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Report profile

For us, sustainable entrepreneurship and profitable growth go hand in hand. Through our business, we want to create sustainable value for our company, our stakeholders and society while balancing ecological, social and business aspects. In doing so, we are helping tackle the great challenges facing today's world, such as disease, poverty, hunger, and climate change. Our ambition is to leverage science and technology to achieve progress for humankind. In this report, we comprehensively present our understanding of sustainable entrepreneurship.

We have a long-standing history of embracing corporate responsibility, which is also reflected in our reporting practices. We have been detailing our efforts to live up to our corporate responsibility since 1993, focusing initially on environmental topics. In 2003, we began reporting on sustainability topics every two years. Since 2016, we have been publishing a report annually.

In this report, we describe the [strategic direction](#) of our sustainable entrepreneurship as well as the focus areas in which we intend to achieve our sustainability goals. We want to inform our [stakeholders](#) transparently and comprehensively about our activities and successes as well as the challenges we face.

Moreover, in 2021, we integrated our disclosures pursuant to the [SASB](#) standards (Sustainability Accounting Standards Board) and the requirements of the Task Force on Climate-Related Financial Disclosures ([TCFD](#)) into the Sustainability Report. Through this step, we aim to meet the increasing transparency expectations of our investors and other stakeholders.

In addition, this Sustainability Report documents the progress we have made in implementing the principles of the United Nations Global Compact ([Communication on Progress](#)).

Reporting framework

This report covers fiscal 2021 and pertains to our entire Group, including its 227 companies in 66 countries. Any deviations from this reporting framework are indicated on a case-by-case basis.

Transformation of the Electronics business sector

In 2018, we commenced a transformation in order to reposition the Performance Materials business sector and to develop it into a leading company in the global market for electronic materials. With the acquisitions of Versum Materials, Inc. and Intermolecular, Inc. in 2019, we achieved two important milestones. In 2021, we renamed the Performance Materials business sector Electronics. The new name is the visible result of the strategic realignment of previous years.

Determining report content

We align the content of our report with the internationally recognized guidelines of the Global Reporting Initiative ([GRI](#)) and the principles of completeness and materiality as well as input from our stakeholders. This report has been prepared in accordance with the [GRI Standards: Comprehensive option](#). Furthermore, we have taken into consideration the requirements of the capital market for assessing companies' sustainability performance.

Every year, we carry out a materiality analysis to determine the sustainability topics of relevance to our Group. We have derived the content of this Sustainability Report from the results of the materiality analysis, which can be found together with the materiality matrix under [Materiality analysis](#).

Our Executive Board has reviewed and approved the Sustainability Report for 2021.

Data collection and consolidation systems

The 2021 Sustainability Report generally provides non-financial indicators for the entire Group. The majority of the figures we publish reflect the status as of December 31, 2021. We explicitly state when, in individual cases, the information provided deviates from these parameters.

Since 2005, we have been using a Group-wide electronic data collection system to collect environmental and occupational health and safety data, which are tracked locally at our individual sites and approved following review. To improve the quality of this data, we support the sites in optimizing their collection processes and their corresponding quality assurance measures. Moreover, our Corporate Sustainability, Quality and Trade Compliance function takes measures, such as internal EHS audits to review both the processes and the data provided.

We collect environmental performance indicators across all our production sites. We also record these indicators for the warehouse, research and office locations that are relevant in terms of their environmental impact. This report's scope of consolidation therefore covers all Group sites that have relevant impacts on the environment.

All employee master data is continually updated in an SAP database. Some employee data is only disclosed for select sites or countries, which is accordingly indicated in the respective text passages.

We use community data management software to track data pertaining to our community outreach activities.

Non-financial statement pursuant to the German Commercial Code

The combined management report of the whole Group and the Merck KGaA, Darmstadt, Germany for fiscal 2021 includes for the first time a combined non-financial statement in accordance with sections 315b and 315c in conjunction with 289b to 289e of the German Commercial Code (HGB) in the form of a separate chapter. Our non-financial statement orients towards the requirements of the Global Reporting Initiative (GRI) standards. It also includes our reporting in accordance with the EU taxonomy regulation. The content of this non-financial statement has also been reviewed by the Supervisory Board in accordance with section 111 (2) of the German Stock Corporation Act (AktG).

External audit

KPMG AG Wirtschaftsprüfungsgesellschaft has audited the annual financial statements and management report of our company for the fiscal year spanning January 1 to December 31, 2021 and has issued an unqualified opinion. The non-financial statement contained in the management report underwent a limited assurance by KPMG AG Wirtschaftsprüfungsgesellschaft.

Furthermore, after undergoing a limited assurance, our company also received an independent audit certificate for this Sustainability Report for 2021.

The additional content provided on both the company's websites as well as external web pages that are linked in this report are not part of the information assured by KPMG. This also applies to the voluntary information contained in the [SASB](#) and the [TCFD](#) indices.

Contacts:

We welcome your feedback and are happy to answer any questions.

Merck KGaA, Darmstadt, Germany

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We published the previous Sustainability Report in April 2021. Our next Sustainability Report is scheduled for publication in April 2023.

Indicators

Economics

Net sales, operating result (EBIT) and research and development costs, by business sector¹

€ million	Life Science	Healthcare	Electronics	Group
2020				
Net sales	7,515	6,639	3,380	17,534
Operating result (EBIT)	1,599	1,804	240	2,985
R&D costs ²	313	1,640	274	2,288
2021				
Net sales	8,990	7,089	3,608	19,687
Operating result (EBIT)	2,479	1,823	509	4,179
R&D costs ²	351	1,712	278	2,408

1 As a non-operating segment, Corporate and Other is not shown here as a separate item, but rather under Segment Reporting in our [2021 Annual Report](#) (p. 246-250).

2 Not presented: research and development costs of € 67 million (2020: € 62 million) allocated to Corporate and Other.

Business ethics

Compliance training

	2018	2019 ¹	2020 ²	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total number of persons trained on anti-corruption guidelines ³	11,404	36,109	28,827	5,790	509
Total number of employees trained on anti-corruption guidelines	11,155	35,673	28,805	5,772	508
% of employees trained on anti-corruption	22	63	50	10	6
by employee category⁴					
Number of Role 2+ employees trained on anti-corruption	9,257	26,890	27,123	5,284	495
% of Role 2+ employees trained on anti-corruption	36	96	90	17	12
% of employees below Role 2 trained on anti-corruption	7	30	6	2	0
by region (%)					
Europe	19	71	51	8	6
North America	36	59	45	11	not applicable
Asia-Pacific (APAC)	16	47	44	12	not applicable
Latin America	12	62	44	8	not applicable
Middle East and Africa (MEA)	18	80	66	12	not applicable

1 As of 2019, we changed our reporting method. Previously, our reports covered the active workforce who has been trained on a specific subject during a particular year. In 2019, we report on the active, trained workforce in the company, regardless of whether their training has already taken place prior to the reporting year. The possibility of trend forecasts for year-to-year comparisons is therefore limited.

2 In 2020, we began using our own global learning management tool and therefore now have a different reporting structure. As of 2020, we report on the active workforce that is part of the target group and has completed the training in the reporting year. The possibility of trend forecasts for year-to-year comparisons is therefore limited.

3 Includes contractors, external supervised workers (e.g. temps) and contract partners working on-site who were trained on anti-corruption guidelines (2021: 18).

4 Employees whose role level had not yet been recorded in our database by December 31 of the respective reporting year have been allocated to "employees below Role 2".

The (employee) target audience for a specific training is related to the risk level associated with employee positions and Role levels. Target audiences therefore may not include all Group employees and also may vary from training to training.

In order to address the special responsibility held by management personnel, and staff with HR responsibility, trainings on anti-corruption guidelines for these employees are in focus. This applies to all employees rated Role 2+.

Our new Anti-Corruption E-learning was rolled out in 2020. The majority of employees within the defined target group already completed the training in 2020. Therefore, the 2021 completion number is lower as the training was only assigned to new joiners, internal transfers or employees who did not complete the E-learning in 2020.

Internal audits on corruption and Human Rights Charter

	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany ¹
Number of audits relating to corruption	54	50	52	56	29
% of audits relating to corruption	69	65	66	67	35
Number of audits relating to the workplace requirements of our Human Rights Charter	46	46	42	51	27

1 Includes global audits which are conducted at the headquarters in Darmstadt and/or the management of the audited function is reporting into KGaA.

In 2021, during 51 of our audits conducted in 11 countries, we reviewed workplace parameters as per our Human Rights Charter. No violations were identified.

Human rights violations¹

	2018 ²	2019 ²	2020	2021
Number of reported violations of Social and Labor Standards Policy	-	-	108	121
Number of confirmed violations of Social and Labor Standards Policy	-	-	29	41
thereof number of incidents of discrimination	-	-	2	6

1 In 2020, we modified our reporting structure for human rights violations. Previously, we reported on such violations in the "Reported compliance violations" table. Since 2020, we report on violations of our [Social and Labor Standards Policy](#), which was drafted and rolled out across the entire Group in 2019.

2 Due to our revised reporting practices, we have decided not to report the data from previous years.

Reported compliance violations

	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total number of reported compliance violations					
Number of reported compliance incidents	72	75	81	79	6
Number of confirmed cases	19	30	41	42	3
Confirmed cases by category					
Bribery and corruption	3	9	6	1	0
Violation of cartel laws and fair competition rules	1	0	0	0	0
Fraudulent actions against the Group	5	8	11	6	0
Other violations of our Compliance Principles for the relations with business partners	1	4	0	0	0
Other violations of our values, internal guidelines or legal requirements	9	9	24	35	3

Data Privacy

	2018	2019 ¹	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Reported violations of Data Privacy Guidelines	1	1	3	3	1
Customer Privacy²					
Total number of substantiated complaints received from outside parties	0	0	0	0	0
Total number of complaints from regulatory bodies	0	1	0	0	0
Total number of identified leaks, thefts, or losses of customer data	1	1	0	0	0

¹ Since 2019, our reported figures have excluded the Consumer Health business, which was divested on December 1, 2018.

² These data only reflect incidents classified as significant.

Legal actions

	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total number ¹ of legal actions pending or completed (for anti-competitive behavior, violations of anti-trust or violations of monopoly legislation)	3	3	4	4	2
pending	3	3	4	3	2
completed	0	0	0	1	0

¹ As published in the annual reports, the herein listed total number of legal actions refers to the significant legal risks as per the company's definition. The significance of legal risks is based on potential negative effects on projected financial objectives as well as on the probability of occurrence.

For further information please see our annual reports:

[Annual Report 2018](#), pages 146-148 and pages 247-251, No. 26

[Annual Report 2019](#), pages 120-122 and pages 243-245, No. 26

[Annual Report 2020](#), pages 125-127 and pages 252-256, No. 27

[Annual Report 2021](#), pages 100-101 and pages 280-284, No. 27

Employees

Total number of employees

As of Dec. 31	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total number of employees	51,749	57,071	58,127	60,348	8,081
Men	29,006	32,531	33,204	34,274	5,292
Women	22,743	24,540	24,923	26,074	2,789

Number of employees by hierarchical level

As of Dec. 31	2018 ¹	2019 ²	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total employees	51,749	57,071	58,127	60,348	8,081
Senior management (Role 6+)	193	190	193	194	70
Middle management (Role 4 & 5)	3,095	3,352	3,637	3,831	824
Low management (Role 3)	9,019	9,499	10,286	10,880	2,077
Other employees (below Role 3)	39,442	44,030	44,011	45,443	5,110
% of women (total)	44	43	43	43	35
thereof in senior management (Role 6+)	36	39	42	49	18
thereof in middle management (Role 4 & 5)	1,025	1,146	1,284	1,413	257
thereof in low management (Role 3)	3,795	4,029	4,352	4,669	773
thereof other employees (below Role 3)	17,888	19,326	19,245	19,943	1,741
% of men (total)	56	57	57	57	65
thereof in senior management (Role 6+)	157	151	151	145	52
thereof in middle management (Role 4 & 5)	2,070	2,206	2,353	2,418	567
thereof in low management (Role 3)	5,224	5,470	5,934	6,211	1,304
thereof other employees (below Role 3)	21,554	24,704	24,766	25,500	3,369
by age group					
Up to 29 years old (%)	15	15	15	15	14
thereof in senior management (Role 6+)	0	0	0	0	0
thereof in middle management (Role 4 & 5)	5	8	6	8	2
thereof in low management (Role 3)	211	190	199	241	65
thereof other employees (below Role 3)	7,279	8,362	8,365	8,880	1,058
30 to 49 years old (%)	61	60	60	60	53
thereof in senior management (Role 6+)	69	69	68	63	25
thereof in middle management (Role 4 & 5)	1,829	1,933	2,032	2,172	512
thereof in low management (Role 3)	6,206	6,516	6,926	7,298	1,336
thereof other employees (below Role 3)	23,536	25,859	25,948	26,624	2,415
50 years or older (%)	24	25	25	25	33
thereof in senior management (Role 6+)	124	121	125	131	45
thereof in middle management (Role 4 & 5)	1,261	1,411	1,599	1,651	310

1 In 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "other employees (below Role 3)".

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma. In the figures, employees whose positions have not been assessed have been allocated to "other employees (below Role 3)".

