

ESG Data Collection

Kureha and Kureha Group

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Target companies

- In Japan
- Kureha Chemical Industry Co., Ltd.
 - Kureha Gohsen Co., Ltd.
 - Kureha Extron Co., Ltd.
 - Kureha Unyu Co., Ltd.
 - Kurehanishiki Construction Co., Ltd.
 - Kureha Engineering Co., Ltd. (Subsidiary of Kureha Service Co.,Ltd.)
 - Kureha Ecology Management Co., Ltd.
 - Kureha Special Laboratory Co., Ltd. (Subsidiary of Kureha Service Co.,Ltd.)
 - Resinous Kasei Co., Ltd. (Subsidiary of Kureha Trading Co.,Ltd.)
- Overseas
- Kureha PGA LLC (Subsidiary of Kureha America Inc.)
 - KREHALON B.V. (Subsidiary of Kureha Europe B.V.)
 - Kureha (Shanghai) Carbon Fiber Materials Co., Ltd.
 - Kureha (Changshu) Fluoropolymers Co., Ltd. (Subsidiary of Kureha (China) Investment Co., Ltd.)
 - Kureha Vietnam Co., Ltd.

August 2021
Kureha Chemical Industry Co., Ltd.

● Environment

Energy usage, by type (Kureha)							
	Energy usage						
	Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Electricity (purchased)	1,000 GJ	754	760	614	793	581	605
Fuel and heat	1,000 GJ	4,950	4,256	4,436	4,173	4,369	4,369
Total	1,000 GJ	5,704	5,016	5,049	4,966	4,950	4,975
Crude oil equivalent	1,000 kL	147	129	130	128	128	124
vs. Previous year	%			100.7	98.4	99.7	97.3
vs. FY2013	%	100.0	88.0	88.6	87.2	86.9	84.5

Energy sales volume, by type (Kureha)							
	Energy sales volume						
	Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Electricity	1,000 GJ	372	394	388	366	388	369
Industrial steam	1,000 GJ	8.4	6.9	7.7	6.5	9.4	8.1
Total	1,000 GJ	380	401	396	372	398	378
Crude oil equivalent	1,000 kL	9.8	10	10	9.6	10	9.7

Energy usage, by intensity: comparison to previous fiscal year, 5 fiscal year average (Kureha)						
	Unit	FY2017	FY2018	FY2019	FY2020	5 fiscal year average intensity
vs. Previous year	%	100.5	97.3	101.2	104.2	100.8

Benchmark index status (Kureha)							
Sector	Benchmark index status						
Name of target business	Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Alkali industry	GJ/t	3.62	3.57	3.57	3.65	3.62	3.64

Energy consumption (Kureha Group)							
	Energy usage						
	Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
KUREHA	1,000 kL	147	129	130	128	128	124
Group Companies in Japan	1,000 kL	13	6	6	7	7	8
Overseas Group Companies	1,000 kL	10	10	16	15	14	14
Total	1,000 kL	170	145	152	150	149	146
vs. Previous year	%			100.0	116.7	100.0	112.6
vs. FY2013	%	100.0	85.5	89.5	88.2	87.4	85.7

CO ₂ generated from business activities (Kureha)							
	CO ₂ emission volume						
	Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Head office, other sites	1,000 t-CO ₂	3.6	2.9	2.8	2.5	2.4	1.5
The plastics processing factories	1,000 t-CO ₂	13	11	11	10	8.6	7.1
The Iwaki Factory	1,000 t-CO ₂	427	373	384	367	375	354
Total	1,000 t-CO ₂	444	388	397	380	386	363
vs. Previous year	%			102.4	95.6	101.7	93.9
vs. FY2013	%	100.0	87.4	89.5	85.6	87.1	81.8

CO ₂ generated from business activities: Originated from energy and non-energy (entire Kureha Group)								
		CO ₂ emission volume						
		Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Originated from energy	KUREHA	1,000 t-CO ₂	431	380	389	370	376	363
	Group Companies in Japan	1,000 t-CO ₂	21	15	13	22	23	21
	Overseas Group Companies	1,000 t-CO ₂	18	20	35	30	28	28
Subtotal		1,000 t-CO ₂	470	415	437	423	428	412
vs. Previous year		%			105.4	96.6	101.2	96.3
vs. FY2013		%	100.0	88.3	93.1	89.9	91.0	87.6
Originated from non-energy	KUREHA	1,000 t-CO ₂	13	7.6	7.9	9.4	10	8.8
	Group Companies in Japan	1,000 t-CO ₂	164	153	146	146	148	138
Subtotal		1,000 t-CO ₂	177	161	154	155	158	147
vs. Previous year		%			95.6	100.8	102.2	92.7
vs. FY2013		%	100.0	90.9	86.9	87.6	89.5	82.9
Total		1,000 t-CO ₂	647	576	591	578	586	559
vs. Previous year		%			102.7	97.7	101.5	95.4
vs. FY2013		%	100.0	89.0	91.4	89.3	90.6	86.4

