

1. Kuraray Group (total of 2. Kuraray Group in Japan and 3. Kuraray Group outside Japan^{*1})

(Coverage: 99.7%)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2) ^{*2}	1,000 t-CO ₂ e	2,236	2,362	3,188	3,231	3,045
Scope1 emissions	1,000 t-CO ₂ e	1,204	1,240	2,000	2,060	2,045
Scope2 emissions	1,000 t-CO ₂ e	1,032	1,122	1,188	1,170	1,000
Energy consumption (crude oil equivalent)	1,000 kl	863	939	1,033	1,042	960
Water intake	1,000 m ³	137,660	131,299	136,631	149,239	133,385
Total	1,000 m ³	137,660	131,299	136,631	149,239	133,385
Tapwater	1,000 m ³	6,596	6,889	6,626	4,480	3,969
Subterranean river water	1,000 m ³	42,566	42,211	41,012	42,430	40,841
Groundwater	1,000 m ³	27,997	27,010	30,463	28,442	29,301
Industrial water	1,000 m ³	5,906	6,806	11,748	15,200	15,958
Seawater (including Rainwater)	1,000 m ³	54,594	48,382	46,782	58,686	43,316
Wastewater	1,000 m ³	80,495	80,108	80,649	80,183	82,716
SOx emissions	tons	346	408	1,431	1,676	1,082
NOx emissions	tons	1,777	1,907	2,218	2,253	2,126
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	77	82	85	80
	Emissions	tons	1,452	1,855	1,637	1,416
	Transfer	tons	9,307	7,799	8,884	12,213
Waste materials	Generated	tons	129,442	123,792	164,953	173,495
	Utilized (recycled)	tons	103,089	99,359	116,889	121,478
	Unutilized (including landfill)	tons	25,800	23,489	47,783	52,017
	Landfill	tons	8,974	9,356	25,313	27,958
						20,921

*1 Excluding head offices and business offices of overseas affiliated companies

*2 Scope1 (direct emissions): GHG emissions generated by fuel combustion at the plants and other facilities of one's own company

Scope2 (indirect emissions): GHG emissions generated by the use of purchased energy such as electricity, heat, and steam supplied

by other companies

2. Kuraray Group in Japan (total of 2-1. Kuraray Co., Ltd. and 2-2. Domestic Affiliated Companies)

(Coverage: 100% (Water intake: 99.9%, Waste water: 99.8%))

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	1,303	1,330	1,320	1,310	1,229
Scope1 emissions		1,000 t-CO ₂ e	1,128	1,147	1,138	1,121	1,067
Scope2 emissions		1,000 t-CO ₂ e	175	183	182	189	162
Energy consumption (crude oil equivalent)		1,000 kl	427	439	437	435	406
Raw materials used		1,000 tons	633	655	675	643	581
Water intake		1,000 m ³	81,492	79,572	80,065	80,156	80,159
Tapwater		1,000 m ³	410	472	540	540	551
Subterranean river water		1,000 m ³	42,566	42,211	41,012	42,430	40,841
Groundwater		1,000 m ³	27,922	26,970	27,838	25,828	26,731
Industrial water		1,000 m ³	2,181	2,172	2,414	3,056	3,885
Seawater (including Rainwater)		1,000 m ³	8,413	7,747	8,261	8,302	8,150
Wastewater		1,000 m ³	72,508	71,312	72,831	69,770	73,604
Rivers		1,000 m ³	-	37,303	37,915	34,601	36,849
Sea area		1,000 m ³	-	31,563	32,405	32,694	34,276
Public sewage		1,000 m ³	-	2,446	2,511	2,474	2,480
SOx emissions		tons	345	407	350	550	280
NOx emissions		tons	1,724	1,856	1,779	1,771	1,624
Soot and dust emissions		tons	29	33	32	31	32
COD emissions		tons	535	514	555	513	516
VOC emissions		tons	797	890	871	836	691
Substances covered under JCIA's voluntary PRTR management program							
Number of items		-	77	82	85	80	77
Emissions		tons	969	1,066	1,004	967	805
Transfer		tons	1,149	1,294	1,203	1,108	911
Substances covered under PRTR law							
Number of items		-	59	62	61	58	55
Emissions		tons	427	431	393	394	306
Transfer		tons	657	747	658	653	444
Waste materials							
Generated		tons	89,976	86,426	88,677	91,785	88,479
Utilized (recycled)		tons	87,283	83,163	86,406	88,837	85,620
Unutilized (including landfill)		tons	2,139	2,319	1,989	2,948	2,859
Landfill		tons	255	313	330	365	616