Number of employees by hierarchical level

As of Dec. 31	2018 ¹	2019 ²	2020	2021 thereof The Group	Merck KGaA, Darmstadt, Germany
thereof in low management (Role 3)	2,602	2,793	3,161	3,341	676
thereof other employees (below Role 3)	8,627	9,809	9,698	9,939	1,637

1 In 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "other employees (below Role 3)".

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma. In the figures, employees whose positions have not been assessed have been allocated to "other employees (below Role 3)".

Average number of employees by functional area¹

Group	2018 ²	2019 ³	2020 ⁴	2021
thereof women	23,388	23,503	24,746	25,295
Production	16,240	16,455	17,624	19,782
thereof women	5,359	5,529	6,043	6,541
Logistics/Supply Chain	4,014	4,109	4,298	4,557
thereof women	1,569	1,626	1,734	1,838
Marketing and Sales/Commercials	15,479	13,970	14,127	14,318
thereof women	6,981	6,608	6,787	6,906
Administration	9,864	10,342	11,342	11,824
thereof women	5,067	5,194	5,499	5,718
Research and Development	7,245	7,561	7,504	7,168
thereof women	3,871	4,053	3,996	3,694
Infrastructure and Other	966	1,208	2,717	1,083
thereof women	541	493	687	598

1 The average employee headcount is calculated by adding up all employees at the end of each of the last 13 months, and dividing this total by 13.

2 The average employee headcount for fiscal 2018 incorporates the Consumer Health employees on a pro rata basis up until the end of November 2018 due to the divestment of the Consumer Health business as of December 1, 2018.

3 To calculate the average number of employees in fiscal 2019, the employee headcount of Versum Materials has been included on a pro rata basis as of October 2019 owing to the acquisition. They are allocated to the functional area "Infrastructure and Other".

4 The average employee headcount for fiscal 2020 incorporates the Allergopharma employees on a pro rata basis up until the end of March 2020 due to the divestment of the Allergopharma business as of March 31, 2020.

Number of employees by region

As of Dec. 31	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total	51,749	57,071	58,127	60,348	8,081
Europe	25,792	26,715	26,587	27,217	8,081
Women	11,464	11,909	11,743	12,098	2,789
Women (%)	44	45	44	44	35
Number of employees with temporary contracts	1,209	1,137	1,105	988	247
% of employees with temporary contracts	5	4	4	4	3
North America	10,978	12,829	13,312	14,070	0
Women	4,742	5,285	5,527	5,800	not applicable
Women (%)	43	41	42	41	not applicable
Number of employees with temporary contracts	148	158 ¹	139	115	not applicable
% of employees with temporary contracts	1	1 ¹	1	1	not applicable
Asia-Pacific (APAC)	10,486	12,728	13,518	14,285	0
Women	4,348	5,049	5,425	5,874	not applicable
Women (%)	41	40	40	41	not applicable
Number of employees with temporary contracts	2,846	3,263 ¹	3,362	3,660	not applicable
% of employees with temporary contracts	27	26 ¹	25	26	not applicable
Latin America	3,340	3,433	3,387	3,529	0
Women	1,648	1,690	1,630	1,721	not applicable
Women (%)	49	49	48	49	not applicable
Number of employees with temporary contracts	62	55	67	12	not applicable
% of employees with temporary contracts	2	2	2	0	not applicable
Middle East and Africa (MEA)	1,153	1,366	1,323	1,247	0
Women	541	607	598	581	not applicable
Women (%)	47	44	45	47	not applicable
Number of employees with temporary contracts	189	182	420	59	not applicable

¹ Employees whose contract type had not yet been recorded in our database by December 31, 2019 were divided up proportionally between the categories "employees with permanent contracts" and "employees with temporary contracts".

Number of employees by region

As of Dec. 31	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
temporary contracts					
% of employees with temporary contracts	16	13	32	5	not applicable

1 Employees whose contract type had not yet been recorded in our database by December 31, 2019 were divided up proportionally between the categories "employees with permanent contracts" and "employees with temporary contracts".

Employees by business sector

As of Dec. 31	2018	2019	2020	2021
Life Science employees	20,667	21,934	23,196	25,323
thereof women	8,837	9,487	10,175	11,255
thereof women (%)	43	43	44	44
Healthcare employees	17,456	18,136	17,463	17,269
thereof women	8,884	9,232	8,788	8,717
thereof women (%)	51	51	50	50
Electronics employees	5,278	7,329	7,228	7,432
thereof women	1,411	1,712	1,666	1,704
thereof women (%)	27	23	23	23

Employees by contract type

As of Dec. 31	2018	2019	2020	2021
Total employees	51,749	57,071	58,127	60,348
Number of employees with permanent contracts	47,295	52,276 ¹	53,034	55,514
% of employees with permanent contracts	91	92 ¹	91	92
thereof women	20,545	22,237 ¹	22,500	23,640
thereof women (%)	43	43 ¹	42	43
Number of employees with temporary contracts	4,454	4,795 ¹	5,093	4,834
% of employees with temporary contracts	9	8 ¹	9	8
thereof women	2,198	2,303 ¹	2,423	2,434
thereof women (%)	49	48 ¹	48	50
full-time employees	49,273	54,265	55,220	57,091
% full-time	95	95	95	95
thereof women	20,577	22,208	22,572	23,585
thereof women (%)	42	41	41	41
part-time employees	2,476	2,806	2,907	3,257
% part-time	5	5	5	5
thereof women	2,166	2,332	2,351	2,489
thereof women (%)	87	83	81	76

¹ Employees whose contract type had not yet been recorded in our database by December 31, 2019 were divided up proportionally between the categories "employees with permanent contracts" and "employees with temporary contracts".

New employees

As of Dec. 31	2018	2019 ¹	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total number of new employee hires	7,129	7,924	6,669	8,960	504
by age group					
up to 29 years old	2,967	3,432	2,889	3,679	263
30 to 49 years old	3,728	4,055	3,347	4,610	225
50 or older	434	437	433	671	16
by gender					
Women	3,401	3,622	3,016	4,101	215
Men	3,728	4,302	3,653	4,859	289
by region					
Europe	2,560	2,529	2,160	2,567	504
North America	1,524	1,733	1,789	2,855	not applicable
Asia-Pacific (APAC)	2,222	2,729	2,206	2,803	not applicable
Latin America	583	578	396	579	not applicable
Middle East and Africa (MEA)	240	355	118	156	not applicable
Rate of new employee hires² (%)	14	14	11	15	6
by age group³					
up to 29 years old	42	43	43	41	52
30 to 49 years old	52	51	50	51	45
50 or older	6	6	7	8	3
by gender³					
Women	48	46	45	46	43
Men	52	54	55	54	57
by region³					
Europe	36	32	32	29	100
North America	21	22	27	32	not applicable
Asia-Pacific (APAC)	31	34	33	31	not applicable
Latin America	8	7	6	6	not applicable
Middle East and Africa (MEA)	3	5	2	2	not applicable

1 These figures exclude the approximately 2,400 Versum Materials and Intermolecular employees who are not classified as new hires because they joined the Group as part of the acquisitions.

2 Formula for calculating the rate of new employee hires: Total number of new employee hires divided by number of employees at the end of the fiscal year.

3 Formula for calculating the rate of new employee hires by age/gender/region: New employee hires of the focus group divided by the total number of new employee hires.

Staff turnover^{1,2}

	2018	2019	2020 ³	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total turnover rate	9.09	9.07	8.22	10.82	2.37
Turnover rate by gender					
Men	9.03	8.69	8.22	10.69	2.45
Women	9.18	9.54	8.22	11.00	2.22
Turnover rate by age group					
Up to 29 years old	14.24	13.13	11.30	16.64	2.59
30 to 49 years old	8.53	8.90	7.74	10.05	1.95
50 or older	7.39	7.03	7.52	9.22	2.95
Turnover rate by region					
Europe	5.73	5.72	5.64	6.00	2.37
North America	9.90	11.02	9.79	15.44	not applicable
Asia-Pacific (APAC)	14.51	13.18	10.60	14.66	not applicable
Latin America	15.41	13.47	11.40	12.95	not applicable
Middle East and Africa (MEA)	9.77	12.14	11.80	16.57	not applicable
Total number of leavers	4,613	4,863	4,721	6,354	201
by gender					
Men	2,578	2,621	2,697	3,575	139
Women	2,035	2,242	2,024	2,779	62
by age group					
Up to 29 years old	1,061	1,042	974	1,451	30
30 to 49 years old	2,649	2,898	2,677	3,545	86
50 or older	903	923	1,070	1,358	85
by region					
Europe	1,457	1,500	1,490	1,601	201
North America	1,064	1,264	1,281	2,078	not applicable
Asia-Pacific (APAC)	1,468	1,484	1,394	2,015	not applicable
Latin America	522	459	398	449	not applicable
Middle East and Africa (MEA)	102	156	158	211	not applicable

1 The table contains unadjusted turnover rates. The rate excludes employees who pause due to parental leave or a long-term illness, as well as employees who are transitioning to the non-working phase of partial retirement.

2 The employee turnover rate is calculated as follows: Total number of leavers from the past 12 months divided by the average employee headcount multiplied by 100.

3 The figures do not reflect the approximately 500 Allergopharma employees, who were not included in the employee turnover rate due to the divestment of the business.

In 2021, the average length of service for employees Group-wide was 9.5 years (2020: 9.6 years), with 15.7 years (2020: 16.2 years) for employees of Merck KGaA, Darmstadt, Germany.

Work-related accidents¹

	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Lost Time Injury Rate (LTIR = workplace accidents resulting in missed days of work per one million hours worked)	1.2	1.6	1.3	1.2	2.5
by region					
Europe	1.8	2.6	2.4	2.1	2.5
North America	1.1	1.0	0.8 ²	1.2	not applicable
Asia-Pacific (APAC)	0.3	0.2	0.1	0.1	not applicable
Latin America	1.5	1.7	0.8 ²	0.4	not applicable
Middle East and Africa (MEA)	0.7	0.0	0.4	0.0	not applicable
Number of deaths	0	0	0	0	0
by region					
Europe	0	0	0	0	0
North America	0	0	0	0	not applicable
Asia-Pacific (APAC)	0	0	0	0	not applicable
Latin America	0	0	0	0	not applicable
Middle East and Africa (MEA)	0	0	0	0	not applicable
by gender					
Women	0	0	0	0	0
Men	0	0	0	0	0

1 Including supervised temporary staff

2 Figure retroactively adjusted

Through the LTIR, we record work-related accidents that involve at least one day of missed work. A work-related accident is an injury that results from the type of work, in the course of doing said work, and that has no internal cause. Work-related accidents are considered relevant if they occur on the premises, on business trips, during goods transport, as a result of external influences (e.g. natural disasters), or due to criminal acts

involving personal injury. Commuting accidents and accidents during company sporting activities are not included. First-aid incidents are generally not included in the LTIR since these usually do not result in more than one day of missed work.

We aim to sustainably lower our LTIR to 1.0 by 2025.