CO ₂ generated from business activities: Scope 1 and Scope 2 (entire Kureha Group)								
		CO ₂ emission volume						
		Unit	FY2013	FY2016	FY2017	FY2018	FY2019	FY2020
Scope 1	KUREHA	1,000 t-CO ₂	-	-	352	337	356	340
	Group Companies in Japan	1,000 t-CO ₂	-	-	147	147	150	139
	Overseas Group Companies	1,000 t-CO ₂	-	-	6	5	4	4
Subtotal		1,000 t-CO ₂	-	-	505	489	510	483
vs. Previous year		%	/	/	/	96.9	104.3	94.7
Scope 2	KUREHA	1,000 t-CO ₂	-	-	45	42	30	31
	Group Companies in Japan	1,000 t-CO ₂	-	-	12	21	21	20
	Overseas Group Companies	1,000 t-CO ₂	-	-	29	25	24	24
Subtotal		1,000 t-CO ₂	-	-	86	89	76	75
vs. Previous year		%	/	/	/	102.7	85.5	99.3
Total of Scope 1 and Scope 2		1,000 t-CO ₂	-	-	591	578	586	559
vs. Previous year		%	/	/	/	97.7	101.5	95.4

Atmospheric (Kureha)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
SOx emission volume	t	11	10	18	4	4
NOx emission volume	t	388	421	395	432	430
Soot and dust emission volume	t	10	5	11	14	14

Water consumption and total discharge (entire Kureha Group)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Water consumption	1,000 m ³	-	24,628	24,215	24,260	23,897
City water	1,000 m ³	-	335	709	349	318
Groundwater	1,000 m ³	-	1,079	1,154	1,153	1,176
Industrial water	1,000 m ³	-	22,007	21,424	21,481	21,300
Seawater	1,000 m ³	-	0	0	0	0
Other	1,000 m ³	-	1,207	928	1,276	1,103
Total discharge	1,000 m ³	-	21,687	21,534	21,832	21,485

Water consumption and total discharge (Kureha)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Water consumption	1,000 m ³	21,014	20,904	20,342	20,392	20,199
City water	1,000 m ³	69	85	81	81	79
Groundwater	1,000 m ³	891	863	868	848	841
Industrial water	1,000 m ³	20,054	19,956	19,393	19,462	19,279
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	0	0	0	0	0
Total discharge	1,000 m ³	18,323	18,165	18,084	18,123	18,059

Discharge-related (Kureha)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
COD emission volume	t	69	74	69	84	73
BOD emission volume	t	13	10	20	21	32
Total nitrogen emission volume	t	48	35	32	38	31
Total phosphorus emission volume	t	7	10	8	8	9

Water consumption and total discharge (Group Companies in Japan)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Water consumption	1,000 m ³	1,604	1,739	1,747	1,812	1,730
City water	1,000 m ³	80	94	129	128	124
Groundwater	1,000 m ³	258	216	286	305	335
Industrial water	1,000 m ³	1,267	1,240	1,213	1,314	1,271
Seawater	1,000 m ³	0	0	0	0	0
Other	1,000 m ³	0	189	118	65	0
Total discharge	1,000 m ³	1,544	1,486	1,523	1,692	1,513

Water consumption and total discharge (Overseas Group Companies)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Water consumption	1,000 m ³	-	1,985	2,126	2,056	1,968
City water	1,000 m ³	-	156	499	139	116
Groundwater	1,000 m ³	-	0	0	0	0
Industrial water	1,000 m ³	-	811	817	706	750
Seawater	1,000 m ³	-	0	0	0	0
Other	1,000 m ³	-	1,018	810	1,211	1,103
Total discharge	1,000 m ³	-	2,036	1,927	2,018	1,913

Waste generation, recycling, and landfill disposal volume (Kureha)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Waste generation volume	1,000 t	25.8	22.4	20.4	22.2	19.7
Recycling volume	1,000 t	15.5	13.8	11.7	13.0	11.5
Landfill disposal volume	1,000 t	4.6	3.6	3.9	4.1	3.2
Recycling rates	%	60.2	61.6	57.4	58.4	58.4

Waste generation, recycling, and landfill disposal volume (Group Companies in Japan)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Waste generation volume	1,000 t	33.2	37.9	41.1	41.9	48.1
Recycling volume	1,000 t	13.3	13.3	13.8	15.2	20.8
Landfill disposal volume	1,000 t	19.8	24.3	27.0	26.6	27.1
Recycling rates	%	40.2	35.2	33.7	36.3	43.2
The above includes waste from the industrial waste treatment industry and construction industry.						