2-1. Kuraray Co., Ltd.

Includes 6 plants (Okayama, Kurashiki (Tamashima area), Saijo, Niigata, Kashima, Tsurumi), Kurashiki Research Center,

Tsukuba Research Center, Tokyo Head Office, Osaka Office, etc.

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	1,250	1,319	1,310	1,301	1,221
(inside number: CO ₂ emissions)		1,000 t-CO ₂ e	1,227	1,296	1,286	1,275	1,193
Energy consumption (crude oil equivalent)		1,000 kl	413	434	433	431	402
Raw materials used		1,000 tons	589	639	660	628	566
Water intake		1,000 m ³	80,537	78,791	79,310	79,356	79,465
Wastewater		1,000 m ³	71,685	70,593	72,149	69,025	72,961
SOx emissions		tons	330	407	350	550	280
NOx emissions		tons	1,705	1,855	1,779	1,770	1,623
Soot and dust emissions		tons	27	33	31	31	32
COD emissions		tons	532	514	554	512	516
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.4	0.0
Substances covered under JCIA's voluntary PRTR management program							
Number of items		-	77	82	85	80	75
Emissions		tons	917	976	902	855	719
Transfer		tons	1,146	1,292	1,201	1,042	859
Substances covered under PRTR law							
Number of items		-	59	62	61	58	55
Emissions		tons	414	431	392	394	306
Transfer		tons	657	746	658	594	398
Waste materials							
Generated		tons	82,900	84,756	87,003	90,262	86,951
Utilized (recycled)		tons	80,489	81,965	85,083	87,623	84,554
Unutilized (including landfill)		tons	1,741	1,847	1,638	2,639	2,397
Landfill		tons	105	163	159	110	253

2-1-1. Okayama Plant (including Kuraray Engineering Co., Ltd., Kuraray Kuraflex Co., Ltd., Kuraray Okayama Spinning Co., Ltd., Kuraray Techno Co., Ltd.)

- (1) Address: 1-2-1, Kaigan-dori, Minami-ku, Okayama City, Okayama Prefecture
 (2) Site area: 663,000 m²
 (3) ISO 14001: Certification No. JQA-EM0796 (Certified on March 24, 2000)

Main products:	Kuralon, Kuralon K-II, Clarino (man-made leather), Kuraflex (dry-laid non-woven fabric), EVAL resin and film, Poval resin
----------------	---

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	642	654	626	650	572	
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	641	652	624	649	571	
Energy consumption (crude oil equivalent)	1,000 kl	193	197	191	199	174	
Raw materials used	1,000 tons	127	139	127	128	92	
Water intake	1,000 m ³	22,221	21,390	21,424	21,796	20,788	
Wastewater	1,000 m ³	19,035	18,571	19,246	19,482	19,701	
SOx emissions	tons	114	209	106	259	92	
NOx emissions	tons	1,089	1,232	1,144	1,157	956	
Soot and dust emissions	tons	13	16	14	14	11	
COD emissions	tons	192	182	193	179	173	
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0	
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	34	31	27	27	
	Emissions	tons	529	511	480	473	389
	Transfer	tons	268	316	356	327	289
Substances covered under PRTR law	Number of items	-	21	20	17	18	
	Emissions	tons	309	292	271	280	207
	Transfer	tons	168	210	207	201	187
Waste materials	Generated	tons	29,684	25,793	25,425	25,748	23,900
	Utilized (recycled)	tons	28,632	24,489	24,606	24,719	23,135
	Unutilized (including landfill)	tons	1,052	1,305	818	1,029	765
	Landfill	tons	36	26	33	24	51

2-1-2. Kurashiki Plant (including Kuraray Tamashima Co., Ltd., Kuraray Techno Co., Ltd.)