The LTIR is the key occupational safety indicator for the Group as a whole. Therefore, we do not publish any other indicators such as workplace accidents, lost days or days of absence. The LTIR is not broken down by gender as this differentiation is not relevant to our strategic planning.

For Merck KGaA, Darmstadt, Germany (about 13% of the employees of the Group), we only report work-related illnesses if these have been certified as an occupational illness by the employers' liability insurance association. In 2021 period, 4 cases of work-induced illness were verified.

Employees who regularly receive a performance and development evaluation

	2018 ¹	2019	2020	2021 The Group ²	2021 thereof Merck KGaA, Darmstadt, Germany ²
% of employees who receive a performance and development evaluation	98	98	98	98	100
by gender					
Women	99	98	98	98	100
Men	98	98	98	98	100
by employee category					
Senior management (Role 6+)	100	100	100	100	100
Middle management (Role 4 & 5)	100	100	100	100	100
Low management (Role 3)	100	100	100	100	100
Other employees (below Role 3)	98	98	98	98	100

1 In 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma. In the facts and figures, these employees are included under "other employees (below Role 3)".

2 Employees whose role level had not yet been recorded in our database by December 31, 2021 are included under "other employees (below Role 3)".

Regular feedback and employee performance evaluations are essential to fairly ranking individual performance and to helping all employees follow their own career path at our company. Our globally uniform Performance and Talent Management Process requires annual feedback meetings and performance assessments. Apart from evaluating employee performance, this helps us to identify individual development opportunities.

In Germany, all permanent employees have been participating in the Performance and Talent Management Process since 2013. In 2021, a total of 59,209 employees worldwide were involved in the process. The Performance and Talent Management Process is coordinated via our online platform HR4You.

Internationality of employees

As of Dec. 31	2018 ¹	2019 ²	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Number of nationalities	136	139	141	142	89
Number of nationalities in management positions (Role 4 or above)	70	73	75	79	39
% of non-Germans in management positions (Role 4 or above)	64	64	66	66	13

1 In 2018 the position assessment had not yet been carried out for employees of all Sigma-Aldrich legal entities in Germany, or for employees of Allergopharma.

2 In 2019, the position assessment had not yet been carried out for employees of Versum Materials as well as of Allergopharma.

Employee age by region

As of Dec. 31

Number of employees	Worldwide	North America	Europe (including Germany)	Merck KGaA, Darmstadt, Germany	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
2020							
Up to 29 years old	8,570	1,906	3,193	1,161	2,800	472	199
thereof women	4,018	825	1,525	420	1,307	260	101
30 to 49 years old	34,974	6,615	15,416	4,458	9,669	2,323	951
thereof women	15,268	2,841	7,076	1,505	3,776	1,161	414
50 or older	14,583	4,791	7,978	2,959	1,049	592	173
thereof women	5,637	1,861	3,142	839	342	209	83
Average age	41.7	44.4	43.1	43.4	37.0	40.7	39.1
Total employees	58,127	13,312	26,587	8,578	13,518	3,387	1,323
2021							
Up to 29 years old	9,129	2,219	3,341	1,125	2,912	482	175
thereof women	4,359	961	1,598	415	1,437	265	98
30 to 49 years old	36,157	6,939	15,653	4,288	10,260	2,404	901
thereof women	15,888	2,958	7,224	1,550	4,081	1,225	400
50 or older	15,062	4,912	8,223	2,668	1,113	643	171
thereof women	5,827	1,881	3,276	824	356	231	83
Average age	41.6	43.9	43.1	43.1	37.1	40.8	39.7
Total employees	60,348	14,070	27,217	8,081	14,285	3,529	1,247

Age of youngest employee

As of Dec. 31

	2018	2019	2020	2021
Age of youngest employee, excluding apprentices	17	18	18	18

Voluntary insurance benefits (voluntarily introduced and (co-) financed)

As of Dec. 31	2018	2019 ¹	2020 ¹	2021 thereof	
				The Group	Merck KGaA, Darmstadt, Germany
% of employees with healthcare benefits ²	67	68	63	64	0
% of employees with Group accident insurance ³	39	36	41	41	3
% of employees with life insurance ⁴	58	58	56	59	0
% of employees with disability insurance (short-term and long-term) ⁵	37	39	39	39	0

- 1 The figures exclude Versum Materials and Intermolecular since the integration process was still underway at this point of time. For more information, see [report profile](#).
- 2 Any spend on voluntarily introduced and (co-) financed healthcare benefits for employees and possibly their dependents. Not taking into consideration any mandatory social security cover (mostly covered by an insurance policy).
- 3 Any spend on voluntarily introduced and (co-) financed accident insurance that pays a defined amount in case of death or disability caused by a work-related accident (not taking into consideration any mandatory social security cover, e.g. workman's compensation).
- 4 Any spend on voluntarily introduced and (co-) financed life insurance cover that pays a defined amount of money in case of natural death (not accidental).
- 5 Any spend on voluntarily introduced and (co-) financed insurance cover that disability pays for salary continuation in case of inability to work caused by an insured incident.

All our employees are covered by either statutory or voluntary accident and health insurance. Employees of Merck KGaA, Darmstadt, Germany are covered by statutory insurance as stipulated by the regulations in force in Germany.

We offer a company pension in numerous countries along with various programs for supplemental company pensions and survivor's benefits.

The global benefits listed in the table above are designed to provide additional security to our workforce and their families and to improve their quality of life. Benefits represent voluntarily employer-initiated as well as employer-financed assistance to our workforce in addition to the regular compensation package.

Our benefits offer meaningful choices, where possible, to support a diverse workforce and are sensitive to the needs and customs of the employees who use them, regardless of country, age, family status, interests, or values.

Long-term pension obligations and post-employment benefits

€ million	2018	2019	2020	2021
Present value of all defined benefit obligations as of Dec. 31	4,719	5,644	6,352	5,995
Pension expenses	319	357	408	461

Depending on the legal, economic and fiscal circumstances prevailing in each country, different retirement benefit systems are provided for the employees. Generally, these systems are based on the years of service and salaries of the employees. Pension obligations include both defined benefit and defined contribution plans and comprise both obligations from current pensions and accrued benefits for pensions payable in the future. Further information can be found in the note on Provisions for employee benefits (p. 288-294, No. 33) of our [Annual Report 2021](#).

Flexible working hours in Germany

As of Dec. 31	2018	2019	2020	2021
% of employees utilizing the "mywork" program working model	42	43	48	51

In coordination with their teams and supervisors, employees taking advantage of our "mywork" program can choose when and where they work.

Parental leave¹

As of Dec. 31	2018	2019	2020	2021
Number of employees with a right to parental leave	308	375	351	414
thereof women (recorded via maternity leave in the respective year)	188	239	225	255
thereof men (recorded via special paternity leave in the respective year)	120	136	126	159
Number of employees who took parental leave ²	500	542	538	617
thereof women	240	248	265	278
thereof men	260	294	273	339
Number of employees on parental leave who worked part time during their leave	128	164	104	198
thereof women	109	140	73	172
thereof men	19	24	31	26
Number of employees who returned from parental leave ²	312	536	529	597
thereof women	65	243	252	273
thereof men	247	293	277	324
Return to work rate (%)	62.4	98.9	98.3	96.8
thereof women	27.1	98.0	95.1	98.2
thereof men	95.0	99.7	101.5	95.6
Number of employees still working for Merck KGaA, Darmstadt, Germany one year after their return from parental leave	268	496	490	⁻³
thereof women	26	218	220	⁻³
thereof men	242	278	270	⁻³
Retention rate (%)	93.1	92.5	92.6	⁻³
thereof women	63.4	89.7	87.3	⁻³
thereof men	97.9	94.9	97.5	⁻³

1 Figures pertain only to Merck KGaA, Darmstadt, Germany (which accounted for around 13% in 2021). Figures are calculated on the basis of the data from one entire year, which also includes those employees who took parental leave during the calendar year but who had not yet returned by Dec. 31.

2 Since parental leave can be taken for a period ranging from one month to three years, it is possible for employees to be recorded across a period of up to four calendar years. This explains why the number of employees on parental leave exceeds the number of employees who have a right to it. It also explains why the "Number of employees who returned from parental leave" might exceed the "Number of employees who took parental leave".

3 Figure will be available on December 31, 2022.

Employees with disabilities¹ (%)

	2018	2019	2020	2021
Employees with disabilities	4.3	4.4	4.7	4.8

¹ Only pertains to Merck KGaA, Darmstadt, Germany (which accounted for around 13% of the Group employees in 2021, calculations based on the German Social Code IX - SGB IX).

Apprentices in Germany

As of Dec. 31	2018	2019	2020	2021
Number of apprentices	604	589	607	602
% of apprentices	4.5	4.3	4.6	4.1

Environment

Total greenhouse gas emissions (Scope 1 and 2 of the GHG Protocol)^{1,2}

metric kilotons	2018	2019	2020 ³	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total CO₂eq⁴ emissions	636	621	2,028	1,843	153
Thereof					
direct CO ₂ eq emissions (Scope 1)	332	341	1,706	1,522	115
indirect CO ₂ eq emissions ⁵ (Scope 2)	304	280	322	321	38
Biogenic CO₂ emissions	13	13	13	15	0

1 In line with the Greenhouse Gas Protocol, for all previous years greenhouse gas emissions were calculated based on the current corporate structure as of Dec. 31 of the reporting year and retroactively adjusted for acquisitions or divestments of (parts of) companies, or for changes in emission factors (portfolio-adjusted).

2 Baseline for our emission targets is 2020.

3 Includes Versum Materials as of 2020.

4 eq = equivalent

5 The figures presented here have been calculated in accordance with the market-based method.

Our response to the [CDP Climate change](#) contains a detailed description of our calculation methods.

We have included the following gases in our calculation of direct and indirect CO₂eq emissions:

Direct CO₂ emissions: CO₂, HFCs, PFCs, CH₄, N₂O, NF₃, SF₆.

Indirect CO₂ emissions: CO₂.

In 2021, we emitted 0.09 kg of CO₂eq per euro of net sales.

Other relevant indirect greenhouse gas emissions (Scope 3 of the GHG Protocol)¹

in metric kilotons of CO ₂ eq ²	2018	2019	2020	2021
Total gross other indirect emissions	348	339	5,030	5,716
Purchased goods & services (category 1) ³	n/a	n/a	3,040	3,572
Capital goods (Category 2) ³	n/a	n/a	293	291
Fuel- and energy-related emissions, not included in Scope 1 or 2 (category 3)	131	127	102	143
Upstream transportation & distribution (category 4) ⁴	n/a	n/a	264	264 ⁵
Waste generated in operations (category 5)	47	50	85	79
Business travel (category 6) ^{6,7}	104	87	32	26
Employee commuting (category 7)	66	75	90	94
Upstream leased assets (category 8) ⁸	0	0	0	0
Downstream transportation & distribution (category 9) ⁴	n/a	n/a	8	8 ⁵
Processing of sold products (category 10) ⁹	0	0	0	0
Use of sold products (category 11) ⁴	n/a	n/a	1,091	1,213
End-of-life treatment of sold products (category 12) ⁴	n/a	n/a	23	23 ⁵
Downstream leased assets (category 13)	0	0	2	2
Franchises (category 14) ¹⁰	0	0	0	0
Investments (category 15)	n/a	n/a	0	1

1 In line with the Greenhouse Gas Protocol, for all previous years greenhouse gas emissions were calculated based on the current corporate structure as of Dec. 31 of the reporting year and retroactively adjusted for acquisitions or divestments of (parts of) companies, or for changes in emission factors (portfolio-adjusted).

2 eq = equivalent

3 The reported figures contain 95-97% of our total spend. The difference stems from smaller sites that are not integrated in our Group-wide purchase volume data. 2020 data are slightly over-reported (approx. 3%) as the currency conversion factor (USD to EUR) from 2021 was used. Non-categorized spends are distributed pro rate to category 1 and 2.

4 Compared to other Scope 3 categories, the screening of the emissions in this category contains more uncertainties. Their impact cannot be estimated more precisely at this time. We are working on improving the accuracy of these data.

5 Due to high efforts for data preparation, we reference 2020 data for 2021.

6 Since 2021, we have applied a new calculation approach for 2021 and 2020. The figure for 2020 was therefore adjusted retrospectively.