Waste generation, recycling, and landfill disposal volume (Overseas Group Companies)						
	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Waste generation volume	1,000 t	2.4	3.3	2.8	2.8	2.1
Recycling volume	1,000 t	1.5	2.1	1.6	0.4	0.3
Landfill disposal volume	1,000 t	0.8	0.7	0.8	0.8	0.7
Recycling rates	%	63.7	63.5	57.6	14.9	15.1

● Social

Employees and other workers (Kureha)				
		FY2018	FY2019	FY2020
Employees	Total	1,808	1,695	1,676
	Male	1,412	1,310	1,309
	Female	396	385	367
Temporary employees	Total	39	32	23
	Male	20	17	12
	Female	19	15	11

Employee age group percentages (Kureha)		
	Unit	FY2020
Under 30 years old	%	14
30-50 years old		55
Over 50 years old		31

New regular employees* (Kureha)				
		FY2018	FY2019	FY2020
By gender	Total	43	44	59
	Male	35	35	51
	Female	8	9	8

Regular employees leaving the company* (Kureha)				
		FY2018	FY2019	FY2020
By gender	Total	78	48	74
	Male	58	38	52
	Female	20	10	22

Paid Holidays Taken (Kureha)				
	Unit	FY2018	FY2019	FY2020
Percentage of paid holidays taken	%	77.8	81.8	72.5

Overtime Hours (Kureha)				
	Unit	FY2018	FY2019	FY2020
Average monthly overtime hours	hr/mo	12.1	12.9	11.8

Parental leave (Kureha)					
		Unit	FY2018	FY2019	FY2020
Employees taking parental leave	Total		6	9	8
	Male		0	0	2
	Female		6	9	6
Use of parental leave acquisition rate	Total		11.3	14.3	16.3
	Male	%	0	0	4.7
	Female		100	100	100
Return to work rate after parental leave	Total		100	100	100
	Male	%	-	-	-
	Female		100	100	100
Male employees taking childbirth and parental leave*	Male		15	18	16
Use of male childbirth and childcare leave*	Male	%	31.9	34.0	37.2
*Excludes seconded employees.					

Nursing leave (Kureha)			
	FY2018	FY2019	FY2020
Employees taking nursing leave	0	0	0

Employment of people with disabilities (Kureha*)				
	Unit	FY2018	FY2019	FY2020
Employment rate	%	2.36	2.24	2.38
Statutory employment rate	%	2.20	2.20	2.30
*Includes Sunshine Kureha Co., Ltd., a special subsidiary.				

Mandatory retirees and reinstated employees (Kureha)	
	FY2020
Mandatory retirees	30
Reinstated employees	27
Percentage of reinstated employees	90.0

The number of fatalities as a result of work-related ill health (Kureha)	
	FY2020
All employees	0
All workers who are not employees but whose work and/or workplace is controlled by the organization	0

● Governance

Composition of the Board of Directors (Kureha)				
	FY2020			
	Inside Directors	Outside Directors	Total	Percentage of outside directors (%)
Total	4	4	8	50.0
Directors	3	2	5	40.0
Audit & Supervisory Board Members	1	2	3	66.7

Compensation of directors (Kureha)					
Classification	Aggregate amount of remuneration (Millions of yen)	FY2020			Number of Directors
		Amount of remuneration by type (Millions of yen)			
		Base salary	Performance-linked remuneration, etc.	Non-monetary rewards, etc.	
Directors (Excluding outside directors)	215	127	70	18	3
Audit & Supervisory Board Member (Excluding outside auditors)	18	18	-	-	1
Outside Directors	30	30	-	-	3*
Outside Audit & Supervisory Board Members	29	29	-	-	2

*Due to a succession, the composition of the Board of Directors has not changed (3 inside, 2 outside)

Whistleblowing system (Group Companies in Japan)			
	FY2018	FY2019	FY2020
The number of reports	5	2	10

Violations of the law (Kureha)			
	FY2018	FY2019	FY2020
Antitrust Law	0	0	0
Violations of laws concerning security export control	0	0	0

Marketing and Labeling (Kureha)			
	FY2018	FY2019	FY2020
Premiums and Representations Act violations	0	0	0

● Information on external certification

Company name		Status of international standard certification		
		Environmental Management System	Occupational Safety and Health Management System	Quality Management System
In Japan	Kureha Chemical Industry Co., Ltd. Iwaki Factory	ISO 14001	ISO 45001	ISO 9001
	Kureha Chemical Industry Co., Ltd. Plastics Processing	ISO 14001	ISO 45001	ISO 9001
	Kureha Gohsen Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Extron Co., Ltd.	ISO 14001	-	ISO 9001
	Kureha Unyu Co., Ltd.	-	-	ISO 9001
	Kurehanishiki Construction Co., Ltd.	ISO 14001	COHSMS	ISO 9001
	Kureha Engineering Co., Ltd.	-	-	-
	Kureha Ecology Management Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Special Laboratory Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Resinous Kasei Co., Ltd.	ISO 14001	-	ISO 9001
Overseas	Kureha PGA LLC	-	-	-
	KREHALON B.V.	ISO 14001	-	ISO 9001
	Kureha (Shanghai) Carbon Fiber Materials Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha (Changshu) Fluoropolymers Co., Ltd.	ISO 14001	ISO 45001	ISO 9001
	Kureha Vietnam Co., Ltd.	-	-	ISO 9001