- (1) Address: 7471, Tamashima-otoshima, Kurashiki City, Okayama Prefecture
 (2) Site area: 410,000 m²
 (3) ISO 14001: Certification No. JQA-EM1213 (Certified on December 22, 2000)

Main products:	Polyester fiber, Poval film
----------------	-----------------------------

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020	
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	92	105	106	106	117	
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	73	85	85	84	93	
Energy consumption (crude oil equivalent)	1,000 kl	21	25	24	21	27	
Raw materials used	1,000 tons	25	23	23	25	20	
Water intake	1,000 m ³	7,080	7,042	7,072	7,769	8,315	
Wastewater	1,000 m ³	6,776	6,486	6,555	7,674	8,299	
SOx emissions	tons	57	33	51	58	24	
NOx emissions	tons	87	92	87	93	90	
Soot and dust emissions	tons	0.5	0.8	2.7	1.8	5.9	
COD emissions	tons	37	39	44	51	46	
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0	
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	12	10	10	15	
	Emissions	tons	31	31	29	29	36
	Transfer	tons	63	76	40	36	59
Substances covered under PRTR law	Number of items	-	8	6	5	6	
	Emissions	tons	0.0	0.3	0.1	0.1	0.3
	Transfer	tons	1.7	0.1	0.2	0.2	1.2
Waste materials	Generated	tons	12,455	11,194	13,178	14,479	14,734
	Utilized (recycled)	tons	12,431	11,174	13,145	14,461	14,589
	Unutilized (including landfill)	tons	25	20	33	18	146
	Landfill	tons	25	19	29	18	123

2-1-3. Saijo Plant (including Kuraray Saijo Co., Ltd., Kuraray Techno Co., Ltd.)

- (1) Address: 892, Tsuitachi, Saijo City, Ehime Prefecture
 (2) Site area: 541,000 m²
 (3) ISO 14001: Certification No. JQA-EM1185 (Certified on December 15, 2000)

Main products:	Poval film, Melt-blown Non-woven fabric, VECTRAN polyarylate fiber, GENESTAR (heat resistant polyamide resin), Polyester filament, KURAGEL PVA gel
----------------	--

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	190	188	193	183	187
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	190	188	192	182	187
Energy consumption (crude oil equivalent)	1,000 kl	55	56	58	57	55
Raw materials used	1,000 tons	29	29	29	28	26
Water intake	1,000 m ³	15,221	14,175	14,503	14,344	15,805
Wastewater	1,000 m ³	12,641	12,435	12,535	12,558	14,020
SOx emissions	tons	149	148	154	142	134
NOx emissions	tons	431	397	407	404	450
Soot and dust emissions	tons	10	13	9.3	9.0	9.1
COD emissions	tons	23	22	23	21	15
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	16	16	16	17
	Emissions	tons	135	144	144	141
	Transfer	tons	4.5	4.6	4.3	4.8
Substances covered under PRTR law	Number of items	-	10	10	10	11
	Emissions	tons	3.0	2.8	2.8	3.8
	Transfer	tons	2.4	2.6	4.3	3.4
Waste materials	Generated	tons	14,206	14,547	13,802	14,486
	Utilized (recycled)	tons	13,999	14,304	13,572	14,281
	Unutilized (including landfill)	tons	207	232	220	205
	Landfill	tons	9.1	15	14	14

2-1-4. Niigata Plant (including Kuraray Noritake Dental Inc., Kuraray Techno Co., Ltd.)