7 Air travel, hotel stays, rental car travels, rail travel (German Railway)

8 Already covered under Scope 1 and 2 emissions

9 Our company produces a huge variety of intermediate products for various purposes. Due to their many applications and our customer structure, the associated greenhouse gas emissions cannot be tracked in a reasonable fashion.

10 This category is not relevant for us as we do not operate franchises, i.e. businesses operating under a license to sell or distribute another company's goods or services. Out-licensing in the pharmaceutical sector is not regarded as franchising.

Details on the calculation (methodology, assumptions, uncertainties) of the Scope 3 categories can be found in the [Scope 3 document](#).

Biogenic emissions (Scope 3), if present, are not being recorded.

Emissions of ozone-depleting substances

metric tons	2018	2019	2020	2021
Total emissions of ozone-depleting substances	1.5	1.0	2.2	1.5
CFC-11eq ¹	0.1	0.1	0.1	0.1

¹ CFC-11eq is a unit of measure used to compare the potential of various substances to deplete the ozone. Reference value 1 indicates the potential of CFC-11 to cause the depletion of the ozone layer.

Substances included: R-12, R-22, R-123, R-141b, R-401a, R-402a, R408a, R-409a, R-502, R-503.

Source for the emission factors: Montreal Protocol.

Other air emissions

metric kilotons	2018	2019	2020	2021
Volatile organic compounds (VOC)	0.3	0.3	0.3	0.3
Nitrogen oxide	0.3	0.3	0.2	0.3
Sulfur dioxide	0.010	0.010	0.004	0.004
Dust	0.010	0.010	0.010	0.020

The VOC, nitrogen oxide, sulfur dioxide, and dust emissions reported here are attributable to production activities as well as energy generation. These figures do not include emissions from vehicles. Emissions are determined partially based on measurements and partially based on calculations or estimates. Only some sites are required to measure individual parameters.

Transport of finished goods, by means of transportation

	2018	2019	2020	2021
% truck	74	70	70	71
% boat	14	19	22	21
% airplane	12	11	8	8

The figures contain the volumes of the biggest global distribution centers of our Life Science, Healthcare and Electronics business sectors. These figures pertain to the total weight of transported products and indicate the primary means of transport.

In shipping finished goods from our production sites to the local warehouses of our subsidiaries, we have been working to reduce the use of air shipping in favor of sea freight. This change aims to both reduce costs as well as lower transport-related CO₂ emissions.

Energy consumption¹

In GWh	2018	2019	2020	2021 The Group	2021 thereof Merck KGaA, Darmstadt, Germany
Total energy consumption	2,158	2,178	2,374	2,454	628
Direct energy consumption	1,261	1,288	1,266	1,318	564
Natural gas	1,194	1,222	1,179	1,232	556
Liquid fossil fuels ²	33	33	52	48	8
Biomass and self-generated renewable energy	34	33	35	38	0
Indirect energy consumption	897	890	1,108	1,136	64
Electricity	749	745	945	958	64
Steam, heat, cold	148	145	163	178	0
Total energy sold	0.0	0.1	0.2	0.1	0.0
Electricity	0.0	0.1	0.2	0.1	0.0
Steam, heat, cold	0.0	0.0	0.0	0.0	0.0
In TJ					
Total energy consumption	7,770	7,839	8,546	8,834	2,261
Direct energy consumption	4,541	4,637	4,558	4,745	2,030
Natural gas	4,298	4,399	4,244	4,435	2,002
Liquid fossil fuels ²	119	119	187	173	29
Biomass and self-generated renewable energy	124	119	126	137	0
Indirect energy consumption	3,229	3,202	3,989	4,090	230
Electricity	2,696	2,682	3,402	3,449	230
Steam, heat, cold	533	520	587	641	0
Total energy sold	0.0	0.5	0.7	0.4	0.0
Electricity	0.0	0.5	0.7	0.4	0.0
Steam, heat, cold	0.0	0.0	0.0	0.0	0.0

1 In line with the Greenhouse Gas Protocol, for all previous years energy consumption has been calculated based on the current corporate structure as of Dec. 31 of the reporting year and retroactively adjusted for acquisitions or divestments of (parts of) companies, or for changes in emission factors (portfolio-adjusted).

2 Light and heavy fuel oil, liquefied petroleum gas (LPG), diesel, biodiesel, gasoline and kerosene

At 15 sites we use photovoltaics to produce power.

We currently only record purchased secondary energy – this is primarily electricity and, to a lesser extent, heat/steam/cold. Details on the local energy mix, including the respective percentage of primary energy, renewable energy, etc. are not available. Data on local energy efficiency in electricity or heat generation are not available either. Our production sites are located in countries with a widely varying energy mix.

Our Darmstadt and Gernsheim sites in Germany consume the most energy, representing 25% of our Group-wide total. Here, fossil energy (coal, gas, etc.) accounts for approx. 39%, nuclear energy approx. 12% and renewable energies approx. 49% of the energy mix. Renewable energies account for a higher share of electricity generation at production sites in Switzerland, with nuclear energy taking the lead in France. Based on an estimated global energy efficiency of 37% for the conversion and distribution of generated electricity, this results in a primary energy consumption of 2,589 GWh for 2021. Based on an estimated global energy efficiency of 85% for heat/steam/cold, this results in a primary energy consumption of 209 GWh for 2021. This yields a total primary energy consumption of 2,798 GWh for 2021. (The calculation is based on factors stated in the “Manual for energy management in practice - Systematically reducing energy costs” published by DENA, 12/2012.)

In 2021, our energy intensity relative to net sales totaled 0.12 kWh/€.

Water withdrawal

millions of m ³	2018	2019	2020	2021 The Group	2021 Water stress areas
Total water withdrawal	14.7	14.0	14.0¹	13.5	0.160
Surface water (rivers, lakes)	2.1	1.9	1.8 ¹	1.9	0.004
Groundwater	7.2	6.8	6.7	6.3	0.004
Drinking water (from local suppliers)	5.3	5.2	5.4 ¹	5.2	0.150
Rain water and other sources	0.05	0.05	0.06 ¹	0.06	0.003

¹ Figure retroactively adjusted.

These figures do not include the ground water that we use for safety measures at our Gernsheim site in Germany. Here, the water is fed back directly into natural circulation.

The volume of seawater and produced water withdrawn is not significant and is therefore not reported separately.

Water reused

millions of m ³	2018	2019	2020	2021
Water reused	24.4	23.3	22.0	23.5

The recirculating cooling system at our Darmstadt, Germany facility accounts for the majority of reused water as it allows the water to be re-utilized multiple times. The volume of reused water is thus greater than the total volume of consumed water.

Wastewater volume

	2018	2019	2020	2021 The Group	2021 Water stress areas
Total wastewater volume (millions of m ³)	13.5	13.2	13.4	13.3	0.118
Wastewater discharged directly	9.6	9.3	9.2	9.5	0.001
Wastewater discharged to third parties	3.9	3.8	4.1	3.8	0.103

The volume of seawater and groundwater discharged is not significant and is therefore not reported separately.

Discrepancies between total wastewater volume and the sum of directly discharged wastewater and wastewater sent to third parties arise from other disposal methods, which, however, only result in minor amounts of wastewater. Direct discharges correspond to the “freshwater” classification of the GRI. Indirect discharges correspond to their “other water” classification.

Wastewater quality¹

	2018	2019	2020	2021
Chemical oxygen demand (metric tons of O ₂)	1,509	1,568	1,482 ²	1,426
Phosphorous (metric tons)	10	12	15	11
Nitrogen (metric tons)	260	481	291	392
Nickel (kg)	30	32	30	37
Lead (kg)	30	34	37	15
Cadmium (kg)	6	6	6	3
Mercury (kg)	0	0	0	1

1 In alignment with [ICCA reporting](#) requirements specified by Cefic, we track heavy metal emissions from lead, cadmium, nickel, and mercury.

2 Figure retroactively adjusted.

The wastewater treatment plant at our site in Gernsheim, Germany also treats wastewater from a neighboring municipality. The communal wastewater from this municipality is included in the emissions stated in the table.

Emissions are determined partially based on measurements and partially based on calculations or estimates. Only some sites are required to measure individual parameters.

These figures reflect the wastewater as it is when it leaves our facilities. Some of the substances in the water are then later removed by third-party purification plants before the water is ultimately discharged into the ecosystem.

Hazardous and non-hazardous waste

metric kilotons	2018	2019	2020	2021
Total waste	245	244	229¹	214
Hazardous waste disposed ²	44	44	38	34
Non-hazardous waste disposed ²	54	41	34	33
Hazardous waste recycled ³	75	78	90 ¹	84
Non-hazardous waste recycled ³	72	81	67 ¹	63

1 Figure retroactively adjusted.

2 Disposed = incineration (without energy recovery) and landfill

3 Recycled = incineration (with energy recovery) and material recycling

Exported/Imported hazardous waste

metric kilotons	2018	2019	2020	2021
Exported ¹	4.5	4.3	4.0	4.6
Imported	0.000	0.000	0.000	0.000

1 Disposal primarily within the EU and the United States.

In 2021, approx. 4% of hazardous waste was shipped internationally.

Waste by disposal method

	2018	2019	2020	2021
Total waste (metric kilotons)	245	244	229¹	214
Disposed waste	98	85	72	66
Landfilled waste	35	26	17	18
Incinerated waste	63	59	55	48
Recycled waste	147	159	157¹	148
Material recycling	127	132	133 ¹	124
Waste-to-energy	20	27	24	24
Recycling rate (%)	60	65	69	69

1 Figure retroactively adjusted.

As in previous years, the total waste generated continues to be heavily influenced by the waste from construction and remodeling activities. Construction, excavation and demolition waste accounted for 20% of our waste in 2021. Around 32 metric kilotons of construction, excavation and demolition waste was recycled.

Significant spills

	2018	2019	2020	2021
Total number of significant spills	0	0	0	0

Community

Spending on community engagement

€ million	2018	2019	2020	2021
Total spending	35.7	46.2	53.6	43.3

We calculate the value of pharmaceutical product donations according to the WHO Guidelines for Medicine Donations; for other product donations, we apply their fair value.

The main reasons for the decline in total spending in 2021 were lower Covid-19-related donations as well as a drop in demand for praziquantel tablets in the affected countries due to Covid-19.

Community engagement spending by region¹

	Europe	North America	Asia-Pacific (APAC)	Latin America	Middle East and Africa (MEA)
2020					
€ million	15.1	5.8	4.2	2.6	25.9
%	28	11	8	5	48
2021					
€ million	10.8	5.0	7.2	0.6	19.7
%	25	12	17	1	45

¹ This table presents the regions across the globe in which we support initiatives. For projects that benefit multiple regions, we have calculated the amount per region by dividing the project spending evenly per country.

Focus of our local community engagement¹

%	2018	2019	2020	2021
Global Health	34	33	36	33
Broad Minds: Education and culture	42	38	43	45
Sustainable Solutions: Environment	2	3	1	2
Disaster relief	2	2	1	2
Other	20	24	19	18

¹ Based on number of projects

Motivations for our community engagement¹

%	2018	2019	2020	2021
Charitable activities	7	6	23	21
Community investment	88	91	72	76
Commercial initiatives in the community	5	3	5	3

¹ Based on total spending on all projects

We categorize the motivations for our activities based on the London Benchmarking Group model as well as the guidelines of the Bertelsmann Foundation for corporate social responsibility. Projects that primarily aim to make improvements within the community are classified as community investment.

Initiatives that are predominantly aimed at company-relevant factors such as image or personnel recruitment are classified as commercial initiatives in the community. Charitable activities cover any other projects that benefit a charitable organization, but cannot be listed under either of the other two motivation categories due to missing data or their narrow scope.

