1. Kuraray Group (total of 2. Kuraray Group in Japan and 3. Kuraray Group outside Japan[*1])

(Coverage: 99.7%)

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2) [*2]		1,000 t-CO_2e	2,216	2,236	2,362	3,188	3,231
	Scope1 emissions	1,000 t-CO_2e	1,200	1,204	1,240	2,000	2,060
	Scope2 emissions	1,000 t-CO_2e	1,017	1,032	1,122	1,188	1,170
Energy consumption (crude oil equivalent)		1,000 kl	858	863	939	1,033	1,042
Water intake	Total	1,000 m^3	128,158	137,660	131,299	135,895	148,416
	Tapwater	1,000 m^3	5,514	6,596	6,889	5,892	3,690
	Subterranean river water	1,000 m^3	40,843	42,566	42,211	41,012	42,430
	Groundwater	1,000 m^3	26,931	27,997	27,010	30,463	28,411
	Industrial water	1,000 m^3	5,884	5,906	6,806	11,748	15,200
	Seawater	1,000 m^3	48,986	54,594	48,382	46,781	58,685
Wastewater		1,000 m^3	76,867	80,495	80,108	80,649	78,777
SOx emissions		tons	418	346	408	1,431	1,676
NOx emissions		tons	1,774	1,777	1,907	2,218	2,253
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	82	77	82	85	80
	Emissions	tons	1,338	1,452	1,855	1,637	1,416
	Transfer	tons	6,784	9,307	7,799	8,884	12,213
Waste materials	Generated	tons	117,544	129,306	123,791	164,953	172,487
	Utilized (recycled)	tons	96,797	102,992	99,359	116,889	120,470
	Unutilized (including landfill)	tons	20,382	25,761	23,488	47,783	52,017
	Landfill	tons	6,060	8,974	9,356	25,313	27,958

*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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	1,264	1,303	1,330	1,320	1,310
	Scope1 emissions	1,000 t-CO_2e	1,109	1,128	1,147	1,138	1,121
	Scope2 emissions	1,000 t-CO_2e	155	175	183	182	189
Energy consumption (crude oil equivalent)		1,000 kl	415	427	439	437	435
Raw materials used		1,000 tons	654	633	655	675	643
Water intake	Total	1,000 m^3	78,351	81,492	79,572	80,065	80,156
	Tapwater	1,000 m^3	381	410	472	540	540
	Subterranean river water	1,000 m^3	40,843	42,566	42,211	41,012	42,430
	Groundwater	1,000 m^3	26,537	27,922	26,970	27,838	25,828
	Industrial water	1,000 m^3	2,056	2,181	2,172	2,414	3,056
	Seawater	1,000 m^3	8,535	8,413	7,747	8,261	8,302
Wastewater	Total	1,000 m^3	70,382	72,508	71,312	72,831	69,770
	Rivers	1,000 m^3	–	–	37,303	37,915	34,601
	Sea area	1,000 m^3	–	–	31,563	32,405	32,694
	Public sewage	1,000 m^3	–	–	2,446	2,511	2,474
SOx emissions		tons	418	345	407	350	550
NOx emissions		tons	1,736	1,724	1,856	1,779	1,771
Soot and dust emissions		tons	28	29	33	32	31
COD emissions		tons	501	535	514	555	513
VOC emissions		tons	–	797	890	871	836
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	82	77	82	85	80
	Emissions	tons	1,010	969	1,066	1,004	967
	Transfer	tons	1,153	1,149	1,294	1,203	1,108
Substances covered under PRTR law	Number of items	-	60	59	62	61	58
	Emissions	tons	409	427	431	393	394
	Transfer	tons	621	657	747	658	653
Waste materials	Generated	tons	83,117	89,976	86,426	88,677	91,785
	Utilized (recycled)	tons	81,246	87,283	83,163	86,406	88,837
	Unutilized (including landfill)	tons	1,506	2,139	2,319	1,989	2,948
	Landfill	tons	277	255	313	330	365