- (1) Address: 2-28, Kurashiki-cho, Tainai City, Niigata Prefecture
 (2) Site area: 924,000 m²
 (3) ISO 14001: Certification No. JQA-EM0801 (Certified on March 31, 2000)

Main products:	Methacrylic resin for molding, Poval resin, Dental materials, KURARITY (acrylic thermoplastic elastomer)
----------------	--

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	141	139	139	136	132
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	139	138	138	134	131
Energy consumption (crude oil equivalent)	1,000 kl	65	65	65	63	62
Raw materials used	1,000 tons	315	324	319	312	304
Water intake	1,000 m ³	33,428	33,330	33,160	32,281	31,572
Wastewater	1,000 m ³	30,194	30,080	30,651	26,160	27,875
SOx emissions	tons	6.3	2.4	10	18	3.3
NOx emissions	tons	51	62	61	58	54
Soot and dust emissions	tons	0.0	0.0	0.0	0.4	0.0
COD emissions	tons	180	170	191	160	181
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	41	37	46	36
	Emissions	tons	112	120	112	110
	Transfer	tons	466	482	386	357
Substances covered under PRTR law	Number of items	-	27	27	30	25
	Emissions	tons	62	73	63	64
	Transfer	tons	400	423	313	296
Waste materials	Generated	tons	16,256	16,989	16,531	17,785
	Utilized (recycled)	tons	15,483	16,016	15,796	16,723
	Unutilized (including landfill)	tons	95	40	463	1,062
	Landfill	tons	26	36	28	27

2-1-5. Kashima Plant (including Kuraray Techno Co., Ltd.)

- (1) Address: 36, Touwada, Kamisu City, Ibaraki Prefecture
 (2) Site area: 408,000 m²
 (3) ISO 14001: Certification No. JQA-EM0364 (Certified on March 12, 1999)

Main products:	SEPTON (thermoplastic elastomer), HYBRAR (thermoplastic elastomer), GENESTAR (heat resistant polyamide resin), Industrial cleaner
----------------	--

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	178	190	201	196	176
(inside number: CO ₂ emissions)		1,000 t-CO ₂ e	178	190	201	196	175
Energy consumption (crude oil equivalent)		1,000 kl	76	80	82	79	72
Raw materials used		1,000 tons	92	100	136	109	94
Water intake		1,000 m ³	2,466	2,461	2,703	2,726	2,531
Wastewater		1,000 m ³	2,743	2,665	2,773	2,760	2,673
SOx emissions		tons	3.8	6.0	7.7	7.0	6.0
NOx emissions		tons	47	51	53	52	48
Soot and dust emissions		tons	3.6	2.0	4.0	3.0	3.0
COD emissions		tons	100	98	101	99	99
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.4	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	38	41	40	35	32
	Emissions	tons	98	163	124	94	74
	Transfer	tons	345	413	414	317	224
Substances covered under PRTR law	Number of items	-	24	25	26	22	21
	Emissions	tons	40	56	41	38	32
	Transfer	tons	84	110	135	93	43
Waste materials	Generated	tons	10,146	10,368	11,580	11,846	11,451
	Utilized (recycled)	tons	9,798	10,188	11,532	11,537	11,080
	Unutilized (including landfill)	tons	356	180	48	309	371
	Landfill	tons	8.3	1.6	0.8	10	18

2-1-6. Tsurumi Plant (Former Kuraray Chemical Co., Ltd. has been acquired by Kuraray Co., Ltd. since FY2017)

- (1) Address: 4342, Tsurumi, Bizen City, Okayama Prefecture
 (2) Site area: 89,000 m²
 (3) ISO 14001: Certification No. JQA-EM5426 (Certified on July 7, 2006)

Main products:	Activated carbon, high performance activated carbon
----------------	--