GRI content index

General disclosures

GRI Standards and Disclosure Number	Comment	Reference
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102-1	Name of the organization	Company profile
102-2	Activities, brands, products, and services	Company profile Products & Services
102-3	Location of headquarters	Company profile
102-4	Location of operations	Company profile List of shareholdings
102-5	Ownership and legal form	Company profile
102-6	Markets served	Company profile Macroeconomic and Sector-Specific Environment
102-7	Scale of the organization	Company profile Net sales Capitalization Consolidated Balance Sheet
102-8	Information on employees and other workers	Supervised temporary staff is not logged in our employee data system. Indicators: employees
102-9	Supply chain	Sustainable supply chain management Mica supply chain
102-10	Significant changes to the organization and its supply chain	Company profile Report profile Fundamental Information about the Group
102-11	Precautionary Principle or approach	Sustainability strategy Patient safety Clinical studies Plant, process & transport safety Chemical product safety Health & safety Environmental stewardship Climate action

102-12 External initiatives

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[Sustainable Development Goals](#)
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102-13 Membership of associations

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Strategy

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[Report on Risks and Opportunities](#)

Ethics and integrity

102-16 Values, principles, standards, and norms of behavior	Sustainability strategy Animal welfare Governance Compliance management Responsible interactions with health systems Human rights Sustainable supply chain management Sustainable Development Goals Bioethics Digital ethics Clinical studies Product-related crime Plant, process & transport safety Chemical product safety Attractive employer Diversity, equity & inclusion Leading & developing employees Health & safety Environmental stewardship Climate action Waste & recycling
102-17 Mechanisms for advice and concerns about ethics	Compliance management Responsible interactions with health systems Human rights Bioethics Digital ethics Clinical studies Animal welfare Diversity, equity & inclusion Health & safety Indicators: business ethics
Governance	
102-18 Governance structure	Sustainability strategy Management Statement on Corporate Governance
102-19 Delegating authority	Sustainability strategy Statement on Corporate Governance
102-20 Executive-level responsibility for economic, environmental, and social topics	Sustainability strategy Environmental stewardship Compliance management Diversity, equity & inclusion Attractive employer

102-21	Consulting stakeholders on economic, environmental, and social topics	Sustainability strategy Stakeholder dialogue Materiality analysis Global health Bioethics Digital ethics Responsible interactions with health systems
102-22	Composition of the highest governance body and its committees	Management Statement on Corporate Governance The Executive Board The Supervisory Board Objectives of the Supervisory Board with respect to its composition
102-23	Chair of the highest governance body	Management Statement on Corporate Governance
102-24	Nominating and selecting the highest governance body	Diversity, equity & inclusion Management Statement on Corporate Governance Gender quota Diversity policy Objectives of the Supervisory Board with respect to its composition
102-25	Conflicts of interest	Compliance management Responsible interactions with health systems Information on corporate governance practices
102-26	Role of highest governance body in setting purpose, values, and strategy	Sustainability strategy Values and compliance Report of the Supervisory Board
102-27	Collective knowledge of highest governance body	Sustainability strategy The Executive Board Statement on Corporate Governance
102-28	Evaluating the highest governance body's performance	Board of Partners The Supervisory Board Articles of Association Statement on Corporate Governance

102-29	Identifying and managing economic, environmental, and social impacts		Sustainability strategy Materiality analysis Compliance management Report on Risks and Opportunities Statement on Corporate Governance
102-30	Effectiveness of risk management processes		Sustainability strategy Compliance management Report on Risks and Opportunities Report of the Supervisory Board
102-31	Review of economic, environmental, and social topics		Sustainability strategy Compliance management Report on Risks and Opportunities Report of the Supervisory Board
102-32	Highest governance body's role in sustainability reporting		Report profile
102-33	Communicating critical concerns		Compliance management Values and compliance
102-34	Nature and total number of critical concerns	<p>Due to the sensitive nature of critical concerns, these figures are only for internal use (except where external reporting is legally required). Significant additions to or changes in the risk register are disclosed in due course to the Executive Board on an ad hoc basis, as per stipulations in the risk policy.</p>	Compliance management Indicators: business ethics Values and compliance
102-35	Remuneration policies		Compensation report
102-36	Process for determining remuneration		Attractive employer Compensation report
102-37	Stakeholders' involvement in remuneration		Attractive employer Compensation report Voting results Annual General Meeting 2021

102-38 Annual total compensation ratio	<p>Competitive salaries and additional benefits not only increase our attractiveness as an employer; they also motivate our people and build loyalty to the company. The compensation we offer is based on market analyses in the relevant field and the value of the respective position, and the employee's skill set and performance. Our Global Rewards Policy defines the framework for compensation and benefits across the entire Group. As far as possible, we strive to offer all our employees comparable compensation structures. Furthermore, we monitor compliance with minimum standards. We do not consider the information required under GRI 102-38 and GRI 102-39 to be relevant to assessing the fairness of our compensation structures.</p>	Attractive employer
102-39 Percentage increase in annual total compensation ratio	<p>Competitive salaries and additional benefits not only increase our attractiveness as an employer; they also motivate our people and build loyalty to the company. The compensation we offer is based on market analyses in the relevant field and the value of the respective position, and the employee's skill set and performance. Our Global Rewards Policy defines the framework for compensation and benefits across the entire Group. As far as possible, we strive to offer all our employees comparable compensation structures. Furthermore, we monitor compliance with minimum standards. We do not consider the information required under GRI 102-38 and GRI 102-39 to be relevant to assessing the fairness of our compensation structures.</p>	Attractive employer

Stakeholder engagement

102-40	List of stakeholder groups	Stakeholder dialogue
102-41	Collective bargaining agreements	Attractive employer
102-42	Identifying and selecting stakeholders	Stakeholder dialogue
102-43	Approach to stakeholder engagement	Stakeholder dialogue Materiality analysis Attractive employer Diversity, equity & inclusion
102-44	Key topics and concerns raised	Materiality analysis Bioethics Digital ethics

Reporting practice

102-45	Entities included in the consolidated financial statements	Report profile Company profile Notes to the Consolidated Financial Statements
102-46	Defining report content and topic Boundaries	Materiality analysis Report profile
102-47	List of material topics	Materiality analysis
102-48	Restatements of information	Report profile
102-49	Changes in reporting	Materiality analysis Report profile
102-50	Reporting period	Report profile
102-51	Date of most recent report	Report profile
102-52	Reporting cycle	Report profile
102-53	Contact point for questions regarding the report	Report profile
102-54	Claims of reporting in accordance with the GRI Standards	GRI Content Index Report profile
102-55	GRI content index	GRI Content Index
102-56	External assurance	Report profile Assurance Report

Economic Standards

GRI Standards and Disclosure Number	Comment	Reference
GRI 201: ECONOMIC PERFORMANCE 2016		
103-1	Explanation of the material topic and its Boundary	Company profile Statement on Corporate Governance
103-2	The management approach and its components	Economic performance Pension schemes
103-3	Evaluation of the management approach	Report on Risks and Opportunities
201-1	Direct economic value generated and distributed	Indicators: employees Indicators: economics Indicators: community Community engagement Consolidated income statement Consolidated cash flow statement Operating activities Personnel expenses
201-2	Financial implications and other risks and opportunities due to climate change	We report in detail on various aspects of climate change as part of our participation in the CDP (formerly known as the Carbon Disclosure Project). Climate action Water management CDP Climate change CDP Water security Report on Risks and Opportunities
201-3	Defined benefit plan obligations and other retirement plans	Indicators: employees Pension schemes
201-4	Financial assistance received from government	Accounting: Property, plant and equipment Research and development costs
GRI 202: MARKET PRESENCE 2016		
103-1	Explanation of the material topic and its Boundary	Attractive employer
103-2	The management approach and its components	
103-3	Evaluation of the management approach	

202-1	Ratios of standard entry level wage by gender compared to local minimum wage	This indicator is not relevant to us, which is why we do not collect data on the ratio of the standard entry level wage compared to local minimum wage. Our Global Rewards Policy applies to all our subsidiaries worldwide and guarantees a systematic compensation structure. Both base pay and short-term variable compensation are oriented to the median base pay of the relevant reference market. Our pay brackets are reviewed on an annual basis and reflect market conditions. We adhere to local minimum wage levels.	Attractive employer
202-2	Proportion of senior management hired from the local community	We promote both the recruitment of local employees and their international deployment at all hierarchical levels. We do not record the proportion of local managers, as this is not relevant for the strategic personnel management of our company.	Attractive employer
GRI 203: INDIRECT ECONOMIC IMPACTS 2016			
103-1	Explanation of the material topic and its Boundary		Global health Prices of medicines Health capacity & awareness
103-2	The management approach and its components		Health capacity & awareness
103-3	Evaluation of the management approach		
203-1	Infrastructure investments and services supported		Global health Health capacity & awareness Mica supply chain Community engagement
203-2	Significant indirect economic impacts		Prices of medicines Health capacity & awareness Community engagement

GRI 204: PROCUREMENT PRACTICES 2016

103-1	Explanation of the material topic and its Boundary		Sustainable supply chain management
103-2	The management approach and its components		Mica supply chain Human rights
103-3	Evaluation of the management approach		
204-1	Proportion of spending on local suppliers	We have no internal guidelines stipulating that preference be given to local vendors in allocating contracts and therefore do not collect this type of data. In some countries, local laws require contracts to be awarded to regional suppliers.	Sustainable supply chain management

GRI 205: ANTI-CORRUPTION 2016

103-1	Explanation of the material topic and its Boundary		Compliance management Sustainable supply chain management
103-2	The management approach and its components		Values and compliance
103-3	Evaluation of the management approach		
205-1	Operations assessed for risks related to corruption		Compliance management Indicators: business ethics Values and compliance Report on Risks and Opportunities
205-2	Communication and training about anti-corruption policies and procedures		Compliance management Indicators: business ethics
205-3	Confirmed incidents of corruption and actions taken	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Compliance management Indicators: business ethics Report on Risks and Opportunities

GRI 206: ANTI-COMPETITIVE BEHAVIOR 2016

103-1	Explanation of the material topic and its Boundary	Compliance management Responsible interactions with health systems
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Indicators: business ethics

Additional material topics**TECHNOLOGY (Sustainable Innovation and R&D)**

103-1	Explanation of the material topic and its Boundary	Sustainable innovation & technology
103-2	The management approach and its components	
103-3	Evaluation of the management approach	

Environmental Standards

GRI Standards and Disclosure Number	Comment	Reference
GRI 301: MATERIALS 2016		
103-1	Explanation of the material topic and its Boundary	Sustainable products & packaging
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
301-1	Materials used by weight or volume	Sustainable products & packaging
301-2	Recycled input materials used	Sustainable products & packaging

301-3	Reclaimed products and their packaging materials	Owing to the multitude of products we supply and the minimal comparability of our various initiatives, we do not collect quantitative data at the Group level. The individual measures taken by our various businesses are reported in the respective chapters.	Sustainable products & packaging
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GRI 302: ENERGY 2016

103-1	Explanation of the material topic and its Boundary		Climate action Environmental stewardship Sustainable products & packaging
103-2	The management approach and its components		Sustainable products & packaging
103-3	Evaluation of the management approach		
302-1	Energy consumption within the organization		Climate action Indicators: environment
302-2	Energy consumption outside of the organization	To date, we have not been tracking energy consumption outside our organization, but we are working to create more transparency on our Scope 3 emissions. Going forward, we will also make efforts to track energy consumption outside of our organization.	Climate action Indicators: environment
302-3	Energy intensity		Climate action Indicators: environment
302-4	Reduction of energy consumption		Climate action Indicators: environment
302-5	Reductions in energy requirements of products and services		Sustainable products & packaging

GRI 303: WATER AND EFFLUENTS 2018

103-1	Explanation of the material topic and its Boundary		Water management Environmental stewardship
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
303-1	Interactions with water as a shared resource		Water management
303-2	Management of water discharge-related impacts		Water management

303-3	Water withdrawal	The amount of seawater and produced water withdrawn is not significant and is therefore not reported separately.	Water management Indicators: environment
303-4	Water discharge	The volume of seawater and groundwater discharged is not significant and is therefore not reported separately.	Water management Indicators: environment
303-5	Water consumption	Most of the water we use in our production streams is released back into aquatic ecosystems through direct or indirect discharges. Evaporation processes are not a material part of our manufacturing operations. At individual manufacturing sites, we incorporate small amounts of water into our products. We are working to implement systems to track this. Because we lack the capacity for water storage, such information is irrelevant to our company.	Water management