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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	1,218	1,250	1,319	1,310	1,301
	(inside number: CO_2 emissions)	1,000 t-CO_2e	1,194	1,227	1,296	1,286	1,275
Energy consumption (crude oil equivalent)		1,000 kl	403	413	434	433	431
Raw materials used		1,000 tons	607	589	639	660	628
Water intake		1,000 m^3	77,456	80,537	78,791	79,310	79,356
Wastewater		1,000 m^3	61,814	63,272	62,846	63,888	60,723
SOx emissions		tons	418	330	407	350	550
NOx emissions		tons	1,734	1,705	1,855	1,779	1,770
Soot and dust emissions		tons	27	27	33	31	31
COD emissions		tons	501	532	514	554	512
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.2	0.0	0.0	0.0	0.4
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	82	77	82	85	80
	Emissions	tons	891	917	976	902	855
	Transfer	tons	1,141	1,146	1,292	1,201	1,042
Substances covered under PRTR law	Number of items	-	60	59	62	61	58
	Emissions	tons	392	414	431	392	394
	Transfer	tons	616	657	746	658	594
Waste materials	Generated	tons	76,356	82,900	84,756	87,003	90,262
	Utilized (recycled)	tons	74,737	80,489	81,965	85,083	87,623
	Unutilized (including landfill)	tons	1,263	1,741	1,847	1,638	2,639
	Landfill	tons	142	105	163	159	110

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 m^2
(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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	638	642	654	626	650
(inside number: CO_2 emissions)		1,000 t-CO_2e	638	641	652	624	649
Energy consumption (crude oil equivalent)		1,000 kl	191	193	197	191	199
Raw materials used		1,000 tons	133	127	139	127	128
Water intake		1,000 m^3	22,071	22,221	21,390	21,424	21,796
Wastewater		1,000 m^3	10,150	10,622	10,824	10,985	11,180
SOx emissions		tons	173	114	209	106	259
NOx emissions		tons	1,132	1,089	1,232	1,144	1,157
Soot and dust emissions		tons	13	13	16	14	14
COD emissions		tons	189	192	182	193	179
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.2	0.0	0.0	0.0	0.0
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	33	34	31	27	28
	Emissions	tons	478	529	511	480	473
	Transfer	tons	271	268	316	356	327
Substances covered under PRTR law	Number of items	-	20	21	20	17	18
	Emissions	tons	291	309	292	271	280
	Transfer	tons	183	168	210	207	201
Waste materials	Generated	tons	26,030	29,684	25,793	25,425	25,748
	Utilized (recycled)	tons	25,102	28,632	24,489	24,606	24,719
	Unutilized (including landfill)	tons	917	1,052	1,305	818	1,029
	Landfill	tons	38	36	26	33	24

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 m^2
(3) ISO 14001: Certification No. JQA-EM1213 (Certified on December 22, 2000)

Main products:	Polyester fiber, Poval film

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	84	92	105	106	106
(inside number: CO_2 emissions)		1,000 t-CO_2e	63	73	85	85	84
Energy consumption (crude oil equivalent)		1,000 kl	21	21	25	24	21
Raw materials used		1,000 tons	25	25	23	23	25
Water intake		1,000 m^3	7,105	7,080	7,042	7,072	7,769
Wastewater		1,000 m^3	7,214	6,776	6,486	6,555	7,674
SOx emissions		tons	77	57	33	51	58
NOx emissions		tons	103	87	92	87	93
Soot and dust emissions		tons	0.5	0.5	0.8	2.7	1.8
COD emissions		tons	31	37	39	44	51
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	12	10	10	12
	Emissions	tons	32	31	31	29	29
	Transfer	tons	68	63	76	40	36
Substances covered under PRTR law	Number of items	-	8	8	6	5	6
	Emissions	tons	0.2	0.0	0.3	0.1	0.1
	Transfer	tons	1.3	1.7	0.1	0.2	0.2
Waste materials	Generated	tons	12,605	12,455	11,194	13,178	14,479
	Utilized (recycled)	tons	12,579	12,431	11,174	13,145	14,461
	Unutilized (including landfill)	tons	25	25	20	33	18
	Landfill	tons	25	25	19	29	18

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 m^2

(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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	178	190	188	193	183
(inside number: CO_2 emissions)		1,000 t-CO_2e	178	190	188	192	182
Energy consumption (crude oil equivalent)		1,000 kl	52	55	56	58	57
Raw materials used		1,000 tons	28	29	29	29	28
Water intake		1,000 m^3	14,277	15,221	14,175	14,503	14,344
Wastewater		1,000 m^3	12,283	12,641	12,435	12,535	12,558
SOx emissions		tons	142	149	148	154	142
NOx emissions		tons	400	431	397	407	404
Soot and dust emissions		tons	12	10	13	9.3	9.0
COD emissions		tons	32	23	22	23	21
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	16	17
	Emissions	tons	140	135	144	144	141
	Transfer	tons	5.1	4.5	4.6	4.3	4.8
Substances covered under PRTR law	Number of items	-	10	10	10	10	11
	Emissions	tons	2.5	3.0	2.8	2.8	3.8
	Transfer	tons	2.1	2.4	2.6	4.3	3.4
Waste materials	Generated	tons	12,548	14,206	14,547	13,802	14,486
	Utilized (recycled)	tons	12,401	13,999	14,304	13,572	14,281
	Unutilized (including landfill)	tons	147	207	232	220	205
	Landfill	tons	6.4	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 m^2