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	43	37	39	24	31
(inside number: CO ₂ emissions)		1,000 t-CO ₂ e	43	37	39	24	31
Energy consumption (crude oil equivalent)		1,000 kl	9.1	9.2	9.6	8.9	9.6
Raw materials used		1,000 tons	29	24	26	25	29
Water intake		1,000 m ³	317	357	420	410	433
Wastewater		1,000 m ³	224	291	312	312	317
SOx emissions		tons	14	8.2	20	67	21
NOx emissions		tons	19	21	26	6.3	25
Soot and dust emissions		tons	1.3	1.1	1.5	3.3	2.8
COD emissions		tons	1.3	1.8	1.9	1.5	1.4
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	6	10	5	5	5
	Emissions	tons	12	6.4	14	7.6	0.5
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Substances covered under PRTR law	Number of items	-	5	6	4	4	4
	Emissions	tons	12	6.1	13	7.4	0.3
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Waste materials	Generated	tons	5,676	5,745	6,378	5,797	6,519
	Utilized (recycled)	tons	5,650	5,680	6,328	5,781	6,505
	Unutilized (including landfill)	tons	27	65	51	15	14
	Landfill	tons	27	65	51	15	14

2-2. Domestic Affiliated Companies

Including Kuraray Plastics Co., Ltd., Kuraray Fastening Co., Ltd., Kuraray Trading Co., Ltd., etc.

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	53	11	11	9.3	8.5
(inside number: CO ₂ emissions)		1,000 t-CO ₂ e	53	11	11	9.3	8.5
Energy consumption (crude oil equivalent)		1,000 kl	14	5	4.9	4.5	4.2
Raw materials used		1,000 tons	44	15	15	15	15
Water intake		1,000 m ³	955	783	755	801	694
Wastewater		1,000 m ³	823	719	682	745	644
SOx emissions		tons	14.6	0	0.1	0.2	0.2
NOx emissions		tons	19.6	1	0.5	0.6	0.5
Soot and dust emissions		tons	1.5	0.2	0.1	0.1	0.1
COD emissions		tons	2.1	0.4	0.4	0.7	0.6
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	12	6	7	7	7
	Emissions	tons	52	90	102	112	86
	Transfer	tons	2.9	2.4	2.4	66	51
Substances covered under PRTR law	Number of items	-	7	3	4	3	3
	Emissions	tons	13	1	0.9	0.2	0.1
	Transfer	tons	0.6	0.4	0.5	59	46
Waste materials	Generated	tons	7,076	1,671	1,674	1,523	1,528
	Utilized (recycled)	tons	6,794	1,199	1,323	1,214	1,066
	Unutilized (including landfill)	tons	397	472	351	308	462
	Landfill	tons	150	150	171	255	363

2-2-1. Ibuki Plant, Kuraray Plastics Co., Ltd.

- (1) Address: 4330, Osa, Tarui-cho, Fuwa-gun, Gifu Prefecture
- (2) Site area: 74,900 m²
- (3) ISO 14001: Certification No. JQA-EM2934 (Certified on January 17, 2003)

Main products:	Hoses, driving pipes, laminates, compounds
----------------	--

		Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)		1,000 t-CO ₂ e	3.2	3.3	3.4	3.0	2.5
(inside number: CO ₂ emissions)		1,000 t-CO ₂ e	3.2	3.3	3.4	3.0	2.5
Energy consumption (crude oil equivalent)		1,000 kl	1.5	1.6	1.7	1.5	1.3
Raw materials used		1,000 tons	8	8.3	8.1	8.0	7.1
Water intake		1,000 m ³	549	682	641	696	607
Wastewater		1,000 m ³	553	682	642	696	607
SOx emissions		tons	0.2	0.1	0.0	0.0	0.0
NOx emissions		tons	0.4	0.5	0.2	0.2	0.1
Soot and dust emissions		tons	0.1	0.1	0.0	0.0	0.0
COD emissions		tons	0.8	0.3	0.0	0.7	0.6
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	7	5	5	5	5
	Emissions	tons	34	85	98	109	85
	Transfer	tons	0.0	0.0	0.0	65	51
Substances covered under PRTR law	Number of items	-	4	2	2	2	2
	Emissions	tons	0.0	0.0	0.0	0.0	0.0
	Transfer	tons	0.0	0.0	0.5	59	46
Waste materials	Generated	tons	624	547	716	607	575
	Utilized (recycled)	tons	426	510	680	462	330
	Unutilized (including landfill)	tons	198	37	36	144	245
	Landfill	tons	13	30	28	143	238

2-2-2. Kuraray Fastening Co., Ltd.

