), and at Vibracoustic in Morganfield (USA). There were also minor fires at various sites. A fire at Freudenberg Sealing Technologies in Blackburn (UK) was caused by an inverter installed in a photovoltaic array. No employees were injured in any of these incidents.

Some sites, including locations in the USA, Italy, Slovenia and India, were again severely affected by the consequences of natural disasters such as flooding or tornados, some of these incidents resulted in water ingress.

There were also security incidents such as site closures in South Africa due to political protests, blackmailing calls in Mexico, and break-ins at construction sites and hotel rooms at Freudenberg events.

Resource consumption

Freudenberg used 2,485 gigawatt hours of energy in 2023 (previous year: 2,583 gigawatt hours). Consumption breakdown by energy sources is as follows:

- Energy purchased from external sources (electricity, steam and district heat; 1,602 gigawatt hours)
- Gas (810 gigawatt hours)
- Heating oil (14 gigawatt hours)
- Self-generated renewable energy (5 gigawatt hours)

The 2,485 gigawatt hours incurred costs totaling some 249 million euros. Energy costs accounted for 2.1 percent of total sales (previous year: 2.4 percent).

Contaminated sites

Provisions for contaminated sites were some 5.4 percent lower than the previous year.

Work on the rehabilitation plan for the former Freudenberg Sealing Technologies site in Pinerolo, Italy, continued, as did work on the ongoing groundwater monitoring programs at locations such as the Klüber Lubrication site in São Paulo, Brazil, and the Freudenberg Sealing Technologies site in Montrond, France.

Monitoring requirements specified by the authorities were implemented at the Weinheim site and at Freudenberg Sealing Technologies in Bristol, USA and Chem-Trend in Howell, USA.

Preventive healthcare

Freudenberg was able to lift the restrictions imposed as a result of the pandemic at all sites and successfully wrap up site COVID-19 vaccination campaigns in the first half of 2023. This made it easier to organize and hold in-person meetings, site inspections and events.

In 2023, over 30 projects on the topic of preventive healthcare were submitted under the Group-wide “We all take care” Award. The large number of projects is a testament to great commitment and creativity of Freudenberg employees with regard to physical and mental health. The winner chosen by the jury was a project from Vibracoustic in Burgos, Spain. The team there developed an automatic loading system that takes the strain off employees who previously had to load and unload the calibration machine manually. The project is an excellent example of the joint generation and realization of an idea within the local team. It improved ergonomics, with positive effects on the health of employees.

Freudenberg Service provides a permanent and systematically coordinated range of preventive healthcare services at the Freudenberg Group headquarters in Weinheim Industrial Park, Germany. In 2023, Freudenberg health experts cooperated closely with the German Cancer Research Center in Heidelberg, organizing presentations by medical and scientific experts, providing easy-to-read information material, and offering uncomplicated cancer screenings. For example, almost 450 employees voluntarily took part in a skin cancer screening and over 250 employees participated in a screening for bowel cancer. The anonymized evaluation of the screening findings and the follow-up contacts showed that these activities led to the timely identification of anomalies and precancer diagnoses among a large proportion of participants, thus bringing benefits not only for employees, but also for the Freudenberg companies that participated in these initiatives.



Occupational health and safety have top priority at Freudenberg.

Occupational safety

Freudenberg's internal reporting now also uses the WRIFR (Work Related Incident Frequency Rate) in addition to the LDIFR (Lost Day Incident Frequency Rate) performance indicator. These metrics serve as non-financial key performance indicators for the Freudenberg Group. Following an increase in 2022, the LDIFR returned to the 2021 level, and came in at 1.4 (previous year: 1.8). This corresponds to a global figure of 152 accidents at work with a minimum of one day of work lost (previous year: 186). The WRIFR also decreased slightly year-on-year, moving down to 3.4 compared to 3.6 in 2022.

There were four serious accidents in 2023. In two cases, the employees suffered permanent damage to fingers. As a result of two of the accidents, the injured employees spent more than seven days in hospital, but did not suffer any permanent damage.

Occupational safety focuses on measures aimed at raising awareness of safe conduct among all employees as well as the design of safe working systems. This is illustrated by successful "We all take care" ideas submitted by the "Safety at Work" Group. The

projects sent in by the teams from the Freudenberg Home and Cleaning Solutions and Freudenberg Filtration Technologies Business Groups focused on the gamification of HSE training. The project from Freudenberg Filtration Technologies ensured that the language and cultural barriers at the site were overcome by communicating Freudenberg's HSE standards in an engaging way. Freudenberg Home and Cleaning Solutions developed a game based on familiar gaming formats that adopts a fun approach to familiarizing employees with tools that analyze HSE events while at the same time communicating the theoretical background and elements of Freudenberg's safety culture.

With regard to safety culture, the safety culture assessment tool was developed further. The regular internal review of the safety culture at sites is increasingly becoming a mandatory element of the Safety Boost program in the Business Groups.



Corporate citizenship

WE CARE ABOUT SERVING THE COMMUNITY

At Freudenberg, corporate citizenship goes beyond the value chain. The Group wants to be recognized as a good neighbor in the communities where it operates, which is why it supports a whole raft of social projects – from small local initiatives to complex international programs. All the campaigns are tailored to local requirements, and Freudenberg employees often participate in their free time.

Since the founding of the company, Freudenberg has been committed to serving the community. Corporate citizenship was strengthened with the launch of the e² (education and environment) program in 2015. The program's goal is to provide people with access to education and employment and to support environmental protection. The e² program complements existing individual initiatives, providing support for projects on all continents based on a catalog of defined criteria. Total funding currently stands at 21 million euros.

Freudenberg also helps where help is urgently needed. Shortly after the earthquake in Turkey at the beginning of the year, the company made a contribution to the relief effort by donating

250,000 euros to Aktion Deutschland Hilft e.V. and the Red Cross/Turkish Red Crescent. In addition to this, several Business Groups organized donations in kind for those affected in the earthquake region.

Examples of e² projects

So far, the e² initiative has supported some 190 projects worldwide. They all show that commitment can make a difference. Here are some examples:

Japan: A playground for orphans in Osaka

Playground of Hope is a non-profit organization that aims to build playgrounds for around 600 children's institutions in Japan, to fill the gap in public funding for these institutions. These actions focus on promoting the emotional development of children who must often rely on such recreational facilities to meet their needs. Japan Vilene Company employees lent a helping hand and built a playground as part of the e² initiative. Plans have already been made to return to the playground in 2024 to make sure it is in good condition and carry out any necessary repairs.

Brazil: A sensory garden for people with Down syndrome

The "Centro Síndrome de Down" supports more than 500 people with Down syndrome. Thanks to the commitment and support of Chem-Trend and SurTec employees, children and young people with this condition now have a special opportunity to interact with the environment: a garden full of new sensations, such as the barefoot experience in the photo (left) has been built at the center with proactive participation and financial support from Freudenberg.



Germany: Renaturation of “old industries” sites

So-called “old industries” such as quarrying and brown coal mining, have left their mark on the landscape. Working with a primary school at our site in Hückelhoven, Germany, children from the school and Freudenberg Performance Materials employees planted about 50 trees and a wide range of forest shrubs. The project teaches the children about the cycle of nature. At the same time, the countryside undergoes a positive change thanks to the new vegetation. The expected harvest from the fruit trees is to be donated to various social organizations in Hückelhoven.

Mexico: AquaTower for schoolchildren in Quéretaro

Access to clean water still cannot be taken for granted in many parts of the world. Together with the Planet Water Foundation, employees from EagleBurgmann installed an AquaTower in Quéretaro, Mexico, in

November 2023. The AquaTowers take polluted water from streams, rivers, springs and other sources and transform it into drinking water. They filter out pathogens such as bacteria, viruses and micro-organisms and improve the health of schoolchildren and the hygienic conditions in which they and other villagers live. The schoolchildren find out more about hygiene rules such as the right way to wash their hands.

Australia: Better prospects for young indigenous males

Aborigines and Torres Strait Islanders are the most vulnerable ethnic group in Australia. Freudenberg supports the Clontarf Foundation whose mission is to improve the education, discipline, life skills, self-esteem and employment prospects of young Aboriginal and Torres Strait Islander men and by doing so equips them to participate more meaningfully in society.



Employees from EagleBurgmann and the Planet Water Foundation installing an AquaTower in Quéretaro, Mexico.

Here are some examples of the Freudenberg Group's long-term orientation on local aid projects:

Help for people affected by the war in Ukraine

After arranging for the immediate aid which was so important right at the start of the war, Freudenberg focused more closely on organizations dedicated to the long-term support and integration of refugees. So far, some 40 organizations in Ukraine and other European countries have received assistance. One such organization is the Ukrainian Friends Foundation that builds container villages at safe locations in Ukraine. 20 container houses in a village near Lviv were built with donations from Freudenberg. In 2023, Freudenberg arranged for a further ten houses to be built in Bila Zerkwa, some 80 kilometers southwest of Kyiv. The company has also provided funds for maintenance. A container houses up to four people, with preference given to families with children. Each container is connected to the sewage network and contains a small kitchen and dining table, in addition to four beds. Playgrounds have also been built near the containers.

Training center in India

Since 2009, Freudenberg has offered young people the opportunity to qualify as electricians, welders, plumbers, motor mechanics, and machinists under dual training programs at a non-profit training center in Nagapattinam, India, in the province of Tamil Nadu, south of Chennai. So far, more than 800 young people have made a successful start to their careers. Most have found a job in the large, well-known organizations located in and around Chennai. The Nagapattinam region is poor, populated mainly by farmers and fishers, and suffered enormously from the 2004 tsunami.

School project in China

A primary school in the Chinese village of Haijin in Sichuan Province devastated by an earthquake in May 2008 was rebuilt with support from Freudenberg and reopened in 2009. The building has space for up to 300 schoolchildren and can give them a good start to their education. Freudenberg employees visit the school every year and organize various activities such as the summer camp, extra tuition and a Christmas party.

“Service Day” in North America

Every year, more than 60 Freudenberg sites in North America take part in a range of corporate citizenship activities. A large number of employees again came together for the 2023 “Service Day” to plant trees, clean up parks or install water towers.

Standing together against old-age poverty and loneliness: free meals for senior citizens

Every year in the pre-Christmas period, the members of the Works Council collect donations for Weinheim senior citizens in need. The Freudenberg Group doubles the sum raised in this way and the funds are used to provide free hot midday meals and some social interaction for the senior citizens 7 days a week. This initiative has been running for some seventy years.

Freudenberg Foundation

Since 1984, the Freudenberg Foundation has been helping to bring about real, long-term change with programs promoting inclusion, education and democracy. As a non-profit company, the Foundation is a Partner of Freudenberg & Co. Kommanditgesellschaft. The main focus of all its projects is the social, linguistic, educational and professional integration of children and young people.



Compliance

ABIDING BY LAWS AND REGULATIONS

As early as 1887, when his sons joined the company, founder Carl Johann Freudenberg drafted his first principles of business conduct. The document forms the basis for the Freudenberg Group's 10 Business Principles with which Partners and employees identify. One principle stipulates that success has to come from performance; Freudenberg shall not engage in any illegal or unethical business practices.

Business Principles and Guiding Principles

The Guiding Principles derived from the Freudenberg Group's Business Principles define the values shaping conduct towards employees, business partners, stakeholders and third parties.

Compliance structure

Freudenberg is a company whose Business Groups are entrepreneurially-driven and operate with a large degree of independence. Along with the holding company, these Business Groups are therefore responsible for conduct that complies with laws and regulations. Both the Board of Management of Freudenberg SE and the top management of the individual Business Groups clearly subscribe to this. At the holding level, the focus is on compliance issues of critical importance throughout the Business Groups and in an international context that could pose a threat to Freudenberg, especially in terms of the company's reputation.

Freudenberg's ambition is to continuously improve its compliance organization, documentation and processes. Functions at the holding level coordinate Freudenberg-wide compliance measures, thereby strengthening and expanding collaboration between Group-level units and compliance managers in the Business Groups. Among other benefits, this promotes the implementation of Freudenberg's compliance standards, best practice exchange and the further development of compliance programs.

The online training programs on various Compliance issues were updated in 2023 and made available to the Business Groups. E-learning courses are provided for many individual topics, giving employees from defined fields and areas of responsibility the opportunity to raise their awareness of specific compliance issues.

Freudenberg offers its employees online training courses on various Compliance issues.



Code of Conduct

The Code of Conduct is derived from the Business Principles and Guiding Principles, in particular the “Responsibility” Guiding Principle. It covers standards of conduct that are valid worldwide. It is designed to ensure that law-abiding and responsible behavior remains the cornerstone of business conduct.

The Code of Conduct is available to employees worldwide in 26 languages. It was comprehensively revised in 2022 to adequately take account of legislative changes as well as significant developments in the field of compliance standards. In particular the amendments enlarge on specifics with regard to key issues in the areas of human rights and climate protection, such as cooperation with business partners and the prohibition of money laundering. The updated Code of Conduct was communicated and explained to all employees across the globe in 2023. The Business Groups have made use of the available communication channels in many ways. This consistent, continuous communication, which is also mandatory for new employees, and the binding nature of the Code of Conduct (for example, as an appendix to employment contracts) underscore the unequiv-

ocal requirement to adhere to these standards of behavior. The globally standardized e-learning tool on the Freudenberg Code of Conduct that was also extensively revised when the Code of Conduct was updated is an appropriate instrument for all employees to become familiar with the Code’s contents.

Freudenberg plans to strengthen and further develop the role of the Code of Conduct as a cornerstone of corporate culture and to expand help and support for employees and their supervisors. In these efforts, Freudenberg focuses in particular on regular exchange with Business Group Compliance managers and on active collaboration with the Ethics Offices and their members.

The Freudenberg Code of Conduct is available in 26 languages. The globally standardized e-learning tool on the Freudenberg Code of Conduct is an appropriate instrument for all employees to become familiar with the contents.

Ethics Offices

The Ethics Offices are an important element of Freudenberg's Compliance Management System. The Ethics Offices serve as a confidential point of contact for all employees and third parties (i.e. persons outside the Freudenberg Group, such as suppliers or customers) wishing to report an actual or imminent violation of the law or of Freudenberg's Business Principles or Guiding Principles. The option to report compliance violations via a channel that guarantees confidentiality or to give warning of imminent offenses is designed to foster the culture of trust and protect Freudenberg's Values and Principles even more effectively.

Corporate Audit and Risk Management

Aside from the main objective of reviewing the effectiveness of the internal control system in place, the work of Corporate Audit also focuses on identifying other potential risks and/or asset misappropriation.



UN Global Compact Communication on Progress

The UN Global Compact is the world's largest and most important initiative promoting responsible corporate governance. Since signing the Global Compact in 2014, Freudenberg has made a voluntary commitment to ensuring its business is values-based and sustainable.

Freudenberg regularly reports on how the company is implementing the ten principles of the Global Compact and its contribution to achieving the UN Sustainable Development Goals in what is known as the UN Global Compact Communication on Progress (CoP). In this past, this Communication on Progress took the form of the section of the Freudenberg Annual Report entitled "Responsibility for Society" with

its chapters on "Sustainability", "Health, Safety and Environmental Protection", "Corporate Citizenship", "Compliance" and "Employees and Diversity".

However, the UN Global Compact changed the format of the Communication on Progress. Since 2023, all participants – and that includes Freudenberg – must complete a standardized questionnaire containing some 70 questions – mostly multiple choice – in sections on Governance, Human Rights, Labor, Environment and Climate, and Anti-Corruption. The completed questionnaires are available from the UN Global Compact website at <https://www.unglobalcompact.org>.



CONSOLIDATED FINANCIAL STATEMENTS OF FREUDENBERG SE

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CONSOLIDATED STATEMENT OF FINANCIAL POSITION

ASSETS

[€ million]	Note	Dec. 31,2022	Dec. 31,2023
ASSETS			
Intangible assets	(1)	2,743.7	2,636.8
Tangible assets	(2)	2,878.3	2,938.9
Investment properties	(3)	12.2	10.2
Investments in joint ventures	(4)	243.1	222.2
Investments in associated companies	(5)	944.2	931.2
Other financial assets		125.3	130.2
Financial assets		1,312.6	1,283.6
Other non-current assets	(7)	61.2	67.3
Deferred taxes	(26)	291.0	370.9
Non-current assets		7,299.0	7,307.7
Inventories	(6)	1,835.2	1,728.4
Trade receivables		1,810.7	1,751.2
Other current assets		261.1	257.3
Current receivables	(7)	2,071.8	2,008.5
Current tax assets		117.0	157.2
Cash and cash equivalents	(8)	1,827.9	2,237.4
Current assets		5,851.9	6,131.5
		13,150.9	13,439.2

EQUITY AND LIABILITIES

[€ million]	Note	Dec. 31,2022	Dec. 31,2023
EQUITY AND LIABILITIES			
Subscribed capital		450.0	450.0
Capital reserves		50.2	50.2
Retained earnings		6,258.5	6,615.9
Equity without non-controlling interests		6,758.7	7,116.1
Non-controlling interests		349.3	420.0
Equity	(10)	7,108.0	7,536.1
Provisions for pensions and similar obligations	(11)	604.9	655.6
Other long-term provisions	(12)	146.4	137.6
Long-term provisions		751.3	793.2
Financial debt		1,346.5	1,269.0
Other non-current liabilities		165.6	153.4
Liabilities	(13)	1,512.1	1,422.4
Deferred taxes	(26)	295.1	241.6
Non-current liabilities		2,558.5	2,457.2
Other current provisions	(12)	763.0	793.2
Current tax liabilities		121.1	147.1
Financial debt		1,047.4	983.1
Trade payables		1,203.4	1,173.0
Other current liabilities		349.5	349.5
Liabilities	(13)	2,600.3	2,505.6
Current liabilities		3,484.4	3,445.9
		13,150.9	13,439.2

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

[€ million]	Note	2022	2023
Sales	(14)	11,753.1	11,902.8
Cost of sales	(15)	-8,259.5	-8,195.2
Gross profit		3,493.6	3,707.6
Selling expenses	(16)	-1,535.7	-1,584.3
Administrative expenses	(17)	-702.5	-731.7
Research and development expenses	(18)	-506.6	-524.7
Other income	(19)	147.6	158.1
Other expenses	(20)	-96.0	-75.6
Income from investments in joint ventures	(4),(21)	23.3	23.4
Profit from operations		823.7	972.8
Income from investments in associated companies	(5),(22)	43.2	36.8
Other investment result	(23)	27.3	57.0
Other interest and similar income	(24)	24.5	65.2
Interest and similar expenses	(25)	-61.7	-108.2
Financial result		33.3	50.8
Profit before income taxes		857.0	1,023.6
Income taxes	(26)	-217.4	-192.8
Consolidated profit		639.6	830.8
Of which: attributable to Freudenberg		626.5	753.7
Of which: attributable to non-controlling interests	(27)	13.1	77.1

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

[€ million]	Note	2022	2023
Consolidated profit		639.6	830.8
Other comprehensive income:			
Remeasurement of defined benefit plans	(11)	184.3	-58.9
Changes in value of securities		-3.3	10.4
Income tax relating to items that will not be reclassified to profit or loss	(10)	-53.9	17.5
Share in other comprehensive income of joint ventures	(4)	0.0	-0.1
Share in other comprehensive income of associated companies	(5)	-8.7	39.6
Items that will not be reclassified to profit or loss		118.4	8.5
Exchange rate differences	(10)	-38.6	-244.4
Changes in value of derivative financial instruments	(10)	-0.1	0.0
Miscellaneous comprehensive income		1.1	6.3
Income tax relating to items that will be reclassified subsequently to profit or loss when specific conditions are met	(10)	-4.1	3.1
Share in other comprehensive income of joint ventures	(4)	0.6	-0.1
Share in other comprehensive income of associated companies	(5)	38.5	33.2
Items that will be reclassified subsequently to profit or loss when specific conditions are met		-2.6	-201.9
Other comprehensive income for the year		115.8	-193.4
Total comprehensive income for the year		755.4	637.4
Of which: attributable to Freudenberg		734.3	576.0
Of which: attributable to non-controlling interests		21.1	61.4