GRI 304: BIODIVERSITY 2016

103-1	Explanation of the material topic and its Boundary		Environmental stewardship Sustainable products & packaging
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Our land use planning takes biodiversity impacts into account, with appropriate protective measures being taken on a case-by-case basis.	Environmental stewardship
304-2	Significant impacts of activities, products, and services on biodiversity		Environmental stewardship
304-3	Habitats protected or restored		Environmental stewardship
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Our land use planning takes biodiversity impacts into account, with appropriate protective measures being taken on a case-by-case basis.	Environmental stewardship

GRI 305: EMISSIONS 2016

103-1	Explanation of the material topic and its Boundary	Climate action Environmental stewardship
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
305-1	Direct (Scope 1) GHG emissions	Climate action Indicators: environment
305-2	Energy indirect (Scope 2) GHG	Climate action Indicators: environment
305-3	Other indirect (Scope 3) GHG emissions	Climate action Indicators: environment CDP Climate change
305-4	GHG emissions intensity	Climate action Indicators: environment
305-5	Reduction of GHG emissions	Climate action Sustainable products & packaging Indicators: environment CDP Climate change
305-6	Emissions of ozone-depleting substances (ODS)	Indicators: environment
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Indicators: environment

GRI 306: WASTE 2020

103-1	Explanation of the material topic and its Boundary	Waste & recycling Environmental stewardship
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
306-1	Waste generation and significant waste-related impacts	Waste & recycling
306-2	Management of significant waste-related impacts	Waste & recycling
306-3	Waste generated	Waste & recycling
306-4	Waste diverted from disposal	Indicators: environment
306-5	Waste directed to disposal	Waste & recycling Indicators: environment

GRI 307: ENVIRONMENTAL COMPLIANCE 2016

103-1	Explanation of the material topic and its Boundary	Environmental stewardship
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
307-1	Non-Compliance with environmental laws and regulations	Environmental stewardship

GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT 2016

103-1	Explanation of the material topic and its Boundary	Sustainable supply chain management
103-2	The management approach and its components	Mica supply chain
103-3	Evaluation of the management approach	
308-1	New suppliers that were screened using environmental criteria	Sustainable supply chain management
308-2	Negative environmental impacts in the supply chain and actions taken	Sustainable supply chain management Mica supply chain

Social Standards

GRI Standards and Disclosure Number	Comment	Reference
GRI 401: EMPLOYMENT 2016		
103-1	Explanation of the material topic and its Boundary	Attractive employer Human rights
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
401-1	New employee hires and employee turnover	Indicators: employees
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Attractive employer
	Part-time employees receive the same eligibility for employee benefits as full-time workers. Employees with temporary contracts, however, are not entitled to all company benefits, such as a company pension.	
401-3	Parental leave	Attractive employer Indicators: employees
GRI 402: LABOR/MANAGEMENT RELATIONS 2016		
103-1	Explanation of the material topic and its Boundary	Attractive employer
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
402-1	Minimum notice periods regarding operational changes	
	The regulations on periods of notice vary worldwide. We apply the rules that are in force locally. There is no need for us to track periods of notice at Group level.	
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018		
103-1	Explanation of the material topic and its Boundary	Health & safety Plant, process & transport safety
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
	The disclosures under GRI 403 pertain to our employees as well as supervised temporary staff. They do not include employees of contractors.	

403-1	Occupational health and safety management system		Health & safety
403-2	Hazard identification, risk assessment, and incident investigation		Health & safety Plant, process & transport safety
403-3	Occupational health services		Health & safety
403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational health and safety committees are required by law in Germany. All employees of Merck KGaA, Darmstadt, Germany are therefore represented by such committees, which operate at site level. They account for around 13% of our total workforce. The majority of sites outside Germany also have health and safety committees to represent their employees. The organization of these committees is the responsibility of our individual sites. Health and safety issues are governed Group-wide by our EHS Policy. The organizational implementation of this policy is the responsibility of our individual sites and is subject to local laws and regulations. Merck KGaA, Darmstadt, Germany, which accounts for approximately 13% of our total workforce, has company agreements in place on occupational health and safety.	Health & safety
403-5	Worker training on occupational health and safety		Health & safety Plant, process & transport safety
403-6	Promotion of worker health		Health & safety
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		Health & safety Human rights Plant, process & transport safety
403-8	Workers covered by an occupational health and safety management system		Health & safety
403-9	Work-related injuries	We have identified the lost time injury rate (LTIR) as a key performance indicator for our company.	Health & safety Plant, process & transport safety Indicators: employees

403-10	Work-related ill health	At Group level, we do not collect data regarding types of work-related illnesses or fatalities resulting from work-related illnesses. As deemed necessary, our sites may collect data on the incidence of occupational illness.	Health & safety Plant, process & transport safety Indicators: employees
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GRI 404: TRAINING AND EDUCATION 2016

103-1	Explanation of the material topic and its Boundary		Diversity, equity & inclusion Leading & developing employees
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
404-1	Average hours of training per year per employee	We do not keep track of the average hours our employees spend on vocational training and continuing education because this indicator does not have any bearing on the quality or success of our efforts.	
404-2	Programs for upgrading employee skills and transition assistance programs		Sustainable supply chain management Human rights Product-related crime Plant, process & transport safety Leading & developing employees Attractive employer Diversity, equity & inclusion Environmental stewardship
404-3	Percentage of employees receiving regular performance and career development reviews		Leading & developing employees Indicators: employees

GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016

103-1	Explanation of the material topic and its Boundary		Diversity, equity & inclusion Attractive employer
103-2	The management approach and its components		Objectives of the Supervisory Board with respect to its composition
103-3	Evaluation of the management approach		

405-1	Diversity of governance bodies and employees		Diversity, equity & inclusion Indicators: employees The Executive Board The Supervisory Board Objectives of the Supervisory Board with respect to its composition Diversity policy
405-2	Ratio of basic salary and remuneration of women to men	As a basic principle, our compensation systems and processes do not distinguish between women and men. The salaries we offer are predicated on the respective job description and are based on our Global Job Catalog, which has fixed salary bands that are identical for men and women. Variable salary components that fall under performance-based compensation are paid on the basis of whether mutually agreed targets have been achieved. A performance management system governs this process.	Attractive employer Diversity, equity & inclusion
GRI 406: NON-DISCRIMINATION 2016			
103-1	Explanation of the material topic and its Boundary		Diversity, equity & inclusion Attractive employer
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
406-1	Incidents of discrimination and corrective actions taken		Diversity, equity & inclusion Indicators: business ethics
GRI 407: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING 2016			
103-1	Explanation of the material topic and its Boundary		Sustainable supply chain management Human rights Attractive employer
103-2	The management approach and its components		
103-3	Evaluation of the management approach		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk		Sustainable supply chain management Human rights

GRI 408: CHILD LABOR 2016

103-1	Explanation of the material topic and its Boundary	Sustainable supply chain management
103-2	The management approach and its components	Mica supply chain Human rights Attractive employer
103-3	Evaluation of the management approach	
408-1	Operations and suppliers at significant risk for incidents of child labor	Sustainable supply chain management Human rights Mica supply chain

GRI 409: FORCED OR COMPULSORY LABOR 2016

103-1	Explanation of the material topic and its Boundary	Sustainable supply chain management
103-2	The management approach and its components	Mica supply chain Human rights Attractive employer
103-3	Evaluation of the management approach	
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Sustainable supply chain management Mica supply chain Human rights

GRI 410: SECURITY PRACTICES 2016

103-1	Explanation of the material topic and its Boundary	Human rights Sustainable supply chain management
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
410-1	Security personnel trained in human rights policies or procedures	We are currently formalizing our processes for security-relevant assessments as part of our Security Governance framework. Going forward, we will be integrating human rights aspects even more strongly into security-relevant processes, for instance training courses for security staff. To this end, we will use the newly established Security Academy platform.
		Human rights

GRI 412: HUMAN RIGHTS ASSESSMENT 2016

103-1	Explanation of the material topic and its Boundary	Human rights Attractive employer
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
412-1	Operations that have been subject to human rights reviews or impact assessments	Human rights Indicators: business ethics
412-2	Employee training on human rights policies or procedures	Human rights
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Human rights

GRI 414: SUPPLIER SOCIAL ASSESSMENT 2016

103-1	Explanation of the material topic and its Boundary	Sustainable supply chain management
103-2	The management approach and its components	Mica supply chain Human rights
103-3	Evaluation of the management approach	
414-1	New suppliers that were screened using social criteria	Sustainable supply chain management
414-2	Negative social impacts in the supply chain and actions taken	Sustainable supply chain management Mica supply chain

GRI 415: PUBLIC POLICY 2016

103-1	Explanation of the material topic and its Boundary	Stakeholder dialogue
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
415-1	Political contributions	Stakeholder dialogue

GRI 416: CUSTOMER HEALTH AND SAFETY 2016

103-1	Explanation of the material topic and its Boundary		Clinical studies Patient safety
103-2	The management approach and its components		Product-related crime Chemical product safety
103-3	Evaluation of the management approach		Sustainable products & packaging Report on Risks and Opportunities
416-1	Assessment of the health and safety impacts of product and service categories		Chemical product safety
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Clinical studies Chemical product safety Report on Risks and Opportunities

GRI 417: MARKETING AND LABELING 2016

103-1	Explanation of the material topic and its Boundary		Compliance management Responsible interactions with health systems
103-2	The management approach and its components		Patient safety Chemical product safety
103-3	Evaluation of the management approach		
417-1	Requirements for product and service information and labeling	All pharmaceuticals are subject to reporting and notification requirements, which we fulfill. In line with the statutory requirements, we provide our customers with easily accessible and relevant information on the safe handling and use of our chemical products. We report on the individual requirements in the respective chapters.	Patient safety Chemical product safety
417-2	Incidents of non-compliance concerning product and service information and labeling		Patient safety Chemical product safety Report on Risks and Opportunities
417-3	Incidents of non-compliance concerning marketing communications	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities.	Report on Risks and Opportunities

GRI 418: CUSTOMER PRIVACY 2016

103-1	Explanation of the material topic and its Boundary	Data protection & privacy Clinical studies
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Data protection & privacy Clinical studies Indicators: business ethics

GRI 419: SOCIOECONOMIC Compliance 2016

103-1	Explanation of the material topic and its Boundary	Compliance management Report on Risks and Opportunities
103-2	The management approach and its components	
103-3	Evaluation of the management approach	
419-1	Non-compliance with laws and regulations in the social and economic area	As applicable, we report on risks from litigation and legal proceedings in our Report on Risks and Opportunities. Report on Risks and Opportunities

Additional material topics

ETHICAL CONDUCT (bioethics, digital ethics, clinical studies, animal welfare)

103-1	Explanation of the material topic and its Boundary	Animal welfare
		Bioethics
103-2	The management approach and its components	Digital ethics
		Clinical studies
103-3	Evaluation of the management approach	

HEALTH FOR ALL

103-1	Explanation of the material topic and its Boundary	Global health
		Open innovation sharing
103-2	The management approach and its components	Prices of medicines
		Health capacity & awareness
103-3	Evaluation of the management approach	

PRODUCT SAFETY AND QUALITY: product-related crime

103-1	Explanation of the material topic and its Boundary	Product-related crime
103-2	The management approach and its components	
103-3	Evaluation of the management approach	

COMMUNITY ENGAGEMENT

103-1	Explanation of the material topic and its Boundary	Community engagement
103-2	The management approach and its components	
103-3	Evaluation of the management approach	

ATTRACTIVE EMPLOYER

103-1	Explanation of the material topic and its Boundary	Attractive employer
103-2	The management approach and its components	
103-3	Evaluation of the management approach	

SASB index

SASB disclosure 2021

In 2021, we integrated our Sustainability Accounting Standards Board ([SASB](#)) disclosures into our Sustainability Report in 2021. In addition to our disclosures pursuant to the SASB standard “Biotechnology & Pharmaceuticals”, we reported our information for the “Medical Equipment & Supplies” and “Semiconductors” industries for the first time. We thus cover our three business sectors now. With our voluntary SASB disclosures, we want to meet the increasing demands of our investors and other stakeholders. The reported data provide transparent, financially material and meaningful information on sustainability. To meet the evolving interests and requirements of our stakeholders in the future as well, we will continuously develop and expand our SASB reporting.