- (1) Address: 56, Noune, Maruoka-cho, Sakai-gun, Fukui prefecture
 (2) Site area: 22,950 m²
 (3) ISO 14001: Certification No. JQA-EM3326 (Certified on August 22, 2003)

Main products:	MAGICTAPE (hook and loop fastener), MAGILOCK (molded plastic hook and loop fastener)
----------------	--

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	4.0	4.0	3.5	2.9	2.8
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	4.0	4.0	3.5	2.9	2.8
Energy consumption (crude oil equivalent)	1,000 kl	1.6	1.6	1.6	1.4	1.3
Water intake	1,000 m ³	44	34	41	43	30
Wastewater	1,000 m ³	42	33	37	41	30
SOx emissions	tons	0.0	0.0	0.0	0.0	0.0
NOx emissions	tons	0.0	0.0	0.0	0.0	0.0
Soot and dust emissions	tons	0.0	0.0	0.0	0.0	0.0
COD emissions	tons	0.0	0.0	0.0	0.0	0.0
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	4	3	2	2
	Emissions	tons	5.8	4.8	4.7	2.1
	Transfer	tons	2.9	2.4	2.4	1.1
Substances covered under PRTR law	Number of items	-	2	2	1	1
	Emissions	tons	1.2	0.9	0.9	0.2
	Transfer	tons	0.6	0.4	0.5	0.1
Waste materials	Generated	tons	228	269	271	229
	Utilized (recycled)	tons	216	250	247	208
	Unutilized (including landfill)	tons	12	20	24	21
	Landfill	tons	0.0	0.7	6.1	6.8

2-2-3. Okayama Plant, Kuraray Trading Co., Ltd.

- (1) Address: 1099, Aza-Shinden, Oaza-Kawabe, Mabi-cho, Kibi-gun, Okayama Prefecture
 (2) Site area: 5,780 m²

Main products:	Industrial resin belts
----------------	------------------------

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	0.5	0.5	0.3	0.5	0.4
(inside number: CO ₂ emissions)	1,000 t-CO ₂ e	0.5	0.5	0.3	0.5	0.4
Energy consumption (crude oil equivalent)	1,000 kl	0.2	0.2	0.1	0.2	0.2
Raw materials used	1,000 tons	0.1	0.1	0.1	0.1	0.1
Water intake	1,000 m ³	4.0	4.0	3.0	4.0	4.0
Wastewater	1,000 m ³	4.0	4.0	3.0	4.0	4.0
SOx emissions	tons	0.2	0.2	0.1	0.2	0.2
NOx emissions	tons	0.4	0.4	0.3	0.4	0.4
Soot and dust emissions	tons	0.1	0.1	0.1	0.1	0.1
COD emissions	tons	0.0	0.0	0.0	0.0	0.0
Ozone-layer depleting substance emissions	tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	2	2	2	2
	Emissions	tons	0.2	0.2	0.1	0.3
	Transfer	tons	0.0	0.0	0.0	0.0
Substances covered under PRTR law	Number of items	-	0	0	0	0
	Emissions	tons	0.0	0.0	0.0	0.0
	Transfer	tons	0.0	0.0	0.0	0.0
Waste materials	Generated	tons	46	41	25	58
	Utilized (recycled)	tons	43	40	24	55
	Unutilized (including landfill)	tons	2.2	1.2	0.8	3.1
	Landfill	tons	0.0	0.0	0.0	0.0