CONSOLIDATED STATEMENT OF CASH FLOWS

[€ million]	Note	2022	2023
Profit before taxes		857.0	1,023.6
Depreciation, amortization and impairment losses on intangible assets, tangible assets, investment properties and financial assets less write-ups		554.9	566.4
Income from investments and interest income		-59.5	-75.0
Income taxes paid		-343.1	-319.1
Profit or loss on disposal of intangible assets, tangible assets, investment properties and financial assets		20.5	6.0
Dividends received		63.4	120.7
Other expenditure and income not affecting payments		12.1	16.7
Changes in inventories, trade receivables and other assets		-587.3	127.9
Changes in trade payables and other liabilities		179.1	-13.5
Changes in provisions		-50.1	-2.7
Interest paid		-58.5	-105.9
Interest received		19.2	58.6
Cash flow from operating activities	(28)	607.7	1,403.7
Cash inflow from disposals of intangible assets, tangible assets and investment properties		14.0	18.3
Cash outflow from acquisitions of intangible assets, tangible assets and investment properties		-401.5	-452.7
Cash inflow from disposals of financial assets		7.0	14.0
Cash outflow from acquisitions of financial assets		-4.1	-12.0
Cash inflow in connection with the disposal of consolidated companies or other business units less cash disposed of		0.7	0.0
Cash outflows in connection with the acquisition of consolidated companies or other business units less cash acquired		-50.3	-82.9
Cash flow from investing activities		-434.2	-515.3
Dividend payments to shareholders/non-controlling interests	(29)	-137.3	-151.5
Payments from transactions with non-controlling interests		-2.2	-33.4
Cash inflow from the take-up of financial debts		196.1	222.1
Cash outflow from the repayment of financial debts		-575.7	-460.0
Cash inflow from disposals of loans and securities held as non-current assets		9.7	40.5
Cash outflow from acquisitions of loans and securities held as non-current assets		-12.8	-33.3
Cash flow from financing activities		-522.2	-415.6
Changes in cash and cash equivalents with effect on payments	(31)	-348.7	472.8
Changes in cash and cash equivalents from exchange rate differences		-10.2	-63.3
Cash and cash equivalents at beginning of year		2,186.8	1,827.9
Cash and cash equivalents at end of year		1,827.9	2,237.4

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

[€ million]	Subscribed capital	Capital reserves	Currency translation	Remeasurement of defined benefit obligations	Fair value measurement of securities	Financial investments accounted for using the equity method
Status Jan. 1, 2022	450.0	50.2	-107.1	-375.1	12.2	146.1
Changes in consolidated group						
Consolidated profit						
Appropriation of profit						
Other comprehensive income			-46.5	184.1	-3.4	19.4
Status Dec. 31, 2022	450.0	50.2	-153.6	-191.0	8.8	165.5
Status Jan. 1, 2023	450.0	50.2	-153.6	-191.0	8.8	165.5
Changes in consolidated group						
Consolidated profit						
Appropriation of profit						
Other comprehensive income			-226.9	-61.0	10.7	52.2
Status Dec. 31, 2023	450.0	50.2	-380.5	-252.0	19.5	217.7

[€ million]	Tax effects recognized in equity	Other retained earnings	Total retained earnings	Equity without non-controlling interests	Non-controlling interests	Equity
Status Jan. 1, 2022	98.5	5,843.7	5,618.3	6,118.5	372.0	6,490.5
Changes in consolidated group		-0.6	-0.6	-0.6	0.0	-0.6
Consolidated profit		626.5	626.5	626.5	13.1	639.6
Appropriation of profit		-93.5	-93.5	-93.5	-43.8	-137.3
Other comprehensive income	-58.9	13.1	107.8	107.8	8.0	115.8
Status Dec. 31, 2022	39.6	6,389.2	6,258.5	6,758.7	349.3	7,108.0
Status Jan. 1, 2023	39.6	6,389.2	6,258.5	6,758.7	349.3	7,108.0
Changes in consolidated group		-106.7	-106.7	-106.7	48.9	-57.8
Consolidated profit		753.7	753.7	753.7	77.1	830.8
Appropriation of profit		-111.9	-111.9	-111.9	-39.6	-151.5
Other comprehensive income	21.7	25.6	-177.7	-177.7	-15.7	-193.4
Status Dec. 31, 2023	61.3	6,949.9	6,615.9	7,116.1	420.0	7,536.1

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

General

Freudenberg is an international industrial group mainly active as a supplier to the automotive, mechanical engineering, oil and gas, and construction industries as well as the textile and apparel industries. The portfolio also includes medical technology and consumer goods.

The consolidated financial statements of Freudenberg SE, Weinheim, Germany (registered with Mannheim Local Court, HRB 714579), for 2023 have been drawn up in accordance with the International Financial Reporting Standards (IFRS) as they are to be applied in the European Union (EU) as of the date of the statement of financial position (December 31, 2023). Freudenberg SE, Weinheim, Germany, is included in the consolidated financial statements of Freudenberg & Co. Kommanditgesellschaft, Weinheim, Germany, which are published in the "Unternehmensregister" (Business Register).

Freudenberg SE has availed itself of the right as laid down in Sec. 315e (3) HGB ("Handelsgesetzbuch", German Commercial Code) to set up its consolidated financial statements in accordance with IFRS.

The Group currency is the euro. All amounts are indicated in million euros unless otherwise stated.

Accounting standards applied for the first time in the reporting year

In the 2023 financial year, the application of the following amended and new standards was binding for the first time:

Standards/Amendments	Designation	Impact
IAS 8	Amendments to IAS 8 – Definition of Accounting Estimates	No material impact
IAS 12	Amendments to IAS 12 – Income taxes: International Tax Reform – Pillar Two Model Rules	No material impact
IAS 12	Amendments to IAS 12 – Income taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	No material impact
IFRS 17	Insurance Contracts, including Amendments to IFRS 17	No material impact
IFRS 17	Amendments to IFRS 17 – Initial Application of IFRS 17 and IFRS 9: Comparative Information	No material impact
Various standards	Amendments to IAS 1 and IFRS Practice Statement 2 – Disclosure of Accounting Policies	No material impact

Amendments with respect to international tax reform – Pillar Two Model Rules

The amendments to IAS 12 provide for a temporary exception to the recognition and disclosure of information about deferred tax assets and liabilities in connection with the introduction of global minimum

taxation in accordance with the OECD Model Rules for Pillar Two, within the scope of which Freudenberg falls. Freudenberg has availed itself of the exception to recognizing and disclosing information about deferred tax assets and liabilities related to Pillar Two income taxes.

The Pillar Two Model Rules are a new series of agreed uniform international tax regulations to ensure that large multinational enterprises (MNEs), such as Freudenberg pay a minimum tax rate of 15 percent on their corporate income in each country where they are active. In the event that an enterprise is active in a country where the tax rate is lower than the minimum value of 15 percent, an additional tax (top-up tax) must be calculated and paid.

The Pillar Two top-up tax is calculated using special rules which are known as Pillar Two Model Rules or as GloBE (Global Anti-Base Erosion) Rules. The rules are intended to ensure that MNEs pay at least an effective tax rate of 15 percent on their global profit, irrespective of where this profit is earned.

The deadline for the implementation of the new rules recommended by the OECD is January 1, 2024, although the rules will need to be implemented by legislation in each country where they are to be applied. Under EU Directive 2022/2523, the Member States of the European Union are obligated to implement the new rules from January 1, 2024, subject to certain exceptions. Germany has already implemented the rules in national law.

The Pillar Two Top-up Tax may lead to an increase in tax expenses for MNEs. The tax expense and the effective tax rate of the Freudenberg Group are stated in Note (26) below. As the Pillar Two legislation had

not yet entered into force as of the date of the consolidated financial statements, the Freudenberg Group is currently not subject to any additional tax expense in this connection. Freudenberg conducts the greater part of its business in countries where the statutory tax rate is in excess of 15 percent and we do not expect any significant increase in our tax expense as a result of the introduction of the Pillar Two Model Rules. On the basis of our initial analysis, we assume that Pillar Two top-up taxes could be payable in very few countries as these countries have a lower statutory tax rate than 15 percent, or as a result of specific local conditions such as state-subsidized tax incentives.

As a result of the complexity of the application of the legislation and the calculation of GloBE income, the quantitative impact of the legislation which has been agreed or entered into force cannot be finally assessed. Freudenberg has devoted significant internal resources to assessing the new Pillar Two Model Rules, determining the additional requirements to be met by tax data and to verifying the processes that will need to be established so that the Group can meet its obligations in full. These activities are being closely monitored by the Board of Management, external advisers are also consulted, where this is considered to be necessary.

Accounting standards published but not yet applied

The following standards, interpretations and amendments published by the International Accounting Standards Board (IASB) and the IFRS Interpretations Committee are not yet binding. The application of these standards, interpretations and amendments is subject to endorsement by the EU which, in some cases, is still pending.

Standards/Interpretations/Amendments		Application binding from ¹	Endorsed by EU	Probable Impact
IAS 1	Amendments to IAS 1 – Classification of Liabilities as Current or Non-current	January 1, 2024	Yes	No material impact
IAS 1	Amendments to IAS 1 – Non-current Liabilities with Covenants	January 1, 2024	Yes	No material impact
IAS 21	Amendments to IAS 21 – The Effects of Changes in Foreign Exchange Rates: Lack of Exchangeability	January 1, 2025	No	No material impact
IFRS 16	Amendments to IFRS 16 – Lease Liability in a Sale and Leaseback	January 1, 2024	Yes	No material impact
Various standards	Amendments to IAS 7 and IFRS 7 – Supplier Finance Arrangements	January 1, 2024	No	No material impact

¹ From this date or for reporting periods beginning after this date .

Consolidated group

Apart from Freudenberg SE, 59 German (previous year: 57) and 340 foreign (previous year: 346) **affiliated companies**, with respect to which Freudenberg SE has the power to direct the relevant activities of the company, the right to variable returns from the company and the ability to affect such variable returns, are fully consolidated.

Freudenberg operates a joint venture in the field of mechanical seals within the EagleBurgmann Business Group together with the partner Eagle Industry Co., Ltd., Tokyo, Japan. Freudenberg holds a 25-percent stake in EagleBurgmann Japan Co., Ltd., Tokyo, Japan. The partner also holds a 25-percent indirect stake in EagleBurgmann Germany GmbH & Co. KG, Wolf-ratshausen, Germany. According to the joint venture agreement between the partners, Freudenberg exercises control over affiliated companies of the EagleBurgmann Group in which Freudenberg holds less than half of the voting rights of the other company; such affiliated companies are therefore fully consolidated.

In the consolidated financial statements, 1 German (previous year: 1) and 12 foreign (previous year: 12) **joint ventures** are included. These legally independent companies are managed jointly with the partner company in each case. Both parties hold rights to the net assets of the companies. The joint ventures are consolidated using the equity method.

In addition, 9 foreign (previous year: 9) **associated companies** are included in the consolidated financial statements. Freudenberg does not control these companies but only exercises a significant influence. These companies are consolidated using the equity method.

All affiliated companies, joint ventures and associated companies are listed in the “Shareholdings” section attached to these Notes to the Consolidated Financial Statements.

In the year under review, 4 companies were included in the consolidated financial statements as fully consolidated affiliated companies for the first time. 8 companies which had previously been fully consolidated were no longer included as fully consolidated affiliated companies due to sale, liquidation or merger. The timing of the initial consolidation is determined

on the basis of the date when Freudenberg SE gained control. In the event of loss of control, deconsolidation is effected.

Acquisitions and disposals

In July 2023, Freudenberg Home and Cleaning Solutions GmbH, Weinheim, Germany, acquired all the shares in VERMOP GmbH (formerly VERMOP Salmon GmbH), Gilching, Germany (“Vermop”). Vermop offers modular cleaning systems and products for cleaning professionals. The company is fully consolidated as part of the Freudenberg Group. From the Group point of view, this acquisition was not material. The purchase price allocation was still provisional as of the date of the statement of financial position.

The consideration transferred for all acquisitions which were not material from the Group point of view amounted into the upper-double-digit range in millions of euros. In 2023, assets totaling about €49.9 million were acquired as a result of all the acquisitions classed as not material. The resulting goodwill is classed as of secondary importance. In the year under review, the companies contributed about €22.3 million to consolidated sales. If the acquisitions had already taken place on January 1, 2023, the sales of the Freudenberg Group would have been increased by a further amount of €39.0 million.

The purchase price allocations for the acquisition of omniTECHNIK Mikroverkapselungs GmbH, Munich, Germany and the acquisition of all the shares in Precote USA LLC, East Lansing, Michigan, USA, which had not been finalized as at December 31, 2022, were reviewed in the year under review. There were no material changes.

Consolidation methods

The consolidated financial statements are based on the annual accounts of Freudenberg SE and the consolidated companies according to IFRS. All the annual accounts concerned were drawn up as at December 31, 2023. In accordance with IFRS 10, the accounts of the individual companies to be included in the consolidated financial statements were drawn up applying uniform accounting and measurement methods.

The acquisition costs of the individual consolidated companies are set off against the pro-rata share in the fair value of the equity of the companies concerned as of the date of acquisition according to the purchase method. Identifiable acquired assets and liabilities are also included in the consolidated statement of financial position at their fair values as of the acquisition date. Any remaining differences are shown as goodwill.

Inter-company profits and losses, sales, expenses and income and all receivables and payables between consolidated companies are eliminated. Deferred taxes are set up on consolidation transactions affecting net income.

Joint ventures and associated companies are consolidated using the equity method on the basis of financial statements drawn up in accordance with IFRS.

The differences arising from the acquisition of shareholdings in joint ventures and associated companies form part of the book value of the shareholding in the company concerned. Amortization is not recognized on goodwill in subsequent periods. An impairment test is carried out on the book value of the shareholding in the joint venture or associated company as a whole if there are indications that the carrying amount could be impaired.

Accounting and measurement principles

Acquired intangible assets are capitalized at acquisition cost and amortized on a systematic basis.

Systematic amortization is based on the following useful lives:

Software	3 to 8 years
Patents	10 to 12 years on average
Licenses	depending on contract term

Intangible assets with finite useful lives acquired in a business combination are amortized on a systematic basis over useful lives of up to 25 years.

An impairment test is carried out on goodwill at least once per year. For the impairment test, the goodwill acquired is allocated to the groups of cash-generating units expected to benefit from the business combination. In line with internal management reporting, the groups of cash-generating units are represented by the Business Groups. An impairment loss is recognized if the carrying amount of the group of cash-generating units is higher than its recoverable amount. The recoverable amount is the higher of the fair value less costs of disposal and the value in use of the group of cash-generating units.

The value in use of the group of cash-generating units concerned is determined by the discounted cash flow method on the basis of a detailed planning period of five years. The fair value less costs of disposal is determined using an appropriate measurement model. This is based on measurement multipliers, discounted cash flow measurement models, prices quoted on exchanges or other indicators of fair value which are available. The discount rates used for the determination of the fair value are based on the weighted average cost of capital (hereafter WACC) determined separately for each group of cash-generating units.

Impairments of capitalized goodwill are shown under other expenses in the consolidated statement of profit or loss. Reversals of impairments are not recognized with respect to goodwill for which impairments have been recognized.

Impairment losses going beyond goodwill are recognized for individual assets of cash-generating units if the fair value less costs of disposal of such units or the value in use of such units has fallen below their carrying amount.

Provided that such assets meet the requirements of IAS 38, internally generated intangible assets are carried as assets at production cost and are amortized on a systematic basis over their useful lives, if their useful lives are finite.

If the useful life of intangible assets is not considered to be finite, no amortization is effected. An impairment test is carried out on such assets annually. An intangible asset may be regarded as having an indefinite useful life when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash flows for the Group.

Expenditure in connection with development projects is capitalized as intangible assets if, in addition to meeting the criteria of IAS 38, a Group threshold is exceeded. Otherwise, development expenditure is shown as expenses. Capitalized development expenditure is amortized on a straight-line basis over the underlying useful life of the product concerned. Amortization of capitalized development expenditure is normally recognized in research and development expenses.

Tangible assets are capitalized at acquisition or production cost. In the case of assets produced by Group companies, production cost also includes directly attributable cost as well as pro-rata overheads and depreciation.

Borrowing costs are capitalized as part of acquisition or production cost in the case of qualifying assets.

Expenditure for repairs and maintenance is generally shown as expenses. Such expenditure is only capitalized if future economic benefits in connection with such expenditure are probable and the acquisition or production cost can be reliably measured.

Taxable grants and tax-free investment subsidies, normally paid by public bodies, are set off against acquisition or production cost or recognized in the statement of financial position as deferred income.

Movable non-current assets and industrial buildings are depreciated over their useful lives, normally on a straight-line basis.

Systematic depreciation is determined on the basis of the following useful lives:

Buildings	max. 50 years
Machinery and equipment	5 to 20 years
Other fixtures, fittings and office equipment	3 to 20 years

An impairment test on tangible and intangible assets assigned to cash-generating units is always carried out if circumstances or changed conditions indicate that the carrying amount of such cash-generating units may not be recovered. The composition of the cash-generating units is determined at the divisional or regional level as a function of the business model and differs between Business Groups. If the impairment of an asset reflected by a write-down in the past is reduced or eliminated, the impairment loss is reversed. The amortized acquisition or production cost represents the upper limit of measurement in such cases.

Under IFRS 16, right-of-use assets and corresponding payment obligations are recognized for all leased assets. The right-of-use asset represents the lessee's right to use a leased asset (the underlying asset) for an agreed term in return for a charge. In accordance with the relief options allowed by IFRS 16, Freudenberg recognizes lease payments associated with underlying assets of low value as expenses on a straight-line basis in the statement of profit or loss. Assets of low value are identified on the basis of classes of assets. Leased assets in the classes of machinery and equipment, IT equipment and other fixtures, fittings and office equipment are classed as of low value. In the case of leased assets in the other classes of assets land and buildings, passenger cars, fork lift trucks and IT infrastructure, right-of-use assets and corresponding lease liabilities are recognized even if the term of the lease is short (less than 12 months). In the case of contracts which include a lease component and another non-lease component, such as a service installation, Freudenberg recognizes such non-lease components as part of the lease in accordance with the practical expedient allowed by IFRS 16. Right-of-use assets

are depreciated on a straight-line basis over the shorter of the useful life of the asset and the term of the lease. In the event that the exercise of a purchase option is assessed as reasonably certain, the right-of-use asset is depreciated over the useful life of the underlying asset irrespective of the term of the lease.

Land and buildings held to earn rentals from third parties are dealt with as investment properties. Such properties are measured at acquisition cost. Investment properties are depreciated over their useful lives. This approach normally corresponds to straight-line depreciation. Systematic depreciation is calculated on the basis of a maximum useful life of 50 years. The fair value is determined by the discounted cash flow method.

Participations are shown at fair value. In some cases, amortized cost represents the best estimate of fair value.

Investments in joint ventures and associated companies are shown at acquisition cost on first-time consolidation and subsequently adjusted for changes in the share of the shareholder in the net assets of the company concerned. In the event that the losses of a joint venture or associated company attributable to Freudenberg exceed the value of the share in that company, no further impairment losses are recognized. If there is objective evidence of impairment or value recovery in the case of such participations, assumptions concerning future business developments must be made with a view to determining the recoverable amount.

Long-term loans are discounted if the amount of such discount is significant.

Inventories are shown at acquisition or production cost or at net realizable value, where this is lower. Inventories of raw materials and consumables and merchandise are measured by the weighted average cost method. Production cost includes directly attributable costs as well as production and material overheads and depreciation.

On first recognition, receivables and other financial assets are measured at fair value. Fair value normally corresponds to the consideration to be received for goods or services transferred to the customer. Subsequent measurements of such assets are effected at amortized

cost using the effective interest method. Long-term receivables are only discounted if the amount of such discount is significant. A loss allowance is recognized on the basis of the expected loss model. Further information on the expected loss model is given under "Further notes".

Contract assets, which are mainly the result of realization of revenue over time for customer-specific products and development contracts, are recognized at amortized cost. For determining impairment losses on contract assets, the simplified procedure for determining the expected credit losses is applied.

The other financial assets are classified and measured on the basis of the business model within which the financial assets are held and on the basis of contractual cash flows at the time of acquisition. There are differences between the treatment of equity and debt instruments. Investments in equity instruments which are held as long-term strategic participations, and which are not expected to be sold within the short- to medium-term future are measured in equity without effect on net income. Debt instruments with cash flows not consisting solely of interest payments and principal repayments, investments for which another measurement would result in an accounting mismatch and shares in partnerships are measured at fair value through profit or loss. An impairment test is carried out for debt instruments measured at amortized cost or at fair value through other comprehensive income.

Cash at bank or in hand is shown at its nominal value. Cash held in foreign currencies is converted using the exchange rate as of the statement of financial position date. The expected credit loss model is applied. Derivative financial instruments that do not meet the requirements for hedge accounting are measured at fair value through profit or loss.