The SASB disclosures were not part of the [limited assurance engagement](#) conducted by an independent auditor for our 2021 Sustainability Report.

Biotechnology & Pharmaceuticals

Safety of Clinical Trial Participants		
HC-BP-210a.1	Discussion, by world region, of management process for ensuring quality and patient safety during clinical trials	Clinical studies R&D: Positions & Policies (Healthcare)
HC-BP-210a.2	Number of FDA Sponsor Inspections related to clinical trial management and pharmacovigilance that resulted in: (1) Voluntary Action Indicated (VAI) and (2) Official Action Indicated (OAI)	There were no FDA Good Clinical Practice (GCP) sponsor inspections related to clinical trials in 2021.
HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	Not reported
Access to Medicines		
HC-BP-240a.1	Description of actions and initiatives to promote access to health care products for priority diseases and in priority countries as defined by the Access to Medicine Index	Global health Prices of medicines
HC-BP-240a.2	List of products on the WHO List of Prequalified Medicinal Products as part of its Prequalification of Medicines Programme (PQP)	Currently there is no product on the list.
Affordability & Pricing		
HC-BP-240b.1	Number of settlements of Abbreviated New Drug Application (ANDA) litigation that involved payments and/or provisions to delay bringing an authorized generic product to market for a defined time period	Not reported

HC-BP-240b.2 Percentage change in: (1) average list price and (2) average net price across U.S. product portfolio compared to previous year	The following overview shows the percentage change in the average list price (WAC) of our Healthcare US product portfolio compared to the previous year:
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- ◆ Rebif®: 7.1 %
- ◆ Mavenclad®: 7.3 %
- ◆ Bavencio®: 3.1 %
- ◆ Gonal-f®: 7.4 %
- ◆ Cetrotide®: 7.3 %
- ◆ Ovidrel®: 7.4 %
- ◆ Serostim®: 7.3 %
- ◆ Saizen®: 6.4 %

See also: [Prices of medicines](#)

HC-BP-240b.3 Percentage change in: (1) list price and (2) net price of product with largest increase compared to previous year	We only report the percentage change in average list price across our U.S. product portfolio. The largest increase compared with the previous year amounted to 7.4% (Gonal-f® and Ovidrel®).
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Drug Safety

HC-BP-250a.1 List of products listed in the Food and Drug Administration's (FDA) MedWatch Safety Alerts for Human Medical Products database	Safety information and adverse event reporting program (FDA website) Adverse event reporting system (FAERS) public dashboard (FDA website)
HC-BP-250a.2 Number of fatalities associated with products as reported in the FDA Adverse Event Reporting System	Adverse event reporting system (FAERS) public dashboard (FDA website)
HC-BP-250a.3 Number of recalls issued, total units recalled	<p>In 2021 we had three drug product recalls in total. None of these recalls was global; they affected individual countries only. None of the recalls was related to the USA. None of the recalls was related to serious injury or fatality, all were either Class II or III. According to our internal policies, any recall type is reported and discussed with the relevant national regulatory authority, including the U.S. FDA. All recall processes are managed under a Global Standard Procedure "Product Recall and Withdrawal Management" which is applied worldwide for medicinal products (pharmaceutical prescription, biological) and devices.</p>
HC-BP-250a.4 Total amount of product accepted for take-back, reuse, or disposal	<p>We do not take back products for reuse. In line with legal requirements in each country we take back products for disposal.</p>
HC-BP-250a.5 Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	<p>We had no such FDA enforcement actions in 2021.</p>

Counterfeit Drugs

HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	Product-related crime
HC-BP-260a.2	Discussion of process for alerting customers and business partners of potential or known risks associated with counterfeit products	We have implemented processes and procedures to ensure that all suspected counterfeit medicines are assessed by a team of experts. The scope of any notification that we provide is the outcome of strategic alignment between relevant functions (e.g. Medical, Procurement, Legal, Quality, Corporate Security, Regulatory Affairs, Communications). Levels of details and format of any notification, including the HA information and collaboration, dedicated patient communication, information/awareness communication to distributors, pharmacies, physicians etc. about the presence of counterfeit or diverted products in the market, is decided on a case-by-case basis in accordance with the identified risks and taking into account corporate, legal and regulatory responsibilities. See also: Product-related crime
HC-BP-260a.3	Number of actions that led to raids, seizure, arrests, and/or filing of criminal charges related to counterfeit products	Product-related crime

Ethical Marketing

HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	Not reported
HC-BP-270a.2	Description of code of ethics governing promotion of off-label use of products	Responsible interactions with health systems

Employee Recruitment, Development & Retention

HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development personnel	Leading and developing employees Attractive Employer Diversity, equity and inclusion
HC-BP-330a.2	(1) Voluntary and (2) involuntary turnover rate for: (a) executives/senior managers, (b) mid-level managers, (c) professionals, and (d) all others	Indicators: employees

Supply Chain Management

HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program or equivalent third-party audit programs for integrity of supply chain and ingredients	Our Healthcare business sector does not participate in the Rx-360 International Pharmaceutical Supply Chain Consortium. However, our facilities are frequently audited by the respective health authorities of the countries in which we distribute our healthcare products.
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As a major supplier to the pharmaceutical industry, our Life Science business sector participates in the Rx-360 audit program.

Regarding our supplier base, we have access to sustainability audits and assessments of our suppliers through our membership in the industry initiatives "Together for Sustainability" (TfS) and "Pharmaceutical Supply Chain Initiative" (PSCI).

See also:

[Sustainable supply chain management](#)

Business Ethics

HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	Not reported
HC-BP-510a.2	Description of code of ethics governing interactions with health care professionals	Our Code of Conduct presents and explains our company's values and our ethical integrity standards (e.g. "We cannot be bribed, and we do not offer bribes", "We make our cooperation with healthcare partners transparent", among many others). It is complemented by our Global Anti-Corruption Policy, which stipulates that all business activities must be conducted in line with legally applicable anti-corruption standards.

Specifically, with regard to our interactions with healthcare professionals, our Healthcare Ethical Guiding Principles address the topic through our "Responsible Interactions" and "Safeguard Independence" principles. These general governance documents are complemented by more than 20 standards and policies, together with procedural and guidance documents covering multiple interactions and engagements with healthcare professionals.

See also:

[Responsible interactions with health systems](#)
[Compliance management](#)

Activity metrics

HC-BP-000.A Number of patients treated

In 2021, our Healthcare medicines were used to treat around 92 million patients. Additionally, we donated 182 million praziquantel tablets, enough to treat schistosomiasis in 73 million school-aged children in 2021.

See also:

[Global Health](#)

HC-BP-000.B Number of drugs (1) in portfolio and (2) in research and development (Phases 1-3)

[Healthcare portfolio](#)

[Research & Development \(Healthcare\)](#)

[Healthcare pipeline](#)

Medical Equipment & Supplies

Affordability & Pricing		
HC-MS-240a.1	Ratio of weighted average rate of net price increases (for all products) to the annual increase in the U.S. Consumer Price Index	Not reported
HC-MS-240a.2	Description of how price information for each product is disclosed to customers or to their agents	Life Science portfolio
Product Safety		
HC-MS-250a.1	Number of recalls issued, total units recalled	<p>We conduct monthly reviews of key performance quality indicators which include a review of multiple quality metrics including number of recalls. Quarterly trends are evaluated and reported through management reviews.</p> <p>In 2021, there were three recalls for our Life Science business:</p> <ul style="list-style-type: none"> US - FDA Class II (43 units recalled) US – FDA Class III (20 units recalled) UK– HPRA notified (1 batch impacted)
HC-MS-250a.2	List of products listed in the FDA’s MedWatch Safety Alerts for Human Medical Products database	In 2021, there were no Life Science products listed in the FDA’s MedWatch Safety Alerts for Human Medical Products database .
HC-MS-250a.3	Number of fatalities related to products as reported in the FDA Manufacturer and User Facility Device Experience database	In 2021, there were no fatalities related to our Life Science products reported to the FDA Manufacturer and User Facility Device Experience database .
HC-MS-250a.4	Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	Life Science received three U.S. FDA 483 forms in 2021.

Ethical Marketing

HC-MS-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	Not reported
HC-MS-270a.2	Description of code of ethics governing promotion of off-label use of products	<p>Before any products can be purchased from our Life Science platform, we use a customer screening process to guard against the purchase of our products for illegal purposes. Core steps of this process cover data sourcing, hazard assessment, safe-use/risk assessment and labels/safety data sheets. Besides our own process, we cooperate with responsible authorities in the U.S. (FBI and the Bureau of Alcohol, Tobacco, Firearms and Explosives, ATF), as well as international authorities (Interpol). If we become aware that any of our Life Science products is used beyond our marketed intention, we evaluate the situation to determine whether to continue sales or not. Proper use of our products is included in our Terms and Conditions under "Use of Products".</p> <p>See also: Chemical product safety</p>

Product Design & Lifecycle Management

HC-MS-410a.1	Discussion of process to assess and manage environmental and human health considerations associated with chemicals in products, and meet demand for sustainable products	<p>We assess environmental, human health, and further sustainability aspects of chemical products that we are sourcing and/or producing and selling. Furthermore, we screen our entire Life Science portfolio against growing demands arising from external stakeholders. For example, in alignment with the European Chemicals Strategy for Sustainability (CSS) we work towards a more sustainable product portfolio. Our Product Stewardship Council drives the transformation of existing products by considering appropriate measures like the substitution of chemical substances. Regarding future products, the selection of benign substance alternatives is done during ideation and early R&D through our Design for Sustainability program. In support of this, we have developed a tool which monitors latest chemical regulations. Besides flagging banned substances, it also flags substances that are already considered critical but not yet regulated. In addition to this, experts of the Chemicals Regulations teams are directly consulted for further insights and advice.</p> <p>See also: Chemical product safety Sustainable products & packaging</p>
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HC-MS-410a.2	Total amount of products accepted for take-back and reused, recycled, or donated, broken down by: (1) devices and equipment and (2) supplies	Since 2013, we have been partnering with Seeding Labs, a non-profit organization dedicated to equipping scientists in resource-limited countries with scientific equipment and support. In 2021, we donated 1,626 items of scientific equipment valued at more than \$360,000.
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See also:

[Sustainable products and packaging](#)

[Sustainability and Social Business Innovation](#)

Supply Chain Management

HC-MS-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in third-party audit programs for manufacturing and product quality	<p>As a major supplier to the pharmaceutical industry, our Life Science business participates in the Rx-360 audit program. The Life Science facilities are regularly audited by customers and respective health authorities for regulated products.</p> <p>(1) Rx-360 audit programs are conducted across the Life Science business on a multi-year cycle with approximately 15% of our manufacturing facilities audited annually.</p> <p>(2) Approximately 5% of our tier 1 supplier facilities participated in third party audit programs such as Rx-360.</p>
HC-MS-430a.2	Description of efforts to maintain traceability within the distribution chain	<p>Product safety (Life Science)</p> <p>Quality & regulatory management (Life Science)</p>
HC-MS-430a.3	Description of the management of risks associated with the use of critical materials	Sustainable supply chain management

Business Ethics

HC-MS-510a.1	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Not reported
HC-MS-510a.2	Description of code of ethics governing interactions with health care professionals	<p>Responsible interactions with healthcare systems</p> <p>Compliance management</p>

Activity metrics

HC-MS-000.A	Number of units sold by product category	Not reported
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Semiconductors

Greenhouse Gas Emissions		
TC-SC-110a.1	(1) Gross global Scope 1 emissions	Indicators: environment
	(2) amount of total emissions from perfluorinated compounds	Not reported
TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Climate action
Energy Management in Manufacturing		
TC-SC-130a.1	(1) Total energy consumed	Indicators: environment
	(2) percentage grid electricity	Not reported
	(3) percentage renewable	Indicators: environment
Water Management		
TC-SC-140a.1	(1) Total water withdrawn	Indicators: environment
	(2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Water management CDP Water security
Waste Management		
TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	Indicators: environment
Employee Health & Safety		
TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	Health and safety
TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	Not reported
Recruiting & Managing a Global & Skilled Workforce		
TC-SC-330a.1	Percentage of employees that are (1) foreign nationals and	Indicators: employees
	(2) located offshore	Indicators: employees
Product Lifecycle Management		
TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Not reported
TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers,	Not applicable
	(2) desktops, and	Not applicable
	(3) laptops	Not applicable

Materials Sourcing

TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	Research & Development (Electronics) Report on risks and opportunities
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Intellectual Property Protection & Competitive Behavior

TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Not reported
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Activity metrics

TC-SC-000.A	Total production	Not reported
TC-SC-000.B	Percentage of production from owned facilities	Not reported

TCFD index

TCFD disclosure 2021

Established in 2015, the Task Force on Climate-related Financial Disclosures ([TCFD](#)) aims to develop consistent, comparable and accurate climate-related financial risk disclosures. Companies can use this data to provide information to investors, lenders, insurers, and other stakeholders, allowing them to assess and analyze climate-related risks and opportunities. We use the recommendations of the TCFD for our climate-related reporting on governance, strategy, risk management, and metrics.