3. Kuraray Group outside Japan (Locations stated below)

(Coverage: 99.5%, excluding head offices and business offices of overseas affiliated companies)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions (Scope1+Scope2)	1,000 t-CO ₂ e	933	1,032	1,868	1,921	1,816
Scope1 emissions	1,000 t-CO ₂ e	76	93	862	939	978
Scope2 emissions	1,000 t-CO ₂ e	856	939	1,006	981	838
Energy consumption (crude oil equivalent)	1,000 kl	437	500	595	606	553
Water intake	1,000 m ³	56,167	51,727	56,565	69,082	53,226
Tapwater	1,000 m ³	6,186	6,417	6,086	3,940	3,418
Subterranean river water	1,000 m ³	0	0	0	0	0
Groundwater	1,000 m ³	75	40	2,624	2,614	2,570
Industrial water	1,000 m ³	3,725	4,635	9,334	12,144	12,073
Seawater (including Rainwater)	1,000 m ³	46,181	40,635	38,521	50,384	35,166
Wastewater	1,000 m ³	7,987	8,795	7,818	10,413	9,112
SOx emissions	tons	1.6	0.7	1,081	1,126	801
NOx emissions	tons	53	51	439	482	502
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	11	11	11	11
	Emissions	tons	483	790	633	449
	Transfer	tons	8,158	6,504	7,680	11,105
Waste materials	Generated	tons	39,466	37,366	76,277	81,710
	Utilized (recycled)	tons	15,805	16,196	30,483	32,641
	Unutilized (including landfill)	tons	23,661	21,170	45,793	49,069
	Landfill	tons	8,718	9,043	24,983	27,593

<Overseas locations covered>

EVAL Europe N.V.
 Kuraray Europe GmbH, PVA/PVB Division
 Kuraray Europe GmbH, Trosifol Division
 Kuraray Europe GmbH, OOO Trosifol
 Kuraray Europe GmbH, Holesov works
 Kuraray America Inc. EVAL BU
 Kuraray America Inc. SEPTON BU
 Kuraray America Inc. PVOH BU
 Kuraray America Inc. Fayetteville works
 Kuraray America Inc. La Porte works
 Kuraray America Inc. Washington works
 Kuraray Korea Ulsan works
 Kuraray Asia Pacific Pte. Ltd.
 MonoSol, LLC. La Porte Plant
 MonoSol, LLC. Portage Plant
 MonoSol, LLC. Duneland Plant
 MonoSol, LLC. Indy Plant
 MonoSol, LLC. Hartlebury Plant
 Plantic Technologies Ltd.
 Kuraray Magictape (Shanghai) Co., Ltd.
 Kuraray Methacrylate (Zhang Jia Gang) Co., Ltd.

Calgon Carbon Corp., Big Sandy Plant
 Calgon Carbon Corp., Pearl River Plant
 Calgon Carbon Corp., Gila Bend Plant
 Calgon Carbon Corp., Neville Island Plant
 Calgon Carbon Corp., Columbus Plant
 Calgon Carbon Corp., North Tonawanda Plant
 Calgon Carbon Corp., E&A Facilities
 Calgon Carbon Corp., UV Technology
 Calgon Carbon Corp., Parentis Plant
 Calgon Carbon Corp., Feluy Plant
 Calgon Carbon Corp., Saint Bauzile Plant
 Calgon Carbon Corp., Riom Montagnes Plant
 Calgon Carbon Corp., Legnago Plant
 Calgon Carbon Corp., Tipton Plant
 Calgon Carbon Corp., Foggia Plant
 Calgon Carbon Corp., Ashton Plant
 Calgon Carbon Corp., Durham Plant
 Calgon Carbon Corp., Suzhou Plant

4. Other Environmental Data

<GHG emissions per type of gas>

- The chart below shows the breakdown of the Kuraray Group's Scope1 (direct emissions: GHG emissions generated by fuel combustion at the plants and other facilities of one's own company) emissions per type of gas.
- Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (AR4-100 year) is applied to the Global Warming Potential (GWP).