Non-current assets and groups of assets held for sale are shown separately in the statement of financial position if they are available for immediate sale in their present condition and the sale of such assets is highly probable within the next 12 months. Such assets are shown at the lower of fair value less costs to sell and book value. Systematic depreciation is not recognized on such assets from the date of reclassification. Liabilities included in a disposal group are shown separately under liabilities.

The requirement for the reversal of the impairment of assets has been complied with both for non-current and for current assets. Unless individual standards call for a different measurement, the amortized acquisition or production costs represent the upper limit of measurement in such cases.

Provisions for pensions and similar obligations are determined by the projected unit credit method using actuarial principles. Service cost and the net interest on the net defined benefit liability are recognized under personnel expenses with an impact on net income. Gains and losses from remeasurements of the net defined benefit liability are disclosed under other comprehensive income. Assets held to provide benefits for employees are measured at fair value.

Deferred taxes are calculated on temporary differences between the book values of assets and liabilities in the consolidated statement of financial position and their tax bases, taking into account the applicable national income tax rates valid on the date of realization and already in force on the statement of financial position date. In addition, deferred tax assets are recognized for tax losses carried forward if sufficient taxable income will be available in the future. Deferred tax assets and liabilities are only set off against each other in cases where the income taxes concerned are levied by the same tax authority and concern the same period. In the case of deferred tax assets which are not impaired following the offsetting, it is assumed that future taxable income will be sufficient to allow the realization of the deferred tax assets formed.

Other provisions allow for all recognizable risks and uncertain obligations towards third parties which will probably result in an outflow of resources which can be reliably estimated. Such provisions are recognized at their most probable settlement value and discounted if the amount of such discount is significant. Reimbursement rights in this connection are shown separately under other assets. In its contracts with customers, Freudenberg provides for warranty services for general repair obligations but does not provide for any extended warranties. In accordance with IFRS 15, the existing warranties are mainly classified as assurance-type warranties and are recognized in accordance with IAS 37 – *Provisions, Contingent Liabilities and Contingent Assets*.

Liabilities are disclosed and measured in accordance with IFRS 9 except where another more specific standard is applicable. Liabilities are normally measured at fair value less transaction costs. Subsequent measurements of financial liabilities are normally effected in accordance with IFRS 9 at amortized cost using the effective interest method.

Contract liabilities relate to considerations received from customers in advance of performance under a contract. Contract liabilities are recognized as sales as soon as the promised goods or services have been transferred to the customer.

Lease liabilities include fixed payments defined in the lease (less any lease incentives to be provided by the lessor), variable lease payments that depend on an index or a rate and amounts expected to be payable by the lessee under residual value guarantees. In addition, payments on the basis of purchase or extension options must be taken into consideration if the lessee is reasonably certain to exercise that option. In the case of termination options, penalties for terminating the lease are only to be included if the lease term reflects the lessee exercising an option to terminate the lease. Lease payments must be discounted using the interest rate implicit in the lease if that rate can be readily determined. If that rate cannot be readily determined, the lessee's incremental borrowing rate must be used. This is normally the case with Freudenberg. The specific incremental borrowing rate for a lease is determined on the basis of an interest matrix. This matrix is based on interbank rates and takes into consideration the term and currency of the lease as well as a risk premium.

Put options granted to the holders of non-controlling interests for the sale of their shares are recognized as forward purchases. The item recorded in equity for these shares is de-recognized and a liability measured at fair value, which corresponds to the net present value of the price at the time of exercise, is recognized. As at each statement of financial position date, the liability is remeasured. The remeasurement depends on exchange rate changes, adjustments to corporate planning assumptions and the discount rate. Any resulting changes in book value are recognized with an effect on net income.

Sales are measured at the fair value of the consideration received or to be received. Sales are recognized

when control of the promised good or service is transferred to the customer. Control of an asset refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset.

The delivery of goods normally represents a performance obligation that is satisfied at a specific point in time. In determining the timing of satisfaction, the transfer of control of the asset is taken as the main criterion. Normally, this is the time when the goods are physically delivered to the customer.

Sales from the delivery of customer-specific products are recognized over time, provided Freudenberg has an enforceable right to payment from the customer in an amount that at least compensates Freudenberg for the performance completed to date plus a reasonable profit margin. The amount of revenue is based on the progress towards complete satisfaction of a performance obligation and normally measured on the basis of the units produced.

Sales from the performance of services are recognized in the accounting period in which the services are performed. Revenue is recognized in the amount which Freudenberg has a right to invoice, as this amount of consideration corresponds directly to the value to the customer of Freudenberg's performance completed to date. Customers are normally invoiced monthly.

Sales in connection with customer-specific development projects are realized over time. In the case of fixed-price contracts, the amount of sales is measured based on the cost incurred to date related to the total expected cost to be incurred in connection with the full satisfaction of the performance obligation. In the case of customer-specific development projects for which Freudenberg has a right to consideration from a customer in an amount that corresponds directly to the value to the customer of Freudenberg's performance completed to date, sales are recognized as a practical expedient in the amount of the consideration which Freudenberg has a right to invoice.

Invoices are normally issued following the physical delivery of goods to the customer or the performance of the service promised in the contract. Payments by customers under fixed-price contracts are based on a contractually agreed payment plan. There are normally no contracts with customers under which the time between the transfer of a promised good or service and

payment in connection with such transfer exceeds one year.

In the event that the service performed by Freudenberg exceeds the payments received or to be received by Freudenberg, a contract asset is recognized. As soon as the right to receive the consideration from the customer becomes unconditional, the contract asset is reclassified to trade receivables. If the payments received from the customer exceed the service performed by Freudenberg, a corresponding contract liability is recognized.

The performance obligations entered into by Freudenberg under contracts with customers normally have an expected original duration of one year or less. In the case of longer terms, Freudenberg is normally entitled to consideration corresponding directly to the performance of services completed to date. Accordingly, the performance obligations contracted but not yet (fully) fulfilled on the reporting date are not disclosed.

The consolidated statement of cash flows is broken down into cash flows from operating, investing and financing activities. Effects arising from changes in the consolidated group and the effects of exchange rate differences have been eliminated from the consolidated statement of cash flows. The influence of these effects on cash and cash equivalents is indicated separately. In the consolidated statement of cash flows, interest paid and interest received are allocated to cash flow from operating activities.

The exercise of judgment and estimates in the application of accounting and measurement methods

In some cases, it is necessary to apply accounting methods based on estimates or the exercise of discretion in connection with the establishment of the consolidated financial statements. Normally, these methods include complex, subjective assessments and the use of uncertain assumptions which may be subject to change. It is therefore conceivable that actual amounts in the future and future events may deviate from the forecasts made as estimates for the same reporting period could have been made differently for equally understandable reasons. Such accounting methods based on estimates and the exercise of discretion may therefore have a material impact on the net assets, financial position and results of operations in the consolidated financial statements and may also change over the course of time. The estimates used for the establishment of the consolidated financial statements and the underlying assumptions are regularly reviewed and any changes are taken into consideration as soon as better information is available.

The composition of a cash-generating unit and the determination of the recoverable amount for the performance of impairment tests is connected with assessments made by management concerning future developments and experience gained in the past. The cash flows predicted on the basis of these assessments may be affected by factors including volatility of capital markets, exchange rate fluctuations and expected economic development. The WACCs used for discounting take into account the market risk and the capital structure of companies comparable to the applicable group of cash-generating units. Changes in these factors may have significant impact on the existence or amount of a value impairment. Further details are given in note (1).

The actuarial assessments for the determination of provisions for pensions and similar obligations are based on major assumptions and estimates with respect to the discount rates used and expected future adjustments to salaries and pensions as well as life expectancy. All the parameters used are regularly reviewed as of the statement of financial position date. Any changes in the parameters used may lead to changes in statement of financial position values. Further details are given in note (11).

The determination of the settlement amount of provisions for guarantees and warranties, restructuring, environmental risks and litigation is normally connected with estimates and uncertainty. For the measurement of such values, the assessments of local independent experts are used in some cases. In the future, deviations between actual events and the assumptions made may necessitate adjustments to the Group's provisions. More detailed information on provisions is given in note (12).

The measurement of leases is based in part on estimates and assessments concerning the term of the lease. Extension and termination options must be taken into consideration in the determination of the term if it is reasonably certain that the lessee will exercise an extension option or not exercise a termination option. In assessing whether the lessee is reasonably certain to exercise an option to extend the lease or not to exercise an option to terminate the lease, all relevant facts and circumstances that create an economic incentive for the lessee to exercise or not exercise the option concerned must be taken into consideration. Such aspects may include penalties, fixtures installed on the leased asset by the lessee and the opportunity cost of exercising or not exercising the option concerned. Information on leased assets is given in note (2).

The measurement of certain derivative financial instruments without an active market such as put or call options and earn-out clauses is based on probability predictions and the best possible estimates of the expected settlement amount, taking into consideration recognized mathematical finance methods. The same applies to the determination of expected credit losses recognized as loss allowances in connection with financial instruments measured at amortized cost. Further information on financial instruments is given in "Further notes".

When determining whether sufficient taxable income will be available in the future for assessing the value of deferred tax assets and the usability of losses carried forward, various estimates, including the development of tax planning strategies, must be made. Deviations between the actual results and the estimates made may have an effect on the assets, liabilities and earnings situation. Further details are given in note (26).

The determination of the amount and timing of revenue from contracts with customers is affected by a number of estimations. Sales are recognized in the amount of the consideration to which Freudenberg expects to be entitled. Especially in the case of the delivery of goods the amount of consideration may vary as a result of variable consideration. The amount of variable consideration is based on estimates and is determined upon the inception of the contract and reassessed at the end of each reporting period. The variable consideration is estimated either by using the expected value method or by using the most likely amount method. This depends on which method Freudenberg expects to better predict the amount of consideration to which it will be entitled. Sales are only recognized to the extent that it is highly probable that a significant reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Amounts which have been received (or are to be received) and which will probably have to be refunded are recognized as refund liabilities and disclosed under other liabilities.

For the recognition of sales from customer-specific development projects, estimates need to be made concerning the degree of completion or the total cost of the contract. A change in these estimates may lead to an increase or reduction in sales in the reporting period.

Fair value is determined on the basis of input factors in three defined categories. Determination is based on estimates and assumptions associated with uncertainty. The following fair value measurement hierarchy is applied:

Level 1: Use of quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

Level 2: Determination of fair value using measurement procedures based on observed input factors for similar assets or liabilities in active markets or for identical assets or liabilities in markets that are not active.

Level 3: Measurement of assets and liabilities using measurement methods based on unobservable inputs as adequate observable market data are not available for the measurement of fair value.

Currency translations

The financial statements of almost all companies included in the consolidated financial statements which are not located in the eurozone are drawn up in the national currencies concerned. This is normally the currency of the primary economic environment in which the companies concerned operate (concept of functional currency).

In the accounts of individual companies, foreign-currency receivables and liabilities are translated at the exchange rates as of the date of the statement of financial position.

Goodwill created as a result of acquisitions on or after March 31, 2004, is carried as an asset of the economically independent foreign companies concerned in their respective functional currencies.

In the consolidated financial statements, the financial statements of all companies not located in the eurozone are translated in accordance with the following principles:

- Statement of financial position items are translated at the exchange rate as of the date of the statement of financial position.
- Statement of profit or loss items are translated at average annual exchange rates.
- Differences arising from the use of different exchange rates are recognized in equity without an effect on net income.
- The same principles are used in the case of investments in joint ventures and associated companies consolidated by the equity method.

As a result of the assessment that Argentina and Türkiye are hyperinflation countries, our activities in those countries have been reported in accordance with IAS 29, except in the case of functional activities transacted in a stable currency. Such reporting had no material impact on the net assets, financial position or results of operations of the Group as at December 31, 2023.

The exchange rates of currencies used for currency conversion which are material to the annual financial statements developed as follows:

Country	Currency	Closing rate		Average rate		
		1 euro =	Dec. 31,2022	Dec. 31,2023	2022	2023
Brazil	BRL		5.6386	5.3618	5.4051	5.3940
China	CNY		7.3582	7.8509	7.0744	7.6839
India	INR		88.1710	91.9045	82.7154	89.4343
Japan	JPY		140.6600	156.3300	138.1390	153.1760
Mexico	MXN		20.8560	18.7231	21.0536	19.0658
Poland	PLN		4.6808	4.3395	4.6868	4.5234
USA	USD		1.0666	1.1050	1.0500	1.0829

Differences arising from the use of different exchange rates compared with the previous year are shown in the statement of changes in intangible and tangible assets with respect to non-current assets and in the consolidated statement of comprehensive income with respect to equity.

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(1) Intangible assets

Changes in intangible assets from January 1 to December 31, 2022:

[€ million]	Internally generated software	Concessions, licenses and others ¹	Goodwill	Payments made on account	Intangible assets in course of construction	Total
ACQUISITION/PRODUCTION COST						
Status Jan. 1, 2022	4.5	2,062.9	2,114.2	2.6	5.7	4,189.9
Changes in consolidated group	0.0	17.2	9.8	0.1	0.0	27.1
Exchange rate differences	0.2	3.2	9.2	0.0	-0.1	12.5
Additions	0.1	8.1	0.0	1.3	2.8	12.3
Disposals	0.0	-17.8	0.0	0.0	-0.2	-18.0
Reclassifications ²	0.0	8.5	0.0	-1.6	-6.4	0.5
Status Dec. 31, 2022	4.8	2,082.1	2,133.2	2.4	1.8	4,224.3
AMORTIZATION						
Status Jan. 1, 2022	3.8	1,119.5	220.3	0.0	0.0	1,343.6
Changes in consolidated group	0.0	-0.4	0.0	0.0	0.0	-0.4
Exchange rate differences	0.2	2.9	-0.9	0.0	0.0	2.2
Additions - systematic	0.1	110.5	0.0	0.0	0.0	110.6
Impairment losses	0.0	24.3	17.4	0.0	0.0	41.7
Disposals	0.0	-17.1	0.0	0.0	0.0	-17.1
Status Dec. 31, 2022	4.1	1,239.7	236.8	0.0	0.0	1,480.6
Book value Dec. 31, 2022	0.7	842.4	1,896.4	2.4	1.8	2,743.7

¹Intangible assets identified in connection with purchase price allocations mainly concern customer lists/relations, technologies and know-how.

²The reclassifications also include transfers to other items in the statement of financial position.

Changes in intangible assets from January 1 to December 31, 2023:

[€ million]	Internally generated software	Concessions, licenses and others ¹	Goodwill	Payments made on account	Intangible assets in course of construction	Total
ACQUISITION/PRODUCTION COST						
Status Jan. 1, 2023	4.8	2,082.1	2,133.2	2.4	1.8	4,224.3
Changes in consolidated group	0.0	22.6	40.3	0.2	0.0	63.1
Exchange rate differences	-0.2	-33.2	-30.6	0.0	0.0	-64.0
Additions	0.3	6.9	0.0	0.9	1.7	9.8
Disposals	0.0	-5.9	0.0	-0.1	0.0	-6.0
Reclassifications ²	0.1	3.3	0.0	-1.8	-1.0	0.6
Status Dec. 31, 2023	5.0	2,075.8	2,142.9	1.6	2.5	4,227.8
AMORTIZATION						
Status Jan. 1, 2023	4.1	1,239.7	236.8	0.0	0.0	1,480.6
Changes in consolidated group	0.0	1.6	0.0	0.0	0.0	1.6
Exchange rate differences	-0.1	-23.8	-11.5	0.0	0.0	-35.4
Additions – systematic	0.2	109.2	0.0	0.0	0.0	109.4
Impairment losses	0.0	40.1	0.0	0.0	0.0	40.1
Disposals	0.0	-5.3	0.0	0.0	0.0	-5.3
Reclassifications ²	0.1	-0.1	0.0	0.0	0.0	0.0
Status Dec. 31, 2023	4.3	1,361.4	225.3	0.0	0.0	1,591.0
Book value Dec. 31, 2023	0.7	714.4	1,917.6	1.6	2.5	2,636.8

¹ Intangible assets identified in connection with purchase price allocations mainly concern customer lists/relations, technologies and know-how.

² The reclassifications also include transfers to other items in the statement of financial position.

The impairment losses with respect to concessions, licenses and others recognized in the year under review chiefly concern technologies and customer lists. They are the result of a revised assessment of the future usefulness of these assets.

Goodwill was subjected to an impairment test in the 2023 financial year. Apart from the expected developments in sales and profit as well as net investments of the Business Groups concerned, the basic assumptions used for determining the value in use of the groups of cash-generating units included a growth rate ranging from 0.5 to 2.0 percent (previous year: 0.5 to 2.0 percent) and pre-tax WACCs ranging from 8.8 percent to 14.6 percent (previous year: ranging from

7.2 percent to 15.6 percent). On this basis, it was not necessary to recognize any impairment of goodwill.

The four significant goodwill items are assigned to the groups of cash-generating units Vibracoustic, Freudenberg Filtration Technologies, Freudenberg Chemical Specialities and Freudenberg Sealing Technologies. The WACCs used for the impairment test were 11.8 percent (previous year: 10.6 percent) for Vibracoustic, 10.8 percent (previous year: 10.5 percent) for Freudenberg Filtration Technologies, 12.7 percent (previous year: 11.7 percent) for Freudenberg Chemical Specialities and 12.7 percent (previous year: 11.5 percent) for Freudenberg Sealing Technologies. The assumed sustainable growth rate for all four groups of cash-generating units was 2.0 percent (previous year: 2.0 percent).

The book values of these goodwill items are shown in the following table:

[€ million]	Goodwill	
	Dec. 31,2022	Dec. 31,2023
Vibracoustic	835.9	835.9
Freudenberg Filtration Technologies	259.6	247.4
Freudenberg Chemical Specialities	190.7	203.1
Freudenberg Sealing Technologies	183.8	181.9

The sales of Vibracoustic once again rose in 2023 compared with the previous year. It is expected that global light vehicle production will increase slightly in 2024 compared with the previous year. The annual planning for Vibracoustic assumes growth in sales in 2024.

Freudenberg Filtration Technologies benefited from growth in automotive business in 2023. Compared with the previous year, sales fell across all divisions. While there was stable development in sales and industrial filtration business, sales fell especially in the consumer sector as a result of lower demand for indoor air filtration systems. Operational planning for 2024 assumes growth in the sales of Freudenberg Filtration Technologies.

In 2023, Freudenberg Chemical Specialities was able to assert itself in a difficult economic environment, although product sales volumes lagged behind expectations. Business was characterized by challenges such as price developments on raw materials and energy markets as well as the availability of goods to be purchased. Countermeasures further strengthened efficiency and Freudenberg Chemical Specialities forged ahead with the development of innovative solutions, also with regard to sustainability. Freudenberg Chemical Specialities plans sales growth in 2024.

Freudenberg Sealing Technologies closed the 2023 financial year with good organic growth despite challenges caused by cost increases as a result of inflation and geopolitical crises. With effect from January 1, 2024, the organizational structure was adapted to foster agility and innovation at the same time as leveraging the growth potential offered by new areas of applications. Demand for high-quality sealing products and component solutions developed positively, especially for applications connected with the energy transition and alternative drivetrains. After what was effectively an economic recession impacted key customer industries at the end of 2023, slight, but still positive, growth is expected in 2024.

In the case of a variation in the WACC of up to +1.0 percentage points or a variation in the sustainable growth rate of up to -1.0 percentage points, it would not have been necessary to recognize impairment of any of the goodwill items.

(2) Tangible assets

Changes in tangible assets from January 1 to December 31, 2022:

[€ million]	Land and buildings	Machinery and equipment	Other fixtures, fittings and office equipment	Payments made on account	Construction in progress	Total
ACQUISITION/PRODUCTION COST						
Status Jan. 1, 2022	2,272.2	4,147.6	999.1	36.7	153.5	7,609.1
Changes in consolidated group	-3.5	0.2	0.4	0.0	-0.2	-3.1
Exchange rate differences	12.5	25.9	4.5	0.2	1.5	44.6
Additions	111.5	93.8	73.8	41.5	196.8	517.4
Disposals	-46.4	-117.9	-69.9	-1.1	-1.2	-236.5
Reclassifications ¹	13.9	118.1	18.1	-19.5	-130.6	0.0
Status Dec. 31, 2022	2,360.2	4,267.7	1,026.0	57.8	219.8	7,931.5
DEPRECIATION						
Status Jan. 1, 2022	1,029.2	3,046.7	757.5	0.0	6.2	4,839.6
Changes in consolidated group	-1.9	-0.2	-0.3	0.0	0.0	-2.4
Exchange rate differences	5.8	13.8	3.9	0.0	0.1	23.6
Addition – systematic	120.1	189.9	85.6	0.0	0.0	395.6
Addition - impairment	0.3	5.6	0.1	0.0	0.1	6.1
Write-ups	0.0	-0.7	-0.1	0.0	0.0	-0.8
Disposals	-32.8	-109.7	-65.2	0.0	-0.6	-208.3
Reclassifications ¹	0.0	0.6	-0.8	0.0	0.0	-0.2
Status Dec. 31, 2022	1,120.7	3,146.0	780.7	0.0	5.8	5,053.2
Book value Dec. 31, 2022	1,239.5	1,121.7	245.3	57.8	214.0	2,878.3

¹ The transfers also include reclassifications to other items in the statement of financial position.