The TCFD reporting was not part of the [limited assurance engagement](#) conducted by an independent auditor for our 2021 Sustainability Report.

For the first time in 2021, we are taking into account the requirements of the TCFD in our sustainability reporting. Our TCFD disclosure is based on our responses to the [CDP 2021 climate change questionnaire](#). Going forward, we plan to continue expanding our quantitative disclosures on climate-related topics as we increasingly integrate the TCFD recommendations into our businesses.

Governance

TCFD core elements	Required information	CDP climate change questionnaire 2021 reference
Disclose the organization's governance around climate-related risks and opportunities.	A. Executive Board's oversight of climate-related risks and opportunities.	C1.1a (p.3) C1.1b (p.4) C2.2 (p.8)
	B. Management's role in assessing and managing climate related risks and opportunities.	C1.2a (p.5)
Related Chapters	Sustainability Strategy Climate Action	

Strategy

TCFD core elements	Required information	CDP climate change questionnaire 2021 reference
Disclose the actual and potential impacts of climate related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	A. Description of climate-related opportunities and risks.	C2.1a (p.8) C2.2 (p.8) C2.3a (p.13)
	B. Impact of climate-related risks on the organization's businesses, strategy, and financial planning.	C3.3 (p.26) C3.4a (p.30)
	C. Resilience of the organization's strategy.	C3.2b (p.26)
Related Chapters	Sustainability Strategy Climate Action	

Risk management

TCFD core elements	Required information	CDP climate change questionnaire 2021 reference
Disclose how the organization identifies, assesses, and manages climate-related risks.	A. Organization's processes for identifying and assessing climate-related risks.	C2.2 (p.8) C2.2a (p.10)
	B. Organization's processes for managing climate-related risks.	C2.2 (p.8)
	C. Integration of processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	C2.2 (p.8)
Related Chapters	Compliance Management	

Metrics and targets

TCFD core elements	Required information	CDP climate change questionnaire 2021 reference
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	A. Metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	C4.1 (p.30) C4.2 (p.34) C5 (p.41) C7 (p.54) C8 (p.58)
	B. Disclose of Scope 1, Scope 2, and, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	C6.1 (p.42) C6.3 (p.43) C6.5 (p.45) C7 (p.54)
	C. Targets used by the organization to manage climate-related risks and opportunities and performance against targets.	C4.1 (p.30) C4.1a (p.30) C4.2 (p.34)
Related Chapters	Climate Action Environmental Stewardship Water Management Waste & Recycling	

Global Compact CoP

2021 UN Global Compact Communication on Progress

We have been a participant in the United Nations Global Compact since 2005. As a signatory to the initiative, we have committed ourselves to its ten principles, which cover key UN conventions on human rights, labor, environment, and anti-corruption. At the same time, the UN Global Compact calls on all participating companies to work to implement these principles within their own sphere of influence.

The following table summarizes the key actions we took in 2021 to advance the principles of the Global Compact.

<p>COMMUNICATION ON PROGRESS</p> 	<p>This is our Communication on Progress in implementing the Ten Principles of the United Nations Global Compact and supporting broader UN goals.</p> <p>We welcome feedback on its contents.</p>
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Link: www.unglobalcompact.org

UNGC principles	Key actions in 2021	Relevant GRI disclosures	Link
Human rights			
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.	<ul style="list-style-type: none"> ◆ Incorporated human rights and modern slavery into our “EHS StartUp!” training for new EHS managers ◆ Offered e-learning courses on our Human Rights Charter and Social and Labor Standards Policy, targeted to all managing directors and senior leaders reporting directly to the Executive Board ◆ Conducted webinars within the scope of the Security Academy meetings on human rights and modern slavery ◆ Formalized review process to ensure fulfillment of safety-relevant human rights aspects at our sites through security audits ◆ Participated in “TfS Talks” by sharing our conflict minerals approach ◆ Adopted and published the Code of Digital Ethics ◆ Offered a free-of-charge and anonymous whistleblowing channel, our compliance hotline, to report potential human rights violations 	103-2, 412-1, 412-2	Compliance management Human rights
Principle 2: Businesses should make sure that they are not complicit in human rights abuses.	<ul style="list-style-type: none"> ◆ Supported the development of a training platform concept on sustainability management within the scope of our TfS membership ◆ Conducted internal and external audits of suppliers on sustainability topics and collected self-reported information ◆ Chaired the Responsible Mica Initiative 	412-3, 414-1, 414-2	Compliance management Sustainable supply chain management Mica supply chain Human rights
Labor standards			
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	<ul style="list-style-type: none"> ◆ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ◆ Regularly included local employee representatives in company decision-making ◆ Formalized review process to ensure fulfillment of safety-relevant human rights aspects at the sites through security audits 	102-41, 402-1, 407-1	Compliance management Human rights Attractive employer

UNGC principles	Key actions in 2021	Relevant GRI disclosures	Link
<p>Principle 4: Businesses should support the elimination of all forms of forced and compulsory labor.</p>	<ul style="list-style-type: none"> ◆ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ◆ Published on our website the UK Modern Slavery Statement and our Australia Modern Slavery Statement, both endorsed by our Executive Board ◆ Incorporated human rights and modern slavery into our “EHS StartUp!” training for new EHS managers ◆ Conducted webinars within the scope of our Security Academy meetings on human rights and modern slavery 	409-1	Compliance management Human rights Attractive employer
<p>Principle 5: Businesses should support the effective abolition of child labor.</p>	<ul style="list-style-type: none"> ◆ Conducted internal audits on workplace matters covered in our Human Rights Charter, which are specified in more detail in our Social and Labor Standards Policy ◆ Chaired the Responsible Mica Initiative ◆ Conducted internal and external audits of suppliers on sustainability topics and collected self-reported information 	408-1	Compliance management Mica supply chain Human rights Attractive employer
<p>Principle 6: Businesses should support the elimination of discrimination in respect of employment and occupation.</p>	<ul style="list-style-type: none"> ◆ Refocused our Diversity, Equity and Inclusion (DE&I) strategy on the following priority areas: gender parity, culture and ethnicity as well as inclusion ◆ Defined new DE&I targets for 2030: Achieve gender parity in leadership positions (2021: 36%); increase the proportion of colleagues in U.S. leadership teams who are members of underrepresented racial and ethnic groups (2021: 21%); increase the global share of nationals from Asia, Latin America, and MEA in leadership positions to 30% (2021: 16%) ◆ Conducted a pay equity analysis ◆ Joined the UN Target Gender Equality Programme ◆ >Integrated the inclusion concept into our Human Resources programs and processes ◆ Launched a tool to support the use of gender-neutral language in job advertisements ◆ Ran a pilot project in the United States: Increased bonuses for successful referrals of qualified diverse candidates. ◆ Offered trainings on unconscious bias Group-wide ◆ Fostered diverse talent through mentoring, sponsoring and talent programs ◆ Supported numerous local and global employee networks on diversity, equity & inclusion ◆ Collaborated with Disability:IN 	102-8, 202-1, 202-2, 401-1, 401-3, 404-1, 404-3, 405-1, 405-2, 406-1	Diversity, equity & inclusion Attractive employer

UNGC principles	Key actions in 2021	Relevant GRI disclosures	Link
Environmental stewardship			
<p>Principle 7: Businesses should support a precautionary approach to environmental challenges.</p>	<ul style="list-style-type: none"> ◆ Passed third-party ISO 14001:2015 audits at 13 sites ◆ Performed 51 internal EHS audits, with all audited sites being rated as “good” or “satisfactory”. ◆ Achieved a 9% reduction of our CO₂ emissions (Scope 1 and Scope 2) in comparison with the baseline year 2020 amid operating business growth, thereby contributing to our target to lower CO₂ emissions (Scope 1 and Scope 2) by 50% by 2030 compared with 2020. ◆ Sourced 30% of our purchased electricity from renewable energies (2020: 27%), thereby contributing to our target to cover 80% of our purchased electricity with renewables by 2030. ◆ Signed a renewable energy virtual power purchase agreement in the United States ◆ Applied to join the Science Based Targets Initiative ◆ Set new water management target: By 2025, lower the Water Intensity Score by 10% compared with the baseline year 2020. ◆ Expanded the central wastewater treatment plant at the Darmstadt site (expansion to include a fourth purification stage). ◆ Worked towards shrinking the environmental footprint of our waste by 5% by 2025, as measured by our waste scoring system, as compared with the baseline year 2016. In 2021, we achieved a 5.6% reduction (2020: 4.6%) ◆ Took measures to ensure product safety (for instance REACH, GHS), plant and process safety, and transport and warehouse safety (such as internal EHS audits) 	<p>201-2, 301-1, 302-1, 303-1, 305-1, 305-2, 305-3, 305-6, 305-7</p>	<p>Safety of chemical products Plant, process and transport safety Environmental stewardship Climate protection Waste and recycling Water management</p>
<p>Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.</p>	<ul style="list-style-type: none"> ◆ Introduced bulk packaging designs for a subset of our Durapore[®] and Millipore Express[®] filter cartridges ◆ Commercialized greener alternative products such as Cyrene™, our Stericup E filtration system and our microplastic-free functional filler RonaFlair ◆ Utilized reusable and recyclable packaging, which we also offer to our customers ◆ Offered sustainable mobility options to employees (such as “Jobticket” public transit passes and shared bicycles) ◆ Installed at our global headquarters an extensive electric vehicle charging infrastructure, part of which is available to our employees for their own personal use 	<p>301 - 308</p>	<p>Sustainable Products and Packaging Climate protection</p>

UNGC principles	Key actions in 2021	Relevant GRI disclosures	Link
<p>Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.</p>	<ul style="list-style-type: none"> ◆ Leveraged DOZN™, our web-based tool for evaluating greener alternatives to various chemicals. We also provided this tool to our customers and partner universities. ◆ Updated our “DfS: Development” approach to integrate sustainability aspects into the product development process ◆ Integrated ESG criteria into R&D portfolio management ◆ Developed sustainable products such as liquid crystal technologies, raw materials for natural cosmetics and “greener” alternatives to chemicals. ◆ Reduced packaging materials and deployed more sustainable packaging as part of our SMASH Packaging sustainable packaging strategy ◆ Continued to expand the recycling programs for our Life Science and Electronics customers 	302-4, 302-5, 305-5	Sustainable Products and Packaging
Anti-corruption			
<p>Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.</p>	<ul style="list-style-type: none"> ◆ Revised our risk matrix with a focus on bribery and corruption risks ◆ Performed 84 internal audits on corruption-related risks ◆ Provided employee training courses on topics such as anti-corruption, anti-trust, data privacy and healthcare compliance. ◆ Expanded our training courses to comply with the Code of Conduct in healthcare-specific dilemma situations in all countries in which our Healthcare business sector operates and developed comparable training course for our Life Science and Electronics business sectors ◆ Developed our anti-money-laundering program further by conducting a risk analysis ◆ Offered a free-of-charge and anonymous whistleblowing channel (compliance hotline) ◆ Formed partnerships and engaged stakeholders to coordinate and enhance anti-corruption efforts ◆ Published annual EFPIA transparency reports 	102-16, 102-17, 205-1, 205-2, 205-3, 415-1	Compliance Management Responsible Interactions with Health Systems