(Coverage: 99.7%)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Carbon dioxide (CO ₂)	1,000 t-CO ₂ e	1,181	1,217	1,976	2,035	2,018
Methane (CH ₄)	1,000 t-CO ₂ e	1.2	1.3	1.3	1.5	1.5
Nitrous oxide (N ₂ O)	1,000 t-CO ₂ e	20	21	22	23	25
Hydrofluorocarbons (HFCs)	1,000 t-CO ₂ e	1.4	0.8	0.8	1.2	0.8
Perfluorocarbons (PFCs)	1,000 t-CO ₂ e	0.0	0.0	0.0	0.0	0.0
Sulfur hexafluoride (SF ₆)	1,000 t-CO ₂ e	0.0	0.0	0.0	0.0	0.4
Nitrogen trifluoride (NF ₃)	1,000 t-CO ₂ e	0.0	0.0	0.0	0.0	0.0

<GHG emissions intensity index>

- The chart below shows the annual trend of the Kuraray Group's GHG emissions intensity index (net sales, production), and the formula is as follows:

GHG emissions intensity index (net sales)=GHG emissions (t-CO₂e)/Net sales (million yen)

GHG emissions intensity index (production)=GHG emissions (t-CO₂e)/Production volume (tons)

(Coverage: 99.7%)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
GHG emissions intensity index (net sales)	t-CO ₂ /million yen	4.6	4.7	5.1	5.5	5.7
GHG emissions intensity index (production)	t-CO ₂ /ton	1.8	1.9	1.9	2.1	2.3

<Production intensity index compared to the previous year>

- The chart below shows the annual trend of the Kuraray Group's production intensity index compared to the previous year.
- Production intensity index is a value obtained by dividing converted production volume by environmental load, and figures are an index based on FY2016 as 100, targeting 1% or more improvement from the previous year.
- Converted production volume is a production volume converted from the production volume of each product as the production volume of the reference product using a conversion factor determined based on the environmental load intensity of each product in the reference year. As Kuraray manufactures products that vary in the environmental load intensity, it uses a converted production volume for each product.
- The formula is as follows:

GHG emission intensity index (Kuraray Group in Japan)=Converted production volume/GHG emissions

Energy intensity index (Kuraray Group outside Japan)=Converted production volume/Energy consumption

Water intensity index (Kuraray Group outside Japan)=Converted production volume/Water usage (except seawater)

(Coverage: 99.7%)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Production intensity index compared to the previous year (Kuraray Group in Japan)	-		2.9%	-3.5%	-1.7%	-14.3%
Energy intensity index compared to the previous year (Kuraray Group outside Japan)	-	-	-7.5%	9.1%	-5.9%	0.2%
Water intensity index compared to the previous year (Kuraray Group outside Japan)	-		-4.5%	-20.1%	-7.6%	-4.6%

<Number of cases of violation of environmental laws and regulations>

- The chart below shows the annual trend of the number of cases of the Kuraray Group's violation of environment-related laws and regulations.
- There have been no leakages, etc. that materially affect the external environment.
- Excluding minor and temporary cases exceeding standard limits and other environmental issues.

(Coverage: 99.7%)

	Unit	FY2016	FY2017	FY2018	FY2019	FY2020
Kuraray Group in Japan	-	0	0	0	0	0
Kuraray Group outside Japan	-	0	0	0	0	0

- Scope of regulations

Kuraray Group in Japan: including the Water Pollution Prevention Act, Act on Special Measures concerning Conservation of the Environment of the Seto Inland Sea as well as related ministerial orders, prefectural ordinances, municipal ordinances and pollution prevention agreements, etc.

Kuraray Group outside Japan: including government laws and regulations, local regulations, etc.

- The volume and quality of wastewater are managed pursuant to laws and regulations, etc. of the country where the plant, etc. is located both in and outside Japan.