Changes in tangible assets from January 1 to December 31, 2023:

[€ million]	Land and buildings	Machinery and equipment	Other fixtures, fittings and office equipment	Payments made on account	Construction in progress	Total
ACQUISITION/PRODUCTION COST						
Status Jan. 1, 2023	2,360.2	4,267.7	1,026.0	57.8	219.8	7,931.5
Changes in consolidated group	13.8	15.3	15.5	0.3	0.0	44.9
Exchange rate differences	-46.5	-89.3	-12.6	-1.5	-4.1	-154.0
Additions	83.0	100.1	91.8	52.5	227.2	554.6
Disposals	-46.8	-122.9	-61.9	-0.3	-5.1	-237.0
Reclassifications ¹	29.8	139.0	27.9	-38.4	-149.8	8.5
Status Dec. 31, 2023	2,393.5	4,309.9	1,086.7	70.4	288.0	8,148.5
DEPRECIATION						
Status Jan. 1, 2023	1,120.7	3,146.0	780.7	0.0	5.8	5,053.2
Changes in consolidated group	2.3	13.2	13.7	0.0	0.0	29.2
Exchange rate differences	-20.4	-67.9	-9.3	0.0	-0.3	-97.9
Addition – systematic	125.0	189.9	90.3	0.0	0.0	405.2
Addition - impairment	0.1	12.0	1.1	0.0	6.1	19.3
Disposals	-35.8	-114.7	-57.4	0.0	0.0	-207.9
Reclassifications ¹	4.1	5.7	-1.5	0.0	0.2	8.5
Status Dec. 31, 2023	1,196.0	3,184.2	817.6	0.0	11.8	5,209.6
Book value Dec. 31, 2023	1,197.5	1,125.7	269.1	70.4	276.2	2,938.9

¹ The transfers also include reclassifications to other items in the statement of financial position.

For impairments of tangible assets, Freudenberg received compensation totaling €6.0 million (previous year: €7.6 million) in the year under review. The impairments were largely due to natural catastrophes.

During the year under review, Freudenberg received government grants in the amount of €0.9 million (previous year: €0.2 million), which were included in the assets of property, plant, and equipment.

Additional disclosures on leased assets – right-of-use assets

As a result of the application of IFRS 16, Freudenberg recognizes right-of-use assets in respect of leased assets. The following amounts are recognized in the statement of changes in tangible assets under the category “Land and buildings” (land and buildings) or “Other fixtures, fittings and office equipment” (passenger cars, forklift trucks and IT infrastructure):

[€ million]	Land and buildings	Passenger cars	Forklift trucks	IT infrastructure	Total
Acquisition/Production cost	524.6	76.9	33.6	10.3	645.4
Of which: additions	97.9	22.0	5.5	2.5	127.9
Depreciation	212.2	44.2	18.9	5.7	281.0
Book Value Dec. 31, 2022	312.4	32.7	14.7	4.6	364.4

[€ million]	Land and buildings	Passenger cars	Forklift trucks	IT infrastructure	Total
Acquisition/Production cost	549.8	85.3	35.3	8.4	678.8
Of which: additions	61.9	29.8	7.3	0.3	99.3
Depreciation	257.5	45.9	20.8	5.7	329.9
Book Value Dec. 31, 2023	292.3	39.4	14.5	2.7	348.9

In the 2023 financial year, the interest expense for leased assets amounted to €8.9 million (previous year: €6.2 million). In addition, expenses for leased assets of low value and short-term leases were recognized in the statement of profit or loss in the amount of €22.4 million (previous year: €19.3 million). The total cash outflow for leasing in 2023 was €138.9 million (previous year: €127.0 million).

(3) Investment properties

Details of land and buildings held by Freudenberg as investment properties are shown in the table below:

[€ million]	2022	2023
Rent income	5.3	5.3

There are no restrictions on the saleability of investment properties. There are no contractual obligations to purchase, build or develop investment properties. Furthermore, Freudenberg is not under any contractual obligations to repair or maintain such investment properties going beyond its statutory obligations.

There were no significant direct operating expenses in the year under review or in the previous year.

Changes in investment properties from January 1 to December 31:

[€ million]	2022	2023
ACQUISITION/PRODUCTION COST		
Status Jan. 1	55.2	55.2
Reclassifications	0.0	-1.6
Status Dec. 31	55.2	53.6
DEPRECIATION		
Status Jan. 1	41.3	43.0
Additions - systematic	1.7	1.5
Reclassifications	0.0	-1.1
Status Dec. 31	43.0	43.4
Book value Dec. 31	12.2	10.2

The fair value of investment properties was €38.0 million (previous year: €31.6 million) and was calculated on the basis of discounted cash flows (level 3 inputs).

(4) Investments in joint ventures

The joint venture agreement with NOK Corporation, Tokyo, Japan, is of major importance for Freudenberg.

NOK-Freudenberg Singapore Pte. Ltd., Singapore, is a 50:50 joint venture between the Japanese NOK Corporation and Freudenberg SE with the objective of

servicing the high-growth Chinese and Indian markets with locally-produced and imported sealing products.

The summarized financial information of this joint venture company is set out below:

[€ million]	NOK-Freudenberg Singapore Pte. Ltd.	
	Dec. 31,2022	Dec. 31,2023
Current assets	326.8	293.5
Of which: cash and cash equivalents	126.4	102.6
Non-current assets	283.4	276.4
Current liabilities	131.3	131.3
Of which: current financial liabilities	12.5	19.1
Non-current liabilities	16.6	16.9
Equity without non-controlling interests	462.3	421.7
Freudenberg share	50.0 %	50.0 %
Pro-rata share in equity	231.2	210.8
At-equity measurement	231.2	210.8

	2022	2023
Sales	529.6	483.4
Profit or loss from continuing operations	45.1	45.6
Other comprehensive income	-6.6	-20.5
Total comprehensive income	38.5	25.1
Of which: depreciation and amortization	-29.6	-29.0
Of which: interest income	1.7	2.8
Of which: interest expenses	-1.1	-1.3
Of which: income tax expense or income	-18.5	-12.7

Freudenberg received a dividend amounting to €31.0 million (previous year: €8.4 million) from NOK-Freudenberg Singapore Pte. Ltd.

The total carrying amount of interests in all individual joint ventures which are not material was €11.4 million (previous year: €11.9 million).

The pro-rata share of the profit or loss from continuing operations of all individual joint ventures classed as not material was €0.6 million (previous year: €0.8 million) and the pro-rata share in other comprehensive income was €-0.2 million (previous year: €0.2 million).

(5) Investments in associated companies

For Freudenberg, its most important investment in associated companies is its participation in the Japanese company NOK Corporation with its registered office in Tokyo, Japan.

The NOK Group manufactures and supplies sealing products, flexible printed circuits, roll products for office equipment and further products such as specialty lubricants.

This major associated company provided the following figures in its consolidated interim financial statements as at December 31:

[€ million]	NOK Corporation	
	Dec. 31, 2022	Dec. 31, 2023
Current assets	2,916.5	2,749.2
Non-current assets	3,159.2	3,179.5
Current liabilities	1,374.6	1,435.3
Non-current liabilities	738.7	685.9
Treasury shares	-17.5	-81.4
Non-controlling interests	378.6	321.6
Equity without treasury shares and non-controlling interests	3,601.3	3,567.3
Freudenberg share	25.1%	25.1%
Pro-rata share in equity	903.9	895.4
Goodwill	7.1	7.1
At-equity measurement	911.0	902.5

	2022	2023
Sales	5,186.6	4,813.3
Profit or loss from continuing operations	179.4	161.9
Other comprehensive income	135.4	295.2
Total comprehensive income	314.8	457.1

The rise in the other comprehensive income of NOK Corporation is due to the positive developments in exchange rates, securities and actuarial gains.

Freudenberg received dividends in the amount of €24.0 million (previous year: €18.1 million) from NOK Corporation.

As at December 31, 2023, the market value of the shareholding in NOK Corporation was €523.0 million (¥81,765.3 million) (previous year: €362.7 million; ¥51,019.1 million).

The total carrying amount of interests in all associated companies classed as not material was €28.7 million (previous year: €33.2 million).

The pro-rata share in the profit or loss from continuing operations of all individual associated companies classed as not material was €2.5 million (previous year: €6.0 million) and the pro-rata share in the other comprehensive income of these companies was €-2.3 million (previous year: €-0.7 million). The pro-rata share in the total comprehensive income was therefore €0.2 million (previous year: €5.3 million).

(6) Inventories

Inventories break down as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Raw materials and consumables	653.5	595.5
Work in progress	225.1	237.6
Finished goods and merchandise	878.1	808.7
Customer-specific tools in construction	72.7	82.3
Payments made on account	5.8	4.3
	1,835.2	1,728.4

Inventories fell by €106.8 million compared with the previous year. After eliminating the effects of changes in the consolidated group and exchange rate effects, inventories decreased by about 4.6 percent.

Write-downs of inventories totaling €49.2 million (previous year: €57.6 million) were recognized as expenses in the reporting year.

Write-ups totaling €31.9 million (previous year: €27.4 million) were recognized in accordance with the requirement to reverse write-downs as the reason for the impairment losses concerned no longer existed.

The inventories shown are not subject to any significant restrictions on title or disposal.

(7) Receivables

[€ million]	Dec. 31,2022	Dec. 31,2023
Trade receivables	1,810.7	1,751.2
Of which: Residual term up to 1 year	1,810.7	1,751.2
Other assets	322.3	324.6
Of which: Residual term up to 1 year	261.1	257.3
Of which: Residual term more than 1 year	61.2	67.3

After adjustment for effects resulting from changes in the consolidated group and exchange rate effects, trade receivables fell by about 2 percent.

Contract assets have not been disclosed as a separate item but under other assets in the statement of financial position, because the amount concerned was not material. As at December 31, 2023, contract assets amounted to €10.9 million (previous year: €8.6 million). Changes in contract assets are mainly the result of the satisfaction of performance obligations laid down in contracts with customers. Contract assets are normally a result of contracts meeting the requirements for the realization of sales over time.

The other assets include pension plan assets in excess of the corresponding pension obligations amounting to €10.8 million (previous year: €7.8 million).

The other assets also include other tax receivables in the amount of €98.0 million (previous year: €100.2 million) and liability insurance claims totaling €4.2 million (previous year: €4.4 million).

The claims for reimbursement in connection with recognized provisions, which are included in other assets, are shown in the other provisions under note (12).

(8) Cash and cash equivalents

[€ million]	Dec. 31,2022	Dec. 31,2023
Securities	161.1	151.0
Checks and cash in hand	2.1	0.3
Cash at banks	1,664.7	2,086.1
	1,827.9	2,237.4

The securities are highly liquid investments with short terms.

The increase in liquidity is the result of higher cash at banks. Further information is given in the notes to the consolidated statement of cash flows.

(9) Assets and groups of assets held for sale

As at December 31, 2023 (as in the previous year), no assets or liabilities were classified as held for sale.

(10) Equity

The subscribed capital in the amount of €450.0 million (previous year: €450.0 million) consists of 450 million no-par-value registered shares. The sole shareholder of Freudenberg SE is Freudenberg & Co. Kommanditgesellschaft, Weinheim (hereafter: Freudenberg & Co. KG).

The reserves break down as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Capital reserves	50.2	50.2
Retained earnings	6,258.5	6,615.9
	6,308.7	6,666.1

The capital reserves consist of contributions in kind made by the shareholder.

The retained earnings include net income earned by the Group in the past and not distributed as well as reserves of companies included in the consolidated financial statements including expenses and income recorded without effect on net income.

The profit distributed in the reporting year amounted to €111.9 million (previous year: €93.5 million). This corresponded to a profit per share of €0.25 (previous year: €0.21).

The Board of Management proposes that the 2023 net retained profit in the amount of €4,153.0 million (previous year: €3,551.1 million) should be carried forward to new account.

In the reporting year, income (+) and expenses (-) which had previously been recorded without an effect on net income with respect to the following components of other comprehensive income were reclassified to the statement of profit or loss:

[€ million]	Dec. 31,2022	Dec. 31,2023
Exchange rate differences	5.3	-0.7
	5.3	-0.7

In the 2023 financial year, tax effects (income (+) / expenses (-)) recorded without effect on net income are attributable to the various items of other comprehensive income as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Remeasurement of defined benefit plans	-53.2	17.7
Securities and other items	-4.1	2.9
	-57.3	20.6

Non-controlling interests

The change in non-controlling interests in the equity of consolidated affiliated companies from €349.3 million to €420.0 million was mainly the result of the allocation of profit for the year and the acquisition of non-controlled interests. This change was offset by dividends paid and exchange rate differences.

In the case of the following affiliated company, the consolidated financial statements include significant non-controlling interests in the amount of 25 percent of the shares:

[€ million]		
Freudenberg-NOK General Partnership, Wilmington, Delaware, USA	Dec. 31,2022	Dec. 31,2023
Profit (+)/loss (-) attributable to non-controlling interests	20.0	25.6
Total amount of non-controlling interests	159.7	181.2

This affiliated company is included in the consolidated financial statements with the following values:

[€ million]		
Freudenberg-NOK General Partnership, Wilmington, Delaware, USA	Dec. 31,2022	Dec. 31,2023
Current assets	520.3	578.7
Non-current assets	306.5	297.8
Current liabilities	127.5	121.0
Non-current liabilities	32.2	27.7

	2022	2023
Sales	810.2	843.7
Profit (+)/loss (-)	127.5	124.9
Total comprehensive income	159.1	99.2

Freudenberg-NOK General Partnership, Wilmington, Delaware, USA, paid dividends in the amount of €9.6 million (previous year: €5.0 million) to the holder of the non-controlling interests.

Other non-controlling interests especially concern the EagleBurgmann Business Group, where they arise as a result of the contractual agreements with the partner Eagle Industry Co. Ltd., Tokyo, Japan.

(11) Provisions for pensions and similar obligations

The Freudenberg pension scheme consists of both defined contribution and defined benefit pension plans. Defined benefit plans include both fixed salary and final salary plans. The provisions for pensions and similar obligations include obligations arising from current pensions and future pension entitlements.

The pension plans at the Freudenberg Group mainly concern German, Japanese and British companies. The pension obligations of the German companies are commitments financed by provisions. These obligations are subject to the rules of the pension plan concerned and the applicable statutory provisions. The plans include benefit commitments dependent on service periods and on salaries and provide for disability benefits and benefits for surviving dependents as well as for retirement benefits.

The pension plans of British companies are managed by third party pension funds. The representatives of the pension funds are legally obliged to act in the interest of all participants in the plan. In cooperation with investment advisers, they are responsible for the development and regular review of investment strategies for the plan assets. Commitments based on age and years of service include both retirement benefits and certain forms of survivor benefits. Most of these plans are frozen and future entitlements can no longer be earned by plan participants. The pension obligations of these companies are mainly financed by plan assets, funded chiefly by employers' contributions.

The pension plans in Japan consist of benefit commitments based on age and years of service. These pension plans are managed by a third-party pension fund. The pension obligations of the Japanese companies are mainly financed by plan assets, funded solely by employers' contributions.

Apart from pension obligations, this item also includes obligations similar to pensions, such as amounts paid to employees upon the termination of their employment which do not constitute termination benefits. These benefits vary in accordance with the legal, tax and economic conditions in the countries concerned.

All defined benefit schemes of the Freudenberg Group are subject to typical actuarial risks, especially investment and interest risks.

Current service cost and net interest on the net defined benefit liability are disclosed in the statement of profit or loss under personnel expenses in the relevant functional areas.

In the case of the defined contribution plans, there are no additional obligations apart from the payment of contributions. Contributions paid are expensed under personnel expenses and amounted to €27.9 million in 2023 (previous year: €31.4 million).

The defined benefit obligations were calculated on actuarial principles by the projected unit credit method. The calculation was based on the following discount rates as major actuarial assumptions:

	Dec. 31,2022	Dec. 31,2023
Germany	3.70 %	3.20 %
Japan	1.51 %	1.37 %
United Kingdom	4.80 %	4.53 %

In the case of the other foreign companies, the discount rates ranged from 1.4 to 25.6 percent (previous year: 1.5 to 10.2 percent).

The Heubeck 2018 G actuarial tables were used in the case of the German companies. A uniform trend in salaries and pensions of 2.5 percent was defined for the relevant pension plans. As a result of the pension plan regulations, the assumed trend in salaries and pensions only has an effect on the value of pension obligations in exceptional cases.

Net obligations are shown in the following items of the statement of financial position:

[€ million]	Dec. 31,2022	Dec. 31,2023
Provisions for pensions and similar obligations	604.9	655.6
Other assets	7.8	10.8
	597.1	644.8

Net obligations are calculated as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Present value of funded obligations	345.9	340.8
Fair value of plan assets	-346.8	-340.8
Surplus (-)/deficit (+)	-0.9	0.0
Present value of unfunded obligations	598.0	644.8
	597.1	644.8

Defined benefit obligations developed as follows:

[€ million]	Germany	Japan	United Kingdom	Miscellaneous	2022
Present value of defined benefit obligations, Jan. 1, 2022	728.8	123.7	331.9	114.5	1,298.9
Current service cost	15.9	3.6	0.0	5.2	24.7
Interest cost	7.2	0.6	5.6	2.2	15.6
Gains (-) and losses (+) from remeasurement of defined benefit obligations	-196.0	-9.2	-99.4	-15.0	-319.6
Gains (-) and losses (+) on settlements	0.0	0.0	0.0	0.0	0.0
Past service cost	0.1	0.0	0.0	2.0	2.1
Contributions by plan participants	0.0	0.0	0.0	0.5	0.5
Liabilities extinguished on settlements	0.0	0.0	0.0	-0.1	-0.1
Benefits paid	-20.9	-4.8	-14.0	-12.2	-51.9
Changes in consolidated group	0.0	0.0	0.0	-2.0	-2.0
Other changes	0.0	0.0	0.0	-0.8	-0.8
Exchange rate differences	0.0	-9.0	-17.5	3.0	-23.5
Present value of defined benefit obligations, Dec. 31, 2022	535.1	104.9	206.6	97.3	943.9

[€ million]	Germany	Japan	United Kingdom	Miscellaneous	2023
Present value of defined benefit obligations, Jan. 1, 2023	535.1	104.9	206.6	97.3	943.9
Current service cost	14.6	2.7	0.0	4.8	22.1
Interest cost	19.4	1.2	9.8	3.9	34.3
Gains (-) and losses (+) from remeasurement of defined benefit obligations	53.3	2.3	-0.5	-0.5	54.6
Gains (-) and losses (+) on settlements	0.0	0.0	0.0	0.0	0.0
Past service cost	0.0	-0.1	0.0	-0.7	-0.8
Contributions by plan participants	0.0	0.0	0.0	0.7	0.7
Liabilities extinguished on settlements	-16.1	0.0	0.0	0.2	-15.9
Benefits paid	-21.5	-5.4	-12.4	-8.0	-47.3
Changes in consolidated group	0.0	0.0	0.0	-0.8	-0.8
Other changes	0.6	0.5	0.0	-0.4	0.7
Exchange rate differences	0.0	-10.5	4.3	0.3	-5.9
Present value of defined benefit obligations, Dec. 31, 2023	585.4	95.6	207.8	96.8	985.6

The plan assets of funded pension plans developed as follows:

[€ million]	Japan	United Kingdom	Miscellaneous	2022
Fair value of plan assets, Jan. 1, 2022	121.3	351.8	42.6	515.7
Interest income	0.0	6.0	0.3	6.3
Gains (-) and losses (+) from remeasurement of plan assets	-15.4	-118.1	-1.7	-135.2
Contributions by employer	0.9	4.6	3.1	8.6
Contributions by plan participants	0.0	0.0	0.5	0.5
Liabilities extinguished on settlements	0.0	0.0	0.0	0.0
Benefits paid	-0.3	-14.0	-6.4	-20.7
General plan administration costs	0.0	-0.2	0.0	-0.2
Changes in consolidated group	0.0	0.0	-1.8	-1.8
Other changes	0.5	0.0	-0.6	-0.1
Exchange rate differences	-8.9	-18.5	1.1	-26.3
Fair value of plan assets, Dec. 31, 2022	98.1	211.6	37.1	346.8

[€ million]	Japan	United Kingdom	Miscellaneous	2023
Fair value of plan assets, Jan. 1, 2023	98.1	211.6	37.1	346.8
Interest income	1.4	10.2	0.7	12.3
Gains (-) and losses (+) from remeasurement of plan assets	-2.1	-3.0	0.8	-4.3
Contributions by employer	4.2	3.7	3.5	11.4
Contributions by plan participants	0.0	0.0	0.7	0.7
Liabilities extinguished on settlements	0.0	0.0	0.0	0.0
Benefits paid	-5.0	-12.4	-3.5	-20.9
General plan administration costs	0.0	-0.2	0.0	-0.2
Changes in consolidated group	0.0	0.0	0.0	0.0
Other changes	0.5	0.0	0.0	0.5
Exchange rate differences	-9.8	4.4	-0.1	-5.5
Fair value of plan assets, Dec. 31, 2023	87.3	214.3	39.2	340.8

The fair value of plan assets with quoted prices in active markets was as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Equity instruments	37.3	52.1
Interest-bearing securities	70.8	75.3
Other assets	216.7	190.6
	324.8	318.0

The fair value of plan assets without quoted prices in active markets was as follows:

[€ million]	Dec. 31,2022	Dec. 31,2023
Interest-bearing securities	0.3	1.1
Other assets	21.7	21.7
	22.0	22.8

In the following year, contributions in the amount of €14.1 million (previous year: €12.4 million) will probably be made to plan assets. Furthermore, an amount of €16.1 million was settled with respect to the Board of Management from existing pension obligations in the year under review. The weighted average duration of defined benefit obligations as at the end of the reporting year was 13.6 years (previous year: 13.3 years).

As at the end of the financial year, expected discounted pension payments as a function of the due date were as follows.

[€ million]	Dec. 31,2023
2024	48.7
2025-2028	229.1
2029-2033	273.7

In the reporting year, gains and losses from the re-measurement of the defined benefit obligations and plan assets recognized in retained earnings developed as follows:

[€ million]	2022	2023
Gains (+) and losses (-) from remeasurement, Jan. 1	-363.0	-173.7
Gains (+) and losses (-) from remeasurement of defined benefit obligations	319.6	-54.6
Of which: as a result of changed financial assumptions	340.1	-47.7
Of which: as a result of changed demographic assumptions	2.9	1.6
Of which: as a result of experience-based adjustments	-23.4	-8.5
Gains (+) and losses (-) from remeasurement of plan assets	-135.3	-4.3
Reclassifications/other changes	-16.9	0.2
Exchange rate differences	21.8	-2.0
Gains (+) and losses (-) from remeasurement, Dec. 31	-173.8	-234.4

The possible changes in the defined benefit obligation as a result of changes in the discount rate, a major actuarial assumption, were calculated on the basis of the projected unit credit method. If the discount rate as at the statement of financial position date had been 0.50 percentage points lower, the present value of defined benefit obligations as at the statement of financial position date would have been €43.7 million (previous year: €50.6 million) higher. If the discount rate as at the statement of financial position date had been 0.50 percentage points higher, the present value of defined benefit obligations as at the statement of financial position date would have been €74.0 million (previous year: €62.4 million) lower.

(12) Other provisions

[€ million]	Personnel obligations	Warranties and guarantees	Restructuring	Miscellaneous	Total
Status Jan. 1, 2023	463.8	95.5	32.6	317.5	909.4
Increases	359.3	34.5	31.9	178.7	604.4
Unwinding of discount and effect of change in discount rate	-0.1	0.0	0.0	0.6	0.5
Amounts used	-285.4	-14.8	-8.9	-119.7	-428.8
Reversal	-31.7	-25.7	-9.3	-76.8	-143.5
Exchange rate differences	-7.0	-0.6	-0.6	-5.1	-13.3
Changes in consolidated group	1.5	0.4	0.0	0.4	2.3
Other changes	0.5	0.1	-0.3	-0.5	-0.2
Status Dec. 31, 2023	500.9	89.4	45.4	295.1	930.8
Of which: long-term	74.8	18.1	2.9	41.8	137.6
Of which: short-term	426.1	71.3	42.5	253.3	793.2
Reimbursement claims connected with provisions and shown in the statement of financial position under other assets	0.2	0.0	0.0	0.0	0.2

The provisions for personnel obligations mainly include provisions for other short-term employee benefits such as bonuses and commissions, provisions for vacation not taken and other long-term employee benefits such as long-term remuneration components as well as provisions for partial early retirement and provisions for termination benefits.

The provisions for guarantees and warranties concern products supplied and services rendered. Provisions for restructuring are recognized if a detailed, formal restructuring plan has been prepared and communicated to the parties concerned. The provisions cover expenditure directly connected with the measures adopted.

The miscellaneous provisions include the following items:

[€ million]	Dec. 31, 2022	Dec. 31, 2023
Commissions	38.8	35.8
Onerous contracts	28.9	26.3
Legal action	28.1	22.9
Other	221.7	210.1
Total	317.5	295.1

(13) Liabilities

[€ million]	Residual term		Dec. 31,2022	Residual term		Dec. 31,2023
	Short-term	Long-term		Short-term	Long-term	
Liabilities to banks (= financial debt)	120.3	367.5	487.8	55.3	337.5	392.8
Cash pool liabilities	114.7	0.0	114.7	143.2	0.0	143.2
Other financial debt	90.6	62.6	153.2	32.0	31.0	63.0
Lease liabilities	94.2	269.1	363.3	99.2	246.2	345.4
Shareholder's loans	412.0	300.0	712.0	422.0	300.0	722.0
Accounts of Freudenberg & Co. KG Partners	215.6	347.3	562.9	231.4	354.3	585.7
Financial debt	1,047.4	1,346.5	2,393.9	983.1	1,269.0	2,252.1
Trade payables	1,203.4	0.0	1,203.4	1,173.0	0.0	1,173.0
Contract liabilities	59.7	0.0	59.7	61.0	0.0	61.0
Miscellaneous liabilities	289.8	165.6	455.4	288.5	153.4	441.9
Other liabilities	349.5	165.6	515.1	349.5	153.4	502.9
	2,600.3	1,512.1	4,112.4	2,505.6	1,422.4	3,928.0

The average interest rate on long-term liabilities to banks is 1.97 percent (previous year: 1.03 percent). The other financial debt includes loans by third parties with an interest rate between 4.77 and 5.00 percent on the long-term portion.

The interest payable on the certificates of indebtedness included in the liabilities to banks is based on variable and fixed components. Cash flows for variable and fixed interest and repayment of principal will probably be as follows from 2024 to 2027:

[€ million]	Book value	Cash flows		
		Dec. 31,2023	2024	2025
Certificates of indebtedness	294.0	6.8	168.7	137.6

The cash pool liabilities towards the parent company and its affiliates are not included in the consolidated group of Freudenberg SE and are of a short-term nature.

[€ million]	Dec. 31,2023
2024	94.3
2025-2028	193.5
2029 ff.	84.4

Lease liabilities have been recognized since 2019 as a result of the application of IFRS 16. As at December 31, 2023, possible future cash outflows in the amount of €29.1 million (previous year: €36.0 million) were not included in lease liabilities because a lease had been concluded but not yet incepted as at the date of the statement of financial position or because it was not assessed as reasonably certain that an extension option would be exercised. The cash flows for the leasing liabilities shown in the statement of financial position break down as follows:

The loans granted by the shareholder were extended during the reporting year. Interest is payable on these loans at rates between 2.34 and 5.25 percent (previous year: between 2.34 and 3.83 percent). The long-term portion of these loans consists of two tranches of the same amount, one with a term of three years and one with a term of four years.

The interest rates applicable to deposits in accounts of Freudenberg & Co. KG Partners as at the date of the

statement of financial position vary between 3.49 and 5.00 percent depending on the individual agreements (previous year: between 0.50 and 4.20 percent). The long-term portion of these accounts has a term of between one year and five years.

Miscellaneous liabilities include liabilities for outstanding wages and salaries, holiday pay and special bonuses

and liabilities for other taxes, as well as liabilities in connection with social security and other refund liabilities. The long-term portion of the miscellaneous liabilities, as in the case of the financial debt, chiefly has a term of less than five years.

Contingent liabilities and other financial obligations

[€ million]	Dec. 31,2022	Dec. 31,2023
CONTINGENT LIABILITIES		
Guarantees	14.6	14.6
Warranty agreements	0.6	0.3
Miscellaneous	2.6	3.6
	17.8	18.5
OTHER FINANCIAL COMMITMENTS		
Purchase commitments in connection with the delivery of goods and services	157.3	172.7
Purchase commitments in connection with tangible assets	85.4	94.9
Purchase commitments in connection with intangible assets	0.1	0.1
Miscellaneous	4.5	7.5
	247.3	275.2

In addition, the following contingent liabilities and other financial commitments concern joint ventures:

[€ million]	Dec. 31,2022	Dec. 31,2023
CONTINGENT LIABILITIES		
Warranty agreements	13.6	18.0
	13.6	18.0
OTHER FINANCIAL COMMITMENTS		
Purchase commitments in connection with the delivery of goods and services	1.2	0.8
	1.2	0.8

NOTES TO THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

(14) Sales

[€ million]	2022	2023
Sales from sales of goods	11,500.9	11,642.1
Sales from research and development / research and development licenses	116.1	113.6
Sales from services	16.9	33.7
Sales from production-related licenses	2.3	0.1
Other sales	116.9	113.3
	11,753.1	11,902.8

Other sales include, inter alia, sales from the sale of customer-specific tools, sales from rental and lease contracts and sales from support and supplementary operations. At Freudenberg, long-term performance obligations arise under rental and lease agreements. Further details are given in note (3).

The breakdown of sales by sectors is given below:

[€ million]	2022	2023
Automotive OEMs	4,593.6	4,997.6
Final users	1,439.8	1,378.2
Mechanical and plant engineering	1,162.0	1,175.1
Construction	739.4	655.9
Spare parts business	585.5	588.1
Medicine and pharmaceuticals	506.5	542.3
Textile and apparel	582.1	510.3
Energy and water	483.1	498.4
Chemical	270.9	269.5
Other industry sectors	1,390.2	1,287.4
	11,753.1	11,902.8

In the 2023 financial year, sales in the amount of €41.0 million (previous year: €27.4 million) were recorded which had been recognized as contract liabilities at the beginning of the financial year.

(15) Cost of sales

Cost of sales, amounting to €8,195.2 million (previous year: €8,259.5 million), indicates the cost of goods and services sold. Apart from individual directly attributable costs, such as personnel expenses and material expenses, overheads including depreciation/amortization as well as development expenses for customer-specific development projects are also shown under cost of sales.

(16) Selling expenses

Selling expenses, amounting to €1,584.3 million (previous year: €1,535.7 million), include all expenses incurred in the sales area, for example personnel, advertising, carriage and packaging expenses.

(17) Administrative expenses

In 2023, administrative expenses amounted to €731.7 million (previous year: €702.5 million). Administrative expenses include all expenses which cannot be allocated to production, sales or research and development and concern, inter alia, personnel expenses and miscellaneous administrative expenses.

(18) Research and development expenses

Apart from personnel and material expenses, research and development expenses chiefly include the cost of licenses and patents occurring in the course of development projects.

(19) Other income

[€ million]	Dec. 31,2022	Dec. 31,2023
Income from recharges	20.8	16.7
Income from disposals of long term assets	7.1	3.2
Currency and exchange gains ¹	4.8	0.0
Income from other secondary business	2.2	2.3
Government grants	19.1	27.1
Miscellaneous income	93.6	108.8
	147.6	158.1

¹ After offsetting of exchange rate losses.

The rise in other income is mainly due to an increase in a large number of miscellaneous income items, as well as subsidies and grants. Effects from the measurement of option rights, reimbursements for damage which occurred in the year under review and fees are also recognized as miscellaneous income. In addition to these elements, miscellaneous other income includes a large number of individual items with low amounts such as reimbursements and rental income.

(20) Other expenses

[€ million]	Dec. 31,2022	Dec. 31,2023
Losses resulting from disposals of non-current assets	27.6	9.2
Exchange rate loss ¹	0.0	17.2
Miscellaneous expenses	68.4	49.2
	96.0	75.6

¹ After offsetting of exchange rate gains.

The fall in other expenses was chiefly a result of the lower losses resulting from the disposal of tangible assets compared with the previous year.

(21) Income from investments in joint ventures

The income from investments in joint ventures amounted to €23.4 million (previous year: €23.3 million).

(22) Income from investments in associated companies

The fall in income from investments in associated companies from €43.2 million to €36.8 million is a result of the lower pro-rata profit of the associated company NOK Corporation, Tokyo, Japan.

(23) Other investment result

The rise in other investment result from €27.3 million to €57.0 million was chiefly a result of the increase in investment income from shares in partnerships.

(24) Other interest and similar income

Other interest and similar income amounted to €65.2 million (previous year: €24.5 million).

(25) Interest and similar expenses

In 2023, interest expenses amounted to €108.2 million (previous year: €61.7 million). This item chiefly includes interest payable on shareholder's loan in the amount of €26.7 million (previous year: €13.8 million) and interest payable to the Partners of Freudenberg & Co. KG in the amount of €25.1 million (previous year: €13.5 million).

(26) Income taxes

This item shows German corporation tax (plus solidarity surcharge) and municipal trade taxes as well as similar taxes on income payable in other countries.

The figure also includes deferred taxes on temporary differences between the tax balance sheets and commercial balance sheets of individual group companies, on adjustments to consistent measurement within the Freudenberg Group and on the consolidation procedure.

Deferred taxes are calculated at the tax rates applicable in the respective countries.

Income taxes break down as follows (expense (-) / income (+)):

[€ million]	2022	2023
Current taxes related to the reporting period	-269.8	-280.2
Current taxes related to prior periods	-2.3	-25.9
Deferred taxes	54.7	113.3
	-217.4	-192.8

The deferred tax income related to changes in tax rates was €0.1 million (previous year: deferred tax income of €0.4 million). Deferred tax income includes income in the amount of €137.5 million (previous year: €67.4 million) resulting from the development or elimination of temporary differences. In the reporting year, impairment losses with respect to deferred tax assets on temporary differences were recognized in the amount of €6.1 million (previous year: €21.6 million).

In the reporting year, deferred taxes related to transactions recognized directly in equity resulted in an increase in equity of €20.6 million (previous year: decrease in equity €-58.0 million).

As of December 31, 2023, tax losses carried forward amounted to €932.2 million (previous year: €943.3 million). Deferred tax assets were recognized in respect of tax losses carried forward totaling €230.4 million (previous year: €161.1 million). Deferred tax assets were not recognized in respect of tax losses carried forward with a total amount of €701.8 million (previous year: €782.2 million) as it is not expected that these losses will be usable. Of the tax losses carried forward, €20.5 million (previous year: €11.4 million) will be forfeited in the period up to 2033 if they are not used.

In the reporting year, tax losses carried forward totaling €26.7 million (previous year: €13.6 million), for which no deferred tax assets had been recognized, were used.

Deferred taxes concern temporary differences and tax losses carried forward in the following amounts:

[€ million]	Deferred tax assets Dec. 31,2022	Deferred tax liabilities Dec. 31,2022	Deferred tax assets Dec. 31,2023	Deferred tax liabilities Dec. 31,2023
Intangible assets	36.8	235.4	41.8	209.9
Tangible assets	23.0	160.6	42.7	145.4
Financial assets	1.6	1.3	1.6	0.8
Inventories	67.1	1.8	70.0	1.6
Receivables	22.7	26.7	21.1	20.7
Other assets	7.0	2.8	15.1	4.0
Provisions for pensions and similar obligations	76.9	7.3	90.6	0.7
Other provisions	85.0	3.0	91.1	7.2
Liabilities	115.4	24.0	116.9	16.3
Other liabilities	0.4	7.0	0.4	9.1
Tax losses carried forward	29.9	0.0	53.7	0.0
	465.8	469.9	545.0	415.7
Offsetting	-174.8	-174.8	-174.1	-174.1
Recognized in statement of financial position	291.0	295.1	370.9	241.6

No deferred tax items were set up on temporary differences arising from shareholdings totaling €39.0 million (previous year: €42.0 million) as short-term dividend payments are not expected.

No deferred tax liabilities were recognized in respect of differences in the retained earnings of affiliated companies amounting to €2,887.4 million (previous year: €2,875.0 million) as it is intended to use these funds for maintaining the substance and expanding the business of the companies concerned.

Reconciliation of expected income tax with actual income tax expense

Freudenberg SE and its German subsidiaries are subject to corporation tax (plus solidarity surcharge) and the municipal trade tax. Income realized in other countries is taxed at the rates applicable in the respective countries. The tax rate of 30.0 percent (previous year: 30.0 percent) used for calculating the expected tax expense is based on the structure of Freudenberg relevant for taxation. It is calculated as the weighted average of the tax rates for the regions in which Freudenberg realized its main income. Non-taxable income includes, inter alia, the profit after tax of participations consolidated by the equity method, dividends received from non-consolidated companies and income from the re-measurement of financial assets measured at fair value through profit or loss.

[€ million]	2022	2023
Profit before income taxes	857.0	1,023.6
Expected income tax expense (-)/ income (+)	-257.1	-307.1
Different tax rates:		
In Germany	-0.2	0.2
In other countries	57.2	57.8
Tax portion of:		
Non-taxable income	49.8	66.2
Non-deductible expenses	-59.1	-64.2
Current taxes related to prior periods	-6.5	-20.7
Recognition of tax effects of previously unrecognized tax loss carryforwards	-3.0	20.7
Tax portion of tax losses carried forward and used for which no deferred tax assets were recognized	4.0	4.9
Tax credits from grants and subsidies	7.0	37.1
Other taxation effects	-9.5	12.3
Actual income tax expense	-217.4	-192.8
Effective tax rate (percent)	25.4	18.8

(27) Profit or loss attributable to non-controlling interests

[€ million]	2022	2023
Profit	74.5	80.5
Loss	-61.4	-3.4
	13.1	77.1

NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

(28) Cash flow from operating activities

The cash flow from operating activities takes into account dividends received from joint ventures totaling €31.9 million (previous year: €8.7 million) and dividends received from associated companies totaling €28.6 million (previous year: €22.3 million).

(29) Payments to shareholders/non-controlling interests

Payments to shareholders and non-controlling interests include dividends paid to the shareholder, to the Partners of Freudenberg & Co. KG and to holders of non-controlling interests in Group companies.

(30) Reconciliation of financial debt

The table below shows the reconciliation of financial debt:

[€ million]	2022	With effect on payments	Without effect on payments				2023
			Addition	Acquisitions / Disposals	Exchange rate effects	Others	
Liabilities to banks	487.8	-86.9	0.0	1.6	-9.7	0.0	392.8
Liabilities from cash pool	114.7	29.1	0.0	0.0	0.0	-0.6	143.2
Leasing liabilities	363.3	-106.4	92.7	2.3	-6.8	0.3	345.4
Other financial debt	153.2	-106.5	0.0	0.0	16.3	0.0	63.0
Shareholder's loans	712.0	10.0	0.0	0.0	0.0	0.0	722.0
Accounts of Freudenberg & Co. KG Partners	562.9	22.8	0.0	0.0	0.0	0.0	585.7
Financial debt	2,393.9	-237.9	92.7	3.9	-0.2	-0.3	2,252.1

Cash inflows from interest received and cash outflows from interest paid are included in cash flow from operating activities and are shown separately in the consolidated statement of cash flows.

(31) Changes in cash and cash equivalents with effect on payments

Freudenberg recognizes checks, cash in hand, cash at bank and short-term securities with an original term of up to three months as cash and cash equivalents. Cash and cash equivalents include funds with an amount of €21.8 million (previous year: €40.1 million) subject to restrictions on use.

The funds subject to restrictions on use by Freudenberg largely concern cash and cash equivalents held by affiliates which can only be used by Freudenberg with restrictions as a result of exchange controls.

FURTHER NOTES

Material expenses

[€ million]	2022	2023
Raw materials, consumables and merchandise purchased	5,363.1	5,104.3
Services purchased	285.3	275.0
	5,648.4	5,379.3

Workforce and personnel expenses

In the year under review, an average of 52,035 (previous year: 50,598) persons were employed in the following functions:

2023	Germany	Other countries	Total
Production	6,981	27,400	34,381
Sales	2,238	6,780	9,018
Research and development	2,001	1,950	3,951
Administration	1,445	3,240	4,685
	12,665	39,370	52,035

[€ million]	2022	2023
Wages and salaries	2,452.3	2,617.4
Social security contributions and costs of pensions and assistance	583.0	624.2
Personnel expenses	3,035.3	3,241.6

Research and development

In the year under review, research and development activities amounting to €603.6 million (previous year: €576.8 million) were performed. The research and development activities also include development expenses for customer-specific development projects included in the cost of sales in the consolidated statement of profit or loss. Sales from research and development and research and development licenses amounted to €113.6 million (previous year: €116.1 million). In the reporting year, government grants for research and development projects totaling €6.5 million (previous year: €15.9 million) were received.

Financial instruments

The term “financial instrument” is used to refer to any contract that gives rise to both a financial asset of one enterprise and a financial liability or equity instrument of another enterprise. A distinction is made between primary and derivative financial instruments. Primary financial instruments in the case of the purchase or sale of assets are recognized at the settlement date, i.e. the delivery of the asset concerned. Derivative financial instruments are recognized as of the trade date. In the event of loss of control over the contractually agreed rights to a financial asset, the asset concerned is derecognized. Financial liabilities are derecognized on the statement of financial position when the commitment is discharged or cancelled, or expires.

According to IFRS 9, financial assets are divided into the following categories:

- Measured at amortized cost

This category includes debt instruments with cash flows consisting solely of principal and interest payments. They are held by Freudenberg in a business model whose objective is achieved by collecting the contractual cash flows.

- Measured at fair value through other comprehensive income

This category includes both debt and equity instruments. Debt instruments are to be included in this category if the cash flows associated with these instruments consist solely of principal and interest payments and the business model has the objective of both collecting contractual cash flows and selling financial assets.

Amounts recognized in other comprehensive income for those debt instruments are reclassified to the statement of profit or loss upon the later disposal of such instruments. Equity instruments not held for trading may be assigned to this category. The amounts recognized in other comprehensive income

for those equity instruments are not reclassified to the statement of profit or loss in the event of the later disposal of such instruments.

- Measured at fair value through profit or loss

This category includes both debt and equity instruments. Debt instruments are to be assigned to this category in the event that the cash flows associated with such instruments do not consist solely of principal and interest payments or if the business model is based mainly on short-term trading intentions. Equity instruments must also be assigned to this category if there are trading intentions. If there are no trading intentions, there is an option to classify equity instruments as measured at fair value through profit or loss. In addition, both debt and equity instruments are classified in this category if such classification prevents an accounting mismatch between assets and liabilities. The same applies to partnership shares. Those shares are not considered to be equity instruments and also do not meet the condition that the cash flows associated with them consist solely of principal and interest payments. Derivative financial instruments that do not meet the requirements for hedge accounting are also measured at fair value through profit or loss.

In accordance with IFRS 9, financial liabilities are, as a general principle, measured at amortized cost. In such cases, the liabilities concerned are initially recognized at fair value less transaction costs. In accordance with IFRS 9, subsequent measurements are effected at amortized cost using the effective interest method. Only liabilities held for trading purposes are measured at fair value through profit or loss.

Financial instruments are assigned to categories on the basis of the relevant items in the statement of financial position. The allocation to the categories unambiguously defines the accounting and measurement of the financial assets and liabilities.

[€ million]	At amortized cost	At fair value through other comprehensive income	At fair value through profit or loss	Book value Dec. 31, 2022
ASSETS				
Other financial assets	3.7	40.6	81.0	125.3
Trade receivables	1,810.7			1,810.7
Other assets	123.1		30.0	153.1
Securities and cash at bank and in hand	1,827.9			1,827.9
	3,765.4	40.6	111.0	3,917.0

LIABILITIES				
Financial debts ¹	2,393.9			2,393.9
Trade payables	1,203.4			1,203.4
Other liabilities	301.9		1.7	303.6
	3,899.2		1.7	3,900.9

[€ million]	At amortized cost	At fair value through other comprehensive income	At fair value through profit or loss	Book value Dec. 31, 2023
ASSETS				
Other financial assets	4.4	49.6	76.2	130.2
Trade receivables	1,751.2			1,751.2
Other assets	131.5		6.0	137.5
Securities and cash at bank and in hand	2,237.4			2,237.4
	4,124.5	49.6	82.2	4,256.3

LIABILITIES				
Financial debts ¹	2,252.1			2,252.1
Trade payables	1,173.0			1,173.0
Other liabilities	290.3		1.8	292.1
	3,715.4		1.8	3,717.2

¹ The financial debts include lease liabilities in the amount of €345.4 million (previous year: €363.3 million) although these are not included in the scope of IFRS 9.

Certain other assets and other liabilities are shown on the statement of financial position but are not included in the table concerning financial instruments because they cannot be categorized as financial instruments in accordance with IFRS 9 or are subject to the special recognition and measurement principles applicable to hedge accounting (see information on hedging transactions). The other current and non-current assets shown in the statement of financial

position, amounting to €187.1 million (previous year: €169.2 million), mainly concern reimbursement claims with respect to other taxes, advance payments made and plan assets in excess of the corresponding pension obligations. Further details are given in note (7). The other current and non-current liabilities shown in the statement of financial position in the amount of €210.8 million (previous year: €211.5 million) chiefly concern liabilities with respect to other

taxes, contract liabilities and liabilities in connection with social security. Further details are given in note (13). Loans, receivables and debts are measured at amortized cost. The cash flows arising from these financial assets consist solely of principal and interest payments. These loans, receivables and debts are held by Freudenberg within a business model whose objective is achieved by collecting the contractual cash flows. The fair values of financial assets and financial liabilities measured at amortized cost are approximately equal to the carrying amounts of such assets and liabilities.

The other financial assets measured at fair value through other comprehensive income as at the statement of financial position date consist solely of equity instruments not held for trading purposes. The greater part of these financial instruments, in the amount of €44.9 million (previous year: €35.0 million) were measured on the basis of active markets for identical assets (level 1 inputs). For the remaining equity instruments, in the amount of €4.7 million (previous year: €5.6 million), the amortized cost represents the best estimate of the fair value. The amounts recognized in other comprehensive income for equity instruments are not reclassified to the statement of profit or loss upon the later disposal of such instruments. In the reporting year, the total amount of other financial assets recognized in other comprehensive income was €10.8 million (previous €-3.2 million). This amount recognized in other comprehensive income in the year under review does not include any effects resulting from disposals of financial instruments in this category.

The other financial instruments measured at fair value through profit or loss are debt instruments with an amount of €2.7 million (previous year: €2.7 million) with cash flows not consisting solely of principal and interest payments. In addition, these financial instruments include investments that do not meet the requirements for measurement at fair value through other comprehensive income and with cash flows not consisting solely of principal and interest payments in the amount of €12.0 million (previous year: €11.5 million). The other financial assets also include shares in partnerships with an amount of €61.4 million (previous year: €66.8 million). These shares are measured on the basis of observed input factors for similar assets or liabilities in active markets or for identical assets or liabilities in markets that are not active (level 2 inputs).

The other financial instruments measured at fair value through profit or loss are measured on the basis of values observed on active markets for identical assets (level 1 inputs). In the reporting year, the total effect of the re-measurement of such financial instruments on the statement of profit or loss was insignificant. The other assets in this category solely include derivative financial instruments. These chiefly concern option rights for the acquisition of shares in companies with a value of €1.3 million (previous year: €27.5 million). The change in the value of these option rights, amounting to €-26.2 million, is mainly the result of the acquisition of shares in the reporting year. The fair value of these assets is measured on the basis of developed, unobservable inputs (level 3 inputs). The fair value determined would rise or fall depending on the development of future corporate planning data of the companies concerned. The other assets and other liabilities include derivative financial instruments used for hedging currency risks that do not meet the requirements for hedge accounting. Such derivatives are measured at fair value through profit or loss (see information on hedging transactions). The other liabilities also include put options granted to holders of non-controlling interests for the sale of their shares in the amount of €158.3 million (previous year: €160.2 million), which are recognized as forward purchases.

Freudenberg does not hold any financial assets or liabilities for short-term trading purposes.

Offsetting of financial assets and financial liabilities is not effected to any material extent in the statement of financial position and there is no potential for offsetting.

Risks in connection with financial instruments

Freudenberg is exposed to risks resulting from changes in exchange rates and interest rates and, as a general principle, uses conventional derivative instruments such as interest rate swaps, caps and currency futures to hedge risks in connection with business operations and financing to a limited extent (see information on hedging transactions).

The risks arising in connection with financial instruments are chiefly as follows:

Interest rate risk:

In the case of fixed-interest loans or investments, there is a risk that changes in the market interest rate will affect the market value of the item concerned (market value risk contingent on interest rates). In contrast, variable interest loans and investments are not subject to this risk as the interest rate is adjusted to reflect changes in the market situation with a very short delay. However, there is a risk with respect to future interest payments as a result of short-term fluctuations in market interest rates (cash flow risk contingent on interest rates). Risks associated with interest rate changes mainly affect long-term items. If market interest rates had been 1.0 percentage points higher or lower, on average, as of December 31, 2023, this would have had only an insignificant impact on net income.

Currency risk:

The primary financial instruments are chiefly held in the functional currency. Exchange rate differences caused by the conversion of financial statements into the Group currency are not taken into consideration. If the value of the euro against major currencies held at the date of the statement of financial position (USD, GBP and JPY) had been 10 percent higher as at December 31, 2023, the profit before income taxes would have been €12.3 million (previous year: €8.9 million) lower. If the value of the euro against major currencies held (USD, GBP and JPY) had been 10 percent lower as at December 31, 2022, the profit before income taxes would have been €15.1 million (previous year: €10.9 million) higher.

Liquidity risk:

Risks connected with cash flow fluctuations are identified by the cash flow planning system already existing. As a result of the good rating (“A3”) of Freudenberg SE and the credit lines granted by banks on a binding basis, Freudenberg can access ample sources of funds at all times. Further information is given in the Report on Opportunities and Risks (section: Financial risks) in the Combined Management Report.

Credit risk:

A credit risk is the risk that Freudenberg will incur a financial loss as a result of the other party to a financial instrument failing to discharge its obligation. Credit risks may be of a variety of types. For example they may be a result of the investment of liquid funds or the granting of payment deadlines in connection with the supply of goods and services. As a general principle, credit risks arise in connection with all agreements which need to be fulfilled by the counterparty in the future.

In accordance with IFRS 9, expected credit losses are the key factor in calculating loss allowances using the expected loss model. Impairment losses are recognized in accordance with IFRS 9 for all financial assets measured at amortized cost, for debt instruments measured at fair value without effect on net income, and for contract assets. IFRS 9 provides for a three-stage procedure. Loss allowances are measured either on the basis of the 12-month expected credit loss (stage 1) or on the basis of the lifetime expected credit loss if there has been a significant increase in credit risk since initial recognition (stage 2) or a credit impairment has been identified (stage 3).

Securities and cash at bank and in hand are debt instruments that are measured at amortized cost. Such assets held by Freudenberg mainly have a low credit risk and are due in the short-term. Such assets must therefore be assigned to stage 1 of the impairment model. The loss allowance for these assets as at the date of the statement of financial position was €1.6 million (previous year: €1.6 million).

For trade receivables, the simplified approach in accordance with IFRS 9 is adopted. In this approach, the loss allowance is always calculated on the basis of the

lifetime expected credit losses. In order to determine the expected credit losses, trade receivables are assigned to groups with similar credit risks. In the case of appropriate individual circumstances and risk indications, individual impairment losses are recognized. Information related to the past and to the future is taken into consideration in the measurement of impairment losses.

In order to determine the expected credit losses for a group of receivables, Freudenberg applies two factors. The first factor takes the country risk into account and the second factor accounts for the customer-specific default risk.

The centrally defined country risk factor covers factors such as transfer or convertibility risks, moratoriums, and capital or currency regulations which would prevent a company from converting its local currency into a foreign currency and/or transferring foreign currency to creditors in other countries. This specifically includes circumstances such as war, confiscation, revolution, insurrections, flooding and earthquakes. In addition the model considers forward looking information regarding the financial and economic situation. The financial information includes medium-term financial solvency indicators such as overall foreign debt and total payments in connection with external debts. These figures are typically connected with indicators such as the gross domestic product and/or foreign exchange revenues. Economic information includes long-term structural indicators that measure the growth potential such as income levels, savings rates or economic growth rates achieved as well as export diversification, dependence on subsidies or the size of economies.

The customer-specific risk is based on shared credit risk characteristics of receivable groups. It takes into consideration specific business models, customer experience, differences in local payment cultures and market knowledge. If there is a major difference between different due date ranges, impairment loss rates are calculated separately for the different due date ranges.

To a large extent, trade receivables are covered by credit insurance. Credit insurance is taken into account in the calculation of the impairment losses. Otherwise, the carrying amount represents the maximum credit risk.

Trade receivables are de-recognized if, on the basis of an appropriate estimate, it is not to be expected that the receivable may be realized in full or in part. In this context, the information concerned must indicate that a debtor has financial problems and that there is no realistic prospect of the receipt of payments, for example if a debtor has been placed under liquidation or is subject to insolvency proceedings. As at the statement of financial position date, derecognized receivables in the amount of €0.8 million (previous year: €1.2 million) were still subject to enforcement activity.

In the year under review and the comparison period, loss allowances for financial assets other than those mentioned above were not material. This is also a result of the risk management system implemented by Freudenberg, which aims, inter alia, to minimize the credit risk. Freudenberg only concludes derivative financial instruments with national and international banks of investment grade rating. Credit risks are largely limited by distributing between several banks and a policy of applying caps to individual banks.

The risk profile of trade receivables is summarized in the table below:

[€ million]	Gross carrying amount Dec. 31, 2022	Weighted average loss rate ¹	Loss allowance
Current (not past due)	1,542.5	0%	4.2
1 – 60 days past due	229.9	2%	5.6
61 – 180 days past due	44.5	22%	9.9
181 – 360 days past due	13.0	36%	4.7
More than 360 days past due	15.4	66%	10.2

¹ The weighted average loss rate was rounded to full percentage values.

[€ million]	Gross carrying amount Dec. 31, 2023	Weighted average loss rate ¹	Loss allowance
Current (not past due)	1,514.8	0%	6.0
1 – 60 days past due	192.5	3%	6.1
61 – 180 days past due	40.8	21%	8.4
181 – 360 days past due	15.6	31%	4.9
More than 360 days past due	14.1	67%	9.5

¹ The weighted average loss rate was rounded to full percentage values.

The loss allowance for trade receivables developed as follows:

[€ million]	2022	2023
Loss allowance Jan. 1	28.5	34.6
Changes in consolidated group	0.2	0.1
Exchange rate differences	0.3	-0.4
Additions (expenses for loss allowance)	15.9	14.8
Amounts used	-2.9	-2.2
Reversals (write-ups)	-7.4	-12.0
Loss allowance Dec. 31	34.6	34.9

As at the statement of financial position date, the loss allowance for other assets amounted to €0.3 million (previous year: €0.5 million). No significant impairment losses to contract assets were recognized in the year under review.

Hedging transactions

Freudenberg SE is responsible for all financing activities and also operates the cash management system for the entire group of companies. Group companies obtain the financing they require via cash pools or internal loans or, in some countries, in the form of bank loans guaranteed by Freudenberg SE.

The limits of action, responsibilities and control procedures in connection with derivative financial instruments are laid down in a binding form in internal directives for Group companies. Compliance with these directives and the proper handling and measurement of transactions are regularly verified, observing the principle of separation of functions. Furthermore, risk management for financial instruments is integrated in the Freudenberg Group risk management system. Freudenberg does not expose itself to additional financial risks through speculation with derivative financial instruments but uses such instruments only for hedging purposes and therefore reducing risks in connection with transactions (see information on risks in connection with financial instruments). Future transactions are only hedged if there is a high probability of occurrence. As a general principle Freudenberg uses derivative financial instruments for hedging interest rates and foreign exchange risks. Open risk items are primarily hedged via transactions within the Group. External hedging transactions are only concluded after consultation with the responsible corporate function.

The interest rate risk represents the risk that the fair value or future cash flows of financial instruments may fluctuate as a result of changes in market interest rates. As in the previous year, there were no derivatives entered into for the purpose of interest rate hedging as at December 31, 2023.

Freudenberg is active internationally and is subject to exchange rate risks resulting from transactions in foreign currencies. Currency risks arise from future business transactions and recognized assets and liabilities concluded in a currency which is not the functional currency of the relevant Group company. The objective of hedging transactions is to reduce the volatility resulting from foreign currencies. For this purpose, currency futures and currency swaps are concluded.

Derivative financial instruments for hedging recognized assets or liabilities (fair value hedges) are shown in the statement of financial position at fair value. Changes in the fair value are recorded in the statement of profit or loss.

Financial instruments for hedging future cash flows (cash flow hedges) are also included in the statement of financial position at fair value, but changes in the fair value of such instruments are recognized without effect on net income under retained earnings, taking into consideration the applicable income taxes and recognized in the statement of profit or loss when future cash flows are realized. Ineffective portions of hedge transactions are always recognized in the statement of profit or loss. The effectiveness of hedging transactions is determined regularly by prospective assessment upon the inception of the transaction. For hedging currency risks, the main hedging transactions concluded are based on contract terms that are congruent with the underlying transaction. Ineffectiveness may arise if parameters such as the timing of a planned transaction change compared with the original estimate.

Derivatives not covered by hedge accounting, are measured at fair value through profit or loss.

As at December 31, 2023, the Group held the following currency futures:

[€ million]	Dec. 31, 2022	Dec. 31, 2023
DERIVATIVE FINANCIAL INSTRUMENTS - CASH FLOW HEDGES		
Other liabilities - book value (liabilities)	0.2	0.0
Notional amount	6.6	4.3
Maturity date	1/2023-09/2023	1/2024-10/2024
Hedge ratio	1:1	1:1
Change in exchange rate of outstanding hedging instruments	-0.2	0.0
DERIVATIVE FINANCIAL INSTRUMENTS WITHOUT HEDGE ACCOUNTING		
Other assets - book value (assets)	2.5	4.6
Other liabilities - book value (liabilities)	1.7	1.8
Notional amount	211.6	305.5
Maturity date	1/2023-04/2024	1/2024-03/2025

As at the date of the statement of financial position, Freudenberg, as in the previous year, did not hold any fair value hedges.

In the reporting year, value changes in the case of currency futures (cash flow hedges) are recognized in equity in the amount of less than €0.0 million (previous year: €-0.1 million).

The fair values of currency futures were determined on the basis of the quoted currency future prices for similar financial instruments (level 2 inputs). As a result of the very high effectiveness of the hedges, the fluctuations in the values of cash flows from the hedged underlying transactions correspond to the fluctuations in the value of the hedges.

Derivatives to hedge currency risks in connection with the US dollar represent a large part of the notional amount.

[€ million]	Dec. 31, 2022	Dec. 31, 2023
Notional amount currency pair USD/EUR	110.2	153.2
Weighted average hedged rate for the year USD/EUR	1.06	1.10

Related party disclosure

Relations with related parties concern the parent company Freudenberg & Co. KG, joint ventures, associated companies and other related parties.

Other related parties include other participations of the parent company and companies that are not included in the consolidated financial statements for reasons of materiality. Transactions with these parties in the course of the company's ordinary business are effected at normal market conditions and were as follows:

[€ million]	Sales 2022	Receivables			Payables ¹		
		Residual term up to 1 year	Residual term more than 1 year	Dec. 31,2022	Residual term up to 1 year	Residual term more than 1 year	Dec. 31,2022
Parent company	3.3	2.4	0.0	2.4	497.9	300.0	797.9
Joint ventures	50.0	20.8	0.0	20.8	6.0	4.0	10.0
Associated companies	17.2	5.9	0.0	5.9	7.9	0.0	7.9
Other related parties	3.6	1.8	0.0	1.8	50.6	0.0	50.6
	74.1	30.9	0.0	30.9	562.4	304.0	866.4

[€ million]	Sales 2023	Receivables			Payables ¹		
		Residual term up to 1 year	Residual term more than 1 year	Dec. 31,2023	Residual term up to 1 year	Residual term more than 1 year	Dec. 31,2023
Parent company	3.5	1.4	0.0	1.4	532.1	300.0	832.1
Joint ventures	44.7	20.8	0.0	20.8	5.3	2.1	7.4
Associated companies	16.1	4.9	0.0	4.9	6.5	0.0	6.5
Other related parties	5.6	2.0	0.0	2.0	54.4	0.0	54.4
	69.9	29.1	0.0	29.1	598.3	302.1	900.4

¹ Details of liabilities to the parent company are presented in the information on liabilities in note (13).

Related parties also include the members of the Board of Management and the Supervisory Board. The members of these bodies are listed under “Company Boards”.

The total remuneration of members of the Board of Management, including expenditure for short-term payments for members of the Board of Management amounted to €10.6 million (previous year: €9.9 million).

Expenses of €1.0 million (previous year: €2.1 million) were incurred for defined-benefit and defined-contribution pension commitments with respect to company pensions for Board of Management members.

An amount of €17.3 million (previous year: €20.4 million) was assigned to provisions for pension obligations to former members of the Board of Management.

Under a service agreement, Freudenberg SE paid an amount of €1.2 million (previous year: €1.2 million) to its parent company for the performance of key management functions.

Fees of the Auditor

The auditor, PriceWaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, Germany, performed the following services in the 2023 financial year:

[€ million]	2023
Auditing services	2.6
Tax services	0.2
Other assurance services	0.1
Other services	0.4
	3.3

Major events after the date of the statement of financial position

The new Business Group Freudenberg Flow Technologies was established effective January 1, 2024. This Business Group consists of the former Business Groups EagleBurgmann and Freudenberg Oil & Gas Technologies.

Apart from this matter, there were no events of major significance for the net assets, financial position and results of operation of the group of companies up to March 15, 2024, the date when these consolidated financial statements were approved for publication by the Supervisory Board.

Weinheim, March 15, 2024

Freudenberg SE

The Board of Management

SHAREHOLDINGS

AS AT DECEMBER 31, 2023

Company	Location	Country/Region	Share of capital [%]
Freudenberg SE	Weinheim	Germany	-

I. AFFILIATED COMPANIES

Germany

Blaesus Grundstücksverwaltungsgesellschaft mbH & Co. Vermietungs KG	Mainz	Germany	88.12
Burgmann International GmbH¹	Wolfratshausen	Germany	100.00
Capol GmbH¹	Elmshorn	Germany	100.00
Carl Freudenberg KG	Weinheim	Germany	100.00
Chem-Trend (Deutschland) GmbH¹	Maisach	Germany	100.00
Corteco GmbH¹	Weinheim	Germany	100.00
CT Beteiligungs-GmbH¹	Munich	Germany	100.00
EagleBurgmann Atlantic GmbH	Wolfratshausen	Germany	75.00
EagleBurgmann Espey GmbH¹	Moers	Germany	75.00
EagleBurgmann Germany GmbH & Co. KG¹	Wolfratshausen	Germany	75.00
EagleBurgmann Germany Verwaltungs-GmbH	Wolfratshausen	Germany	75.00
EagleBurgmann Middle-East GmbH	Wolfratshausen	Germany	60.00
Externa Handels- und Beteiligungsgesellschaft mit beschränkter Haftung¹	Weinheim	Germany	100.00
FHP Export GmbH¹	Weinheim	Germany	100.00
Freudenberg Chemical Specialities GmbH¹	Weinheim	Germany	100.00
Freudenberg Filtration Technologies GmbH & Co. KG¹	Weinheim	Germany	100.00
Freudenberg FST GmbH¹	Weinheim	Germany	100.00
Freudenberg FT GmbH¹	Weinheim	Germany	100.00
Freudenberg Fuel Cell e-Power Systems GmbH¹	Munich	Germany	100.00
Freudenberg Haushaltsprodukte Augsburg GmbH¹	Augsburg	Germany	100.00
Freudenberg Home and Cleaning Solutions GmbH¹	Weinheim	Germany	100.00
Freudenberg Industrial Services GmbH¹	Hamburg	Germany	100.00
Freudenberg Medical Europe GmbH¹	Kaiserslautern	Germany	100.00
Freudenberg Oil & Gas GmbH¹	Weinheim	Germany	100.00
Freudenberg Performance Materials Apparel GmbH & Co. KG¹	Weinheim	Germany	100.00
Freudenberg Performance Materials GmbH & Co. KG¹	Weinheim	Germany	100.00
Freudenberg Performance Materials Holding GmbH¹	Weinheim	Germany	100.00
Freudenberg Performance Materials Service GmbH¹	Weinheim	Germany	100.00
Freudenberg Process Seals GmbH & Co. KG¹	Weinheim	Germany	100.00
Freudenberg Real Estate GmbH¹	Weinheim	Germany	100.00
Freudenberg Sealing Technologies GmbH¹	Hamburg	Germany	100.00
Freudenberg Technology Innovation SE & Co. KG¹	Weinheim	Germany	100.00
Freudenberg Verwaltungs- und Beteiligungs-GmbH¹	Weinheim	Germany	100.00
Freudenberg Wohnbauhilfe GmbH	Weinheim	Germany	100.00
Hanns Glass GmbH & Co. KG¹	Meuselwitz	Germany	75.00
Hanns Glass Immobilienverwaltung GmbH & Co. KG¹	Paderborn	Germany	75.00
HEFTER Cleantech GmbH¹	Gilching	Germany	100.00

Consolidated Financial Statement – Shareholdings

Company	Location	Country/Region	Share of capital [%]
Hemoteq AG ¹	Würselen	Germany	93.74
Integral Accumulator GmbH ¹	Weinheim	Germany	100.00
JUBA Jutta Baumgartner GmbH	Meuselwitz	Germany	75.00
Kaul GmbH	Elmshorn	Germany	100.00
Klüber Lubrication Deutschland GmbH & Co. KG ¹	Munich	Germany	100.00
Klüber Lubrication GmbH ¹	Weinheim	Germany	100.00
Klüber Lubrication München GmbH & Co. KG ¹	Munich	Germany	100.00
Lederer GmbH ¹	Öhringen	Germany	100.00
Low & Bonar Production GmbH ¹	Erlenbach am Main	Germany	100.00
Mehler Texnologies GmbH ¹	Fulda	Germany	100.00
Mehler Texnologies Logistics GmbH ¹	Fulda	Germany	100.00
OKS Spezialschmierstoffe GmbH ¹	Maisach	Germany	100.00
omniTECHNIK Mikroverkapselungs GmbH ¹	Munich	Germany	100.00
PTFE Compounds Germany GmbH ¹	Bördeland	Germany	100.00
SurTec Deutschland GmbH ¹	Zwingenberg	Germany	100.00
SurTec International GmbH ¹	Bensheim	Germany	100.00
VERMOP GmbH ¹	Gilching	Germany	100.00
VIAM Europe GmbH	Meuselwitz	Germany	75.00
Vibracoustic Aftermarket GmbH ¹	Weinheim	Germany	100.00
Vibracoustic Asia Holding GmbH	Weinheim	Germany	100.00
Vibracoustic CV Air Springs GmbH	Hamburg	Germany	65.07
Vibracoustic Europe GmbH ¹	Weinheim	Germany	100.00
Vibracoustic SE ¹	Hamburg	Germany	100.00
Vibracoustic SE & Co. KG ¹	Weinheim	Germany	100.00
Vileda Gesellschaft mit beschränkter Haftung ¹	Weinheim	Germany	100.00
Other countries			
Freudenberg S.A. Telas sin Tejer	Buenos Aires	Argentina	100.00
Klüber Lubrication Argentina S.A.	Buenos Aires	Argentina	100.00
Chem-Trend Australia Pty Ltd	Thomastown	Australia	100.00
EagleBurgmann Australasia Pty. Ltd.	Ingleburn	Australia	25.00
Freudenberg Filtration Technologies (Aust) Pty. Ltd.	Braeside	Australia	100.00
Freudenberg Home and Cleaning Solutions Pty. Ltd.	Broadmeadows	Australia	100.00
Freudenberg Sealing Technologies Pty. Ltd.	Brendale	Australia	100.00
Klüber Lubrication Australia Pty. Ltd.	Thomastown	Australia	100.00
EagleBurgmann Belgium BV	Sint-Job-in-'t-Goor	Belgium	75.00
FHP Vileda SComm.	Barchon	Belgium	100.00
Klüber Lubrication Belgium Netherlands S.A.	Dottignies	Belgium	100.00
Klüber Lubrication Benelux S.A./N.V.	Dottignies	Belgium	100.00
Chem-Trend Industria e Comercio de Produtos Quimicos Ltda.	Valinhos	Brazil	100.00
EagleBurgmann do Brasil Vedacoes Ltda.	Macuco Valinhos	Brazil	75.00
Freudenberg Nao-Tecidos Ltda.	São José dos Campos	Brazil	100.00
Freudenberg-NOK-Componentes Brasil Ltda.	São Paulo	Brazil	75.00
Klüber Lubrication Lubrificantes Especiais Ltda.	Barueri	Brazil	100.00
SurTec do Brasil Ltda.	Valinhos	Brazil	100.00
Vibracoustic South America Ltda.	Taubaté	Brazil	100.00
Freudenberg Productos del Hogar Ltda.	Santiago de Chile	Chile	100.00
Klüber Lubrication Chile Ltda.	Santiago de Chile	Chile	100.00

Company	Location	Country/Region	Share of capital [%]
Changchun Integral Accumulator Co., Ltd.	Changchun	China	100.00
Chem-Trend (Shanghai) Trading Co. Ltd.	Shanghai	China	100.00
Chem-Trend Chemicals (Shanghai) Co., Ltd.	Shanghai	China	100.00
Dichtomatik (China) Co., Ltd.	Shanghai	China	100.00
EagleBurgmann Dalian Co. Ltd.	Dalian	China	40.00
EagleBurgmann Shanghai Co., Ltd.	Shanghai	China	40.00
EagleBurgmann Technology (Shanghai) Co., Ltd.	Shanghai	China	50.00
Freudenberg & Vilene Interlinings (Nantong) Co. Ltd.	Nantong	China	87.50
Freudenberg & Vilene International Trading (Shanghai) Co., Ltd.	Shanghai	China	87.50
Freudenberg & Vilene Nonwovens (Suzhou) Co. Ltd.	Suzhou	China	87.50
Freudenberg Apollo Filtration Technologies Co., Ltd.	Foshan	China	75.00
Freudenberg Home and Cleaning Solutions (Ningbo) Co., Ltd.	Ningbo	China	100.00
Freudenberg Home and Cleaning Solutions (Shanghai) Co., Ltd.	Shanghai	China	100.00
Freudenberg Management (Shanghai) Co. Ltd.	Shanghai	China	100.00
Freudenberg Medical Plastic & Metal Manufacturing (Shenzhen) Co., Ltd.	Shenzhen	China	100.00
Freudenberg Performance Materials (Changzhou) Company Limited	Changzhou	China	100.00
Freudenberg Politex Ltd.	Shanghai	China	100.00
Freudenberg Real Estate (Yantai) Co. Ltd.	Yantai	China	100.00
Freudenberg Spunweb (Shanghai) Trading Co., Ltd.	Shanghai	China	67.69
Freudenberg Vilene Filter (Chengdu) Co. Ltd.	Chengdu	China	87.50
Klüber Lubrication (Shanghai) Co., Ltd.	Shanghai	China	100.00
Klüber Lubrication Industries (Shanghai) Co., Ltd.	Shanghai	China	100.00
SurTec Metal Surface Treatment Technology (Hangzhou) Co. Ltd.	Hangzhou	China	100.00
Tianjin VIAM Co., Ltd.	Tianjin	China	75.00
Traxit (Huzhou) Lubrication Co. Ltd.	Huzhou	China	100.00
Traxit (Tianjin) Chemical Co. Ltd.	Tianjin	China	100.00
Trelleborg Automotive Design (Shanghai) Co. Ltd.	Shanghai	China	100.00
Vibracoustic (Chongqing) Co. Ltd.	Chongqing	China	100.00
Vibracoustic (Shanghai) Sales & Trading Co., Ltd.	Shanghai	China	100.00
Vibracoustic (Wuxi) Vibration Isolators Co., Ltd.	Wuxi	China	100.00
Vibracoustic (Yantai) Co., Ltd.	Yantai	China	100.00
Vibracoustic CV Air Springs (Yantai) Co., Ltd.	Yantai	China	65.07
Freudenberg Medical srl.	San José	Costa Rica	100.00
Chem-Trend A/S	Søborg	Denmark	100.00
EagleBurgmann KE A/S	Ringkøbing	Denmark	75.00
Klüber Lubrication Nordic A/S	Skovlunde	Denmark	100.00
SurTec Scandinavia ApS	Copenhagen	Denmark	100.00
VERMOP Danmark ApS	Ballerup	Denmark	100.00
Freudenberg Sealing Technologies OÜ	Mullutu	Estonia	100.00
Freudenberg Filtration Technologies Finland Oy	Tampere	Finland	100.00
Freudenberg Home and Cleaning Solutions Oy	Espoo	Finland	100.00
Chem-Trend France S.A.S.U.	Entzheim	France	100.00
Corteco SAS	Nantiat	France	100.00
EagleBurgmann France S.A.S.	Neuville sur Oise	France	75.00
FHP Vileda S.A.S.	Asnières Sur Seine	France	100.00
Freudenberg Filtration Technologies SAS	Nanterre	France	100.00
Freudenberg Immobilier SAS	Chamborêt	France	100.00
Freudenberg Joints Plats SAS	Chamborêt	France	100.00

Consolidated Financial Statement – Shareholdings

Company	Location	Country/Region	Share of capital [%]
Freudenberg Performance Materials S.A.S.	Colmar	France	100.00
Freudenberg Sealing Technologies SAS	Langres	France	100.00
Klüber Lubrication France S.A.S.	Valence	France	100.00
Low & Bonar Paris SARL	Paris	France	100.00
Mehler Texnologies France SARL	Francheville	France	100.00
SurTec France S.A.S.	Toulouse	France	100.00
VERMOP France SARL	Tremblay-en-France	France	100.00
Vibracoustic France SAS	Carquefou	France	100.00
Vibracoustic Nantes SAS	Carquefou	France	100.00
FHP Hellas S.A.	Kifissia, Athens	Greece	100.00
Aquabio Ltd.	Worcester	United Kingdom	100.00
Bonar International Holdings Limited	Edinburgh	United Kingdom	100.00
Bonar Rotaform Limited	Leicester	United Kingdom	100.00
Bonar Silver Limited	Leicester	United Kingdom	100.00
Capol (U.K.) Limited	Huddersfield	United Kingdom	100.00
Chem-Trend (UK) Ltd.	Huddersfield	United Kingdom	100.00
EagleBurgmann Industries UK LP	Warwick	United Kingdom	75.00
EagleBurgmann Industries UK Ltd.	Warwick	United Kingdom	75.00
Filtamark Ltd.	Crewe	United Kingdom	100.00
Freudenberg Filtration Technologies UK Limited	Crewe	United Kingdom	100.00
Freudenberg Home and Cleaning Solutions Limited	Rochdale	United Kingdom	100.00
Freudenberg Household Products LP	Rochdale	United Kingdom	100.00
Freudenberg Limited	Littleborough	United Kingdom	100.00
Freudenberg Oil & Gas Technologies Ltd.	Port Talbot	United Kingdom	100.00
Freudenberg Performance Materials LP	Littleborough	United Kingdom	100.00
Freudenberg Sealing Technologies Limited	Leicester	United Kingdom	100.00
Freudenberg Technical Products Pension Trust Company Limited	North Shields	United Kingdom	100.00
KE-Burgmann UK Ltd.	Congleton	United Kingdom	75.00
Klüber Lubrication Great Britain Ltd.	Huddersfield	United Kingdom	100.00
Low & Bonar Euro Holdings Limited	Leicester	United Kingdom	100.00
Low & Bonar Limited	Edinburgh	United Kingdom	100.00
Low & Bonar Pension Trustees Limited	Edinburgh	United Kingdom	100.00
Mehler Texnologies Ltd.	Leicester	United Kingdom	100.00
Techlok Limited	Port Talbot	United Kingdom	100.00
VERMOP UK Ltd.	Purley	United Kingdom	100.00
Freudenberg Textile Technologies, S.A.	Guatemala City	Guatemala	100.00
APEC (Asia) Limited	Hong Kong	Hong Kong	100.00
Freudenberg & Vilene Int. Ltd.	Hong Kong	Hong Kong	87.50
Freudenberg Household Products Ltd.	Hong Kong	Hong Kong	100.00
Freudenberg Trading (Hongkong) Ltd.	Hong Kong	Hong Kong	100.00
Japan Vilene (Hong Kong) Ltd.	Hong Kong	Hong Kong	75.00
Klüber Lubrication China Ltd.	Hong Kong	Hong Kong	100.00
Vibracoustic Hong Kong Holdings Ltd.	Hong Kong	Hong Kong	100.00
Chem-Trend Chemicals Co. Pvt. Ltd.	Bangalore	India	100.00
Dichtomatik India Seals Private Limited	Bangalore	India	100.00
EagleBurgmann India Pvt. Ltd.	Pune	India	50.00
EagleBurgmann KE Pvt. Ltd.	Chennai	India	75.00
Freudenberg Filtration Technologies India Private Limited	Pune	India	100.00

Company	Location	Country/Region	Share of capital [%]
Freudenberg Gala Household Product Pvt. Ltd.	Mumbai	India	60.00
Freudenberg Performance Materials India Pvt. Ltd.	Chennai	India	100.00
Freudenberg Regional Corporate Center India Pvt. Ltd.	Bangalore	India	100.00
Gimi India Pvt. Ltd.	Bangalore	India	100.00
Klüber Lubrication India Pvt. Ltd.	Bangalore	India	100.00
Low & Bonar India Private Limited	Chennai	India	100.00
SurTec Chemicals India Pvt. Ltd.	Bangalore	India	100.00
Vibracoustic India Pvt. Ltd.	Mohali	India	100.00
PT EagleBurgmann Indonesia	Cikarang Selatan	Indonesia	24.98
PT Klüber Lubrication Indonesia	Jakarta	Indonesia	100.00
Cambus Teoranta	Spiddal	Ireland	94.91
VistaMed Ltd.	Carrick-on-Shannon	Ireland	90.00
Aluservice S.R.L.	Lainate	Italy	100.00
Chem-Trend Italy S.a.s. di Externa Holding S.r.l.	Milan	Italy	100.00
Corteco S.r.l. (a socio unico)	Pinerolo	Italy	100.00
EagleBurgmann Italia S.r.l.	Vimercate	Italy	75.00
Externa Holding S.r.l.	Milan	Italy	100.00
Externa Italia S.r.l.	Pinerolo	Italy	100.00
FHP di R. Freudenberg S.A.S.	Milan	Italy	100.00
Freudenberg Italia S.a.s. di Freudenberg S.r.l.	Milan	Italy	100.00
Freudenberg Performance Materials Apparel S.a.s. di Externa Holding S.r.l.	Milan	Italy	100.00
Freudenberg S.r.l.	Milan	Italy	100.00
Freudenberg Sealing Technologies S.a.s. di Externa Italia S.r.l.u.	Pinerolo	Italy	100.00
Freudenberg Tecnologie di Filtrazione S.a.s. di Externa Holding S.r.l.	Milan	Italy	100.00
Hänsel Textil Italia S.a.s. di Externa Holding S.r.l.	Rho	Italy	100.00
Klüber Lubrication Italia S.a.s. di Externa Holding S.r.l.	Milan	Italy	100.00
Mehler Texnologies S.r.l.	Settimo Milanese	Italy	100.00
Politex S.a.s. di Freudenberg Politex s.r.l.	Milan	Italy	100.00
SurTec Italia SAS di Externa Holding Srl	Milan	Italy	100.00
TF Chemical S.A.S. di Externa Holding S.R.L.	Borgomanero	Italy	100.00
Vermop Italia S.R.L.	Assago	Italy	100.00
Chem-Trend Japan K.K.	Kobe	Japan	100.00
EagleBurgmann Japan Co., Ltd.	Tokyo	Japan	25.00
Freudenberg Spunweb Japan Company, Ltd.	Osaka	Japan	67.69
Japan VIAM Co., Ltd.	Moriyama	Japan	75.00
Japan Vilene Company Ltd.	Tokyo	Japan	75.00
Oshitari Laboratory, Inc.	Sayama	Japan	75.00
Oyama Chemical Co., Ltd.	Oyama	Japan	75.00
Pacific Giken Co., Ltd.	Yasu	Japan	75.00
SurTec MMC Japan KK	Tokyo	Japan	56.00
Vibracoustic Japan KK	Yokohama	Japan	100.00
Vilene Create Co., Ltd.	Tokyo	Japan	75.00
VIS Co., Ltd.	Koga	Japan	75.00
Freudenberg Vileda Jordan Ltd.	Amman	Jordan	51.00
Capol Inc.	Saint-Hubert	Canada	100.00
EagleBurgmann Canada Inc.	Milton	Canada	75.00
Freudenberg Filtration Technologies Inc.	London	Canada	100.00
Freudenberg Household Products Inc.	Laval	Canada	100.00

Consolidated Financial Statement – Shareholdings

Company	Location	Country/Region	Share of capital [%]
Freudenberg Oil & Gas Canada Inc.	Nisku	Canada	100.00
Freudenberg-NOK Inc.	Tillsonburg	Canada	75.00
EagleBurgmann Colombia, S.A.S.	Bogotá	Colombia	75.00
Low & Bonar Latvia s.i.a.	Riga	Latvia	100.00
Bonar International Sarl	Luxembourg	Luxembourg	100.00
EagleBurgmann (Malaysia) SDN. BHD.	Shah Alam	Malaysia	25.00
Freudenberg Oil & Gas Technologies Sdn. Bhd.	Kuala Lumpur	Malaysia	100.00
Freudenberg-NOK St Malaysia Sdn. Bhd.	Petaling Jaya	Malaysia	75.00
Klüber Lubrication (Malaysia) Sdn. Bhd.	Shah Alam	Malaysia	100.00
United Lubricants Industries (S.E.A) Sdn. Bhd.	Cheras	Malaysia	100.00
Chem-Trend Comercial, S.A. de C.V.	Querétaro	Mexico	100.00
EagleBurgmann Mexico S.A. de C.V.	Querétaro	Mexico	75.00
Freudenberg Filtration Technologies, S.A. de C.V.	Silao	Mexico	100.00
Freudenberg Productos del Hogar, S.A. de C.V.	Tultitlan	Mexico	100.00
Freudenberg-NOK Sealing Technologies de Mexico, S.A. de C.V.	Cuautla	Mexico	75.00
Klüber Lubricacion Mexicana S.A. de C.V.	Querétaro	Mexico	100.00
VIAM Manufacturing Mexico S.A. de C.V.	Aguascalientes	Mexico	75.00
Vibracoustic de México, S.A. de C.V.	Lerma	Mexico	100.00
Vibracoustic Toluca, S.A. de C.V.	Toluca	Mexico	100.00
Vitechmex Nonwovens S.A. de C.V.	Aguascalientes	Mexico	75.00
EagleBurgmann Netherlands B.V.	Veenendaal	Netherlands	75.00
Freudenberg Household Products B.V.	Arnhem	Netherlands	100.00
Freudenberg Industrial Services B.V.	Zwolle	Netherlands	100.00
Freudenberg Performance Materials B.V.	Arnhem	Netherlands	100.00
Low & Bonar Technical Textiles Holdings B.V.	Arnhem	Netherlands	100.00
SurTec Benelux B.V.	Reuver	Netherlands	100.00
EagleBurgmann Norway AS	Gardermoen	Norway	75.00
Freudenberg Home and Cleaning Solutions AS	Gardermoen	Norway	100.00
Freudenberg Oil & Gas Technologies AS	Sandnes	Norway	100.00
Deurowood GmbH	Hard	Austria	100.00
EagleBurgmann Austria GmbH	Judenburg	Austria	75.00
Freudenberg Austria GmbH	Kufstein	Austria	100.00
Freudenberg Sealing Technologies Austria GmbH & Co. KG	Kufstein	Austria	100.00
Klüber Lubrication Austria Ges.m.b.H.	Salzburg	Austria	100.00
SurTec Produkte und Systeme für die Oberflächenbehandlung GesmbH	Salzburg	Austria	100.00
VERMOP Österreich GmbH	Langenzersdorf	Austria	100.00
EagleBurgmann Philippines, Inc.	Dasmarinas, Cavite	Philippines	25.00
Chem-Trend Polska Sp. z o.o.	Kobylnica	Poland	100.00
Chem-Trend Polska sp. z o.o. spółka komandytowa	Kobylnica	Poland	100.00
EagleBurgmann Poland sp. z o.o.	Warsaw	Poland	75.00
FHP Vileda Sp. z o.o.	Warsaw	Poland	100.00
FIM Polska Sp. z o.o.	Środa Śląska	Poland	100.00
Freudenberg Sealing Technologies Sp. z o.o.	Śnieciska	Poland	100.00
Freudenberg Vilene Sp. z o.o.	Lodz	Poland	100.00
Klüber Lubrication Polska Sp. z o.o.	Kobylnica	Poland	100.00
Mehler Texnologies Sp. z o.o.	Sosnowiec	Poland	100.00
SurTec Polska Sp. z o.o.	Kobylnica	Poland	100.00
VERMOP Polska Sp. Z o.o.	Będzin	Poland	100.00

Company	Location	Country/Region	Share of capital [%]
Vibracoustic Polska Sp. z o.o.	Środa Śląska	Poland	100.00
ST Ibérica Sociedade Unipessoal, LDA	Albergaria-a-Velha	Portugal	100.00
Chem-Trend Romania s.r.l.	Sibiu	Romania	100.00
Freudenberg Performance Materials Apparel srl	Bukarest	Romania	100.00
Freudenberg Performance Materials SRL	Braşov	Romania	100.00
Klueber Lubrication Romania s.r.l.	Sibiu	Romania	100.00
Mehler Texnologies Romania S.R.L.	Stefanestii de Jos	Romania	100.00
SurTec Romania s.r.l.	Sibiu	Romania	100.00
Vermop RO S.R.L	Cluj-Napoca	Romania	100.00
Vibracoustic Romania SRL	Dej	Romania	100.00
Freudenberg Household Products Eastern Europe OOO	St. Petersburg	Russian Federation	70.00
Freudenberg Politex OOO	Zavolzhye	Russian Federation	100.00
AlMozn National Co. For Home Appliances Limited	Jeddah	Saudi Arabia	75.00
EagleBurgmann Saudi Arabia Ltd.	Al-Khobar	Saudi Arabia	51.00
EagleBurgmann Sweden AB	Norrköping	Sweden	75.00
Freudenberg Home and Cleaning Solutions AB	Norrköping	Sweden	100.00
Freudenberg Sealing Technologies AB	Landskrona	Sweden	100.00
Vibracoustic China Holding AB	Forsheda	Sweden	100.00
Vibracoustic Forsheda AB	Forsheda	Sweden	100.00
Vibracoustic Sweden Holding AB	Forsheda	Sweden	100.00
Vibracoustic Wuxi Holding AB	Forsheda	Sweden	100.00
EagleBurgmann (Switzerland) AG	Höri	Switzerland	75.00
Freudenberg Sealing Technologies AG	Zurich	Switzerland	100.00
Klüber Lubrication AG (Schweiz)	Zurich	Switzerland	100.00
SurTec Cacak d.o.o.	Čačak	Serbia	100.00
Chem-Trend Singapore Pte. Ltd.	Singapore	Singapore	100.00
EagleBurgmann KE Pte. Ltd.	Singapore	Singapore	75.00
EagleBurgmann Singapore Pte. Ltd.	Singapore	Singapore	25.00
EBI Asia Pacific Pte. Ltd.	Singapore	Singapore	25.00
EBI Asia Pte. Ltd.	Singapore	Singapore	50.00
Freudenberg Oil & Gas Pte. Ltd.	Singapore	Singapore	100.00
Klüber Lubrication South East Asia Pte. Ltd.	Singapore	Singapore	100.00
Freudenberg Filtration Technologies Slovensko, s.r.o.	Potvorice	Slovakia	100.00
Freudenberg Immobilienmanagement Slovakia, s.r.o	Potvorice	Slovakia	100.00
Klüber Lubrication Slovensko s.r.o.	Vráble	Slovakia	100.00
Low & Bonar Slovakia a.s.	Ivanka pri Nitre	Slovakia	100.00
SurTec SK s.r.o.	Vráble	Slovakia	100.00
FILC tovarna filca d.o.o.	Škofja Loka	Slovenia	100.00
Freudenberg Gospodinjski Proizvodi d.o.o.	Limbuš	Slovenia	100.00
SurTec Adria d.o.o.	Ljubljana	Slovenia	100.00
EagleBurgmann Ibérica S.A.	Villaviciosa de Odón	Spain	75.00
Freudenberg Espana S.A.	Parets del Vallès	Spain	100.00
Freudenberg Espana S.A., Telas sin Tejer, S.en C.	Parets del Vallès	Spain	100.00
Freudenberg Home and Cleaning Solutions Iberica, S.L.U.	Parets del Vallès	Spain	100.00
Freudenberg Sealing Technologies, S.L.U.	Parets del Vallès	Spain	100.00
Klüber Lubrication GmbH Ibérica S.en C.	Parets del Vallès	Spain	100.00
VERMOP Espana S.L.	Arroyomolinos	Spain	100.00
Vibracoustic Cascante S.A.U.	Cascante	Spain	100.00

Consolidated Financial Statement – Shareholdings

Company	Location	Country/Region	Share of capital [%]
Vibracoustic Spain Holding S.L.U.	Martorell	Spain	100.00
Vibracoustic Spain S.A.U.	Martorell	Spain	100.00
Freudenberg Apparel Lanka (Pvt) Ltd.	Colombo	Sri Lanka	87.50
EagleBurgmann Seals South Africa (Pty) Ltd.	Modderfontein/ Johannesburg	South Africa	55.50
Freudenberg Filtration Technologies (Pty) Ltd.	Cape Town	South Africa	100.00
Freudenberg Nonwovens (Pty.) Ltd.	Cape Town	South Africa	100.00
Klüber Lubrication (Pty.) Ltd.	Alrode Alberton	South Africa	100.00
SurTec South Africa Pty. Ltd.	Alrode Alberton	South Africa	100.00
Vibracoustic-Ikhwezi (Pty) Ltd.	East London	South Africa	70.00
Chem-Trend Korea Ltd.	Anseong-si	South Korea	100.00
EagleBurgmann Korea Co., Ltd.	Osan	South Korea	25.00
Freudenberg Vilene Filtration Technologies Korea Co., Ltd.	Pyeongtaek-si	South Korea	87.50
Korea Vilene Co., Ltd.	Pyeongtaek-si	South Korea	87.50
EagleBurgmann Taiwan Co., Ltd.	#N/A	Taiwan	25.00
Freudenberg & Vilene Nonwovens (Taiwan) Co. Ltd.	Taoyuan	Taiwan	87.50
Freudenberg Far Eastern Spunweb Comp. Ltd.	Taoyuan	Taiwan	67.69
Chem-Trend Trading (Thailand) Co. Ltd.	Bangkok	Thailand	100.00
EagleBurgmann (Thailand) Co., Ltd.	Rayong	Thailand	25.00
Freudenberg & Vilene Filter (Thailand) Co. Ltd.	Chonburi	Thailand	87.50
Freudenberg Home and Cleaning Solutions (Thailand) Co.,Ltd.	Nonthaburi	Thailand	100.00
Klüber Lubrication (Thailand) Co., Ltd.	Bangkok	Thailand	100.00
VIAM Manufacturing (Thailand) Co., Ltd.	Prachin Buri	Thailand	75.00
Vibracoustic (Thailand) Ltd.	Sriracha	Thailand	100.00
Accu-Tech s.r.o.	Chrastava	Czech Republic	100.00
Chem-Trend CZ s.r.o.	Prague	Czech Republic	100.00
EagleBurgmann Czech s.r.o.	Prague	Czech Republic	75.00
Freudenberg Home and Cleaning Solutions s.r.o.	Prague	Czech Republic	100.00
Freudenberg Sealing Technologies s.r.o.	Opatovice nad Labem	Czech Republic	100.00
Klüber Lubrication CZ, s.r.o.	Prague	Czech Republic	100.00
Mehler Texnologies s.r.o.	Lomnice nad Popelkou	Czech Republic	100.00
SurTec CR s.r.o.	Prague	Czech Republic	100.00
TPE správni s.r.o.	Melnik	Czech Republic	100.00
VERDI international s.r.o	Horšovský Týn	Czech Republic	100.00
Vibracoustic CZ s.r.o.	Melnik	Czech Republic	100.00
Beltan Vibracoustic Titresim Elemanlari Sanayi ve Ticaret A.S.	Bursa	Türkiye	100.00
Eagle Burgmann Endüstriyel Sızdırmazlık Sanayi ve Ticaret Limited Şirketi	Istanbul	Türkiye	75.00
Freudenberg Household Products Evici Kullanım Araçları Sanayi ve Ticaret A.S.	Istanbul	Türkiye	100.00
Freudenberg Sealing Technologies Sanayi ve Ticaret A.S.	Bursa	Türkiye	100.00
Freudenberg Vilene Tela Sanayi ve Ticaret A.S.	Istanbul	Türkiye	100.00
Klüber Lubrication Yağlama Ürünleri Sanayi ve Ticaret A.S.	Istanbul	Türkiye	100.00
Mehler Texnologies Teknik Tekstil Ticaret Limited Sirketi	Istanbul	Türkiye	100.00
Vibracoustic Çerkezköy Oto Parçaları Dış Ticaret A.S.	Çerkezköy	Türkiye	100.00
Vibracoustic Çerkezköy Otomotiv Sanayi ve Ticaret A.S.	Çerkezköy	Türkiye	100.00
Vibracoustic CV Air Springs Otomotiv Sanayi ve Ticaret A.S.	Gemlik	Türkiye	65.07
Vibracoustic CVAS Turkey Trading Otomotiv A.S.	Bursa	Türkiye	65.07
EagleBurgmann Hungaria Kft.	Budapest	Hungary	75.00

Company	Location	Country/Region	Share of capital [%]
Freudenberg Háztartási Cikkek Kereskedelmi BT	Budapest	Hungary	100.00
Freudenberg Sealing Technologies Kft.	Kecskemét	Hungary	100.00
Klüber Lubrication Hungaria Kft.	Budapest	Hungary	100.00
VERMOP Hungaria Kft.	Törökbálint	Hungary	100.00
Vibracoustic CV Air Springs Magyarország Kft.	Nyíregyháza	Hungary	65.07
Capol LLC	Wilmington	USA	100.00
Chem-Trend Limited Partnership	East Lansing	USA	100.00
CTM Enterprises, Inc.	Carson City	USA	100.00
EagleBurgmann Industries Inc.	Wilmington	USA	75.00
EagleBurgmann Industries LP	Wilmington	USA	75.00
Filters Now, LLC	Wilmington	USA	100.00
Freudenberg Battery Power Systems, LLC	Wilmington	USA	100.00
Freudenberg Filtration Technologies LP	Wilmington	USA	100.00
Freudenberg Household Products Inc.	Wilmington	USA	100.00
Freudenberg Household Products LP	Wilmington	USA	100.00
Freudenberg Medical, LLC	Wilmington	USA	100.00
Freudenberg North America Limited Partnership	Wilmington	USA	100.00
Freudenberg Oil & Gas, LLC	Wilmington	USA	100.00
Freudenberg Performance Materials LP	Wilmington	USA	100.00
Freudenberg Real Estate LP	Wilmington	USA	100.00
Freudenberg Texbond L.P.	Peachtree Corners	USA	100.00
Freudenberg-NOK General Partnership	Wilmington	USA	75.00
Freudenberg-NOK Holdings, Inc.	Wilmington	USA	75.00
Intpacor Inc.	Wilmington	USA	100.00
Klüber Lubrication NA LP	Wilmington	USA	100.00
Low & Bonar Inc.	Wilmington	USA	100.00
Mehler Texnologies Inc.	Richmond	USA	100.00
Pellon Corporation	Carson City	USA	100.00
PPA Holdings, Inc.	Indianapolis	USA	100.00
PPA Industries, Inc.	Indianapolis	USA	100.00
Precote USA LLC	East Lansing	USA	100.00
Protect Plus Holdings Corp.	Indianapolis	USA	100.00
SurTec, Inc.	Upper Arlington	USA	100.00
Tobul Accumulator Incorporated	West Columbia	USA	100.00
Traxit North America, LLC	Wilmington	USA	100.00
Upper Bristol Ramp, LLC	Wilmington	USA	75.00
VERMOP USA Inc.	Concord	USA	100.00
VIAM Holding, Inc.	Sacramento	USA	75.00
VIAM Manufacturing, Inc.	Nashville	USA	75.00
Vibracoustic CV Air Springs USA, Inc.	Wilmington	USA	65.07
Vibracoustic North America Holdings, Inc.	Wilmington	USA	100.00
Vibracoustic North America LP	Wilmington	USA	100.00
Vibracoustic USA, Inc.	East Lansing	USA	100.00
VICAM Inc.	Nashville	USA	75.00
VITECH Manufacturing, Inc.	Wilmington	USA	75.00
XALT Energy MI, LLC	Wilmington	USA	100.00
XALT Energy, LLC	Wilmington	USA	100.00
EagleBurgmann Gulf Mechanical LLC	Abu Dhabi	UAE	29.40

Consolidated Financial Statement – Shareholdings

Company	Location	Country/Region	Share of capital [%]
EagleBurgmann Middle East FZE	Dubai	UAE	60.00
Freudenberg Oil and Gas FZE	Dubai	UAE	100.00
Mehler Technologies Middle East Trading L.L.C.	Dubai	UAE	100.00
Chem-Trend Vietnam Company Limited	Ho Chi Minh City	Vietnam	100.00
EagleBurgmann Vietnam Company Limited	Ho Chi Minh City	Vietnam	25.00
Freudenberg & Vilene International Vietnam Co. Ltd.	Ho Chi Minh City	Vietnam	87.50
SurTec Viet Nam Co., Ltd.	Ho Chi Minh City	Vietnam	100.00

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Company	Location	Country/Region	Share of capital [%]
II. INVESTMENTS IN JOINT VENTURES (CONSOLIDATED BY EQUITY METHOD)			

Germany

CPW GmbH	Wuppertal	Germany	50,00
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Other countries

Corfina s.r.l.	Pinerolo	Italy	50,00
NOK-Freudenberg Singapore Pte. Ltd. ²	Singapore	Singapore	50,00
TTKKE Holdings, LLC	Dover	USA	30,00

III. INVESTMENTS IN ASSOCIATED COMPANIES (CONSOLIDATED BY EQUITY METHOD)

Other countries

Yihua Bonar Yarns & Fabric Co. Ltd.	Yangzhou	China	60,00
Hikotomi Industrial Co., Ltd.	Hikone	Japan	24,98
NOK Corporation	Tokyo	Japan	25,10
NOK Klüber Co., Ltd.	Tokyo	Japan	49,00
Shinwa Products Co., Ltd.	Tsuzuranuki	Japan	34,09
Klüber Lubrication Korea Ltd.	Seoul	South Korea	48,00
Dawson Manufacturing Company	Plymouth	USA	45,00
SurTec Middle East (L.L.C.)	Sharjah	UAE	35,00
EagleBurgmann Venezuela, C.A.	Caracas	Venezuela	41,25

¹ Application of Sec. 264 (3), HGB (Handelsgesetzbuch, "German Commercial Code") and Sec. 264b, HGB

² Consolidated financial statements including
 Changchun NOK-Freudenberg Oilseal Co., Ltd., Changchun, China
 Corteco China Co. Ltd., Shanghai, China
 Freudenberg-NOK Pvt. Ltd., Chennai, India
 NOK-Freudenberg Group Sales (China) Co., Ltd., Shanghai, China
 NOK-Freudenberg Group Trading (China) Co., Ltd., Shanghai, China
 NOK-Freudenberg Hong Kong Ltd., Hong Kong, Hong Kong
 PT NOK Freudenberg Sealing Technologies, Kota Batam, Indonesia
 Taicang NOK-Freudenberg Sealing Products Co., Ltd., Taicang, China
 Wuxi NOK-Freudenberg Oilseal Co., Ltd., Wuxi, China

INDEPENDENT AUDITOR'S REPORT

To Freudenberg SE, Weinheim

Audit Opinions

We have audited the consolidated financial statements of Freudenberg SE, Weinheim, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2023, and the consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of cash flows and consolidated statement of changes in equity for the financial year from 1 January to 31 December 2023, and notes to the consolidated financial statements, including material accounting policy information. In addition, we have audited the group management report of Freudenberg SE, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2023.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2023, and of its financial performance for the financial year from 1 January to 31 December 2023, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Other Information

The executive directors are responsible for the other information.

The other information comprises the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report disclosures audited in terms of content or with our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures

(systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Frankfurt am Main, 15 March 2024

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Dr. Peter Bartels

Michael Conrad

Wirtschaftsprüfer

Wirtschaftsprüfer

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Registered trademarks are omitted in the Annual Report, also to improve readability.