(3) ISO 14001: Certification No. JQA-EM0801 (Certified on March 31, 2000)

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

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	138	141	139	139	136
(inside number: CO_2 emissions)		1,000 t-CO_2e	136	139	138	138	134
Energy consumption (crude oil equivalent)		1,000 kl	63	65	65	65	63
Raw materials used		1,000 tons	313	315	324	319	312
Water intake		1,000 m^3	31,412	33,428	33,330	33,160	32,281
Wastewater		1,000 m^3	29,142	30,194	30,080	30,651	26,160
SOx emissions		tons	21	6.3	2.4	10	18
NOx emissions		tons	52	51	62	61	58
Soot and dust emissions		tons	0.0	0.0	0.0	0.0	0.4
COD emissions		tons	161	180	170	191	160
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	-	52	41	37	46	36
	Emissions	tons	106	112	120	112	110
	Transfer	tons	411	466	482	386	357
Substances covered under PRTR law	Number of items	-	35	27	27	30	25
	Emissions	tons	59	62	73	63	64
	Transfer	tons	326	400	423	313	296
Waste materials	Generated	tons	15,200	16,256	16,989	16,531	17,785
	Utilized (recycled)	tons	14,695	15,483	16,016	15,796	16,723
	Unutilized (including landfill)	tons	37	95	40	463	1,062
	Landfill	tons	23	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 m^2

(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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	172	178	190	201	196
(inside number: CO_2 emissions)		1,000 t-CO_2e	172	178	190	201	196
Energy consumption (crude oil equivalent)		1,000 kl	73	76	80	82	79
Raw materials used		1,000 tons	109	92	100	136	109
Water intake		1,000 m^3	2,305	2,466	2,461	2,703	2,726
Wastewater		1,000 m^3	2,407	2,743	2,665	2,773	2,760
SOx emissions		tons	3.9	3.8	6.0	7.7	7.0
NOx emissions		tons	48	47	51	53	52
Soot and dust emissions		tons	1.8	3.6	2.0	4.0	3.0
COD emissions		tons	88	100	98	101	99
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.0	0.4
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	42	38	41	40	35
	Emissions	tons	133	98	163	124	94
	Transfer	tons	376	345	413	414	317
Substances covered under PRTR law	Number of items	-	26	24	25	26	22
	Emissions	tons	38	40	56	41	38
	Transfer	tons	98	84	110	135	93
Waste materials	Generated	tons	9,883	10,146	10,368	11,580	11,846
	Utilized (recycled)	tons	9,768	9,798	10,188	11,532	11,537
	Unutilized (including landfill)	tons	130	356	180	48	309
	Landfill	tons	48	8.3	1.6	0.8	10

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 m^2

(3) ISO 14001: Certification No. JQA-EM5426 (Certified on July 7, 2006)

Main products:	Activated carbon, high performance activated carbon

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	38	43	37	39	24
(inside number: CO_2 emissions)		1,000 t-CO_2e	38	43	37	39	24
Energy consumption (crude oil equivalent)		1,000 kl	8.0	9.1	9.2	9.6	8.9
Raw materials used		1,000 tons	26	29	24	26	25
Water intake		1,000 m^3	297	317	357	420	410
Wastewater		1,000 m^3	191	224	291	312	312
SOx emissions		tons	12	14	8.2	20	67
NOx emissions		tons	26	19	21	26	6.3
Soot and dust emissions		tons	1.3	1.3	1.1	1.5	3.3
COD emissions		tons	1.2	1.3	1.8	1.9	1.5
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	6	10	5	5
	Emissions	tons	17	12	6.4	14	7.6
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Substances covered under PRTR law	Number of items	-	5	5	6	4	4
	Emissions	tons	16	12	6.1	13	7.4
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Waste materials	Generated	tons	5,171	5,676	5,745	6,378	5,797
	Utilized (recycled)	tons	5,160	5,650	5,680	6,328	5,781
	Unutilized (including landfill)	tons	12	27	65	51	15
	Landfill	tons	12	27	65	51	15

2-2. Domestic Affiliated Companies

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

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	47	53	11	11	9.3
(inside number: CO_2 emissions)		1,000 t-CO_2e	47	53	11	11	9.3
Energy consumption (crude oil equivalent)		1,000 kl	12	14	4.9	4.9	4.5
Raw materials used		1,000 tons	47	44	15	15	15
Water intake		1,000 m^3	895	955	783	755	801
Wastewater		1,000 m^3	780	823	719	682	745
SOx emissions		tons	0.5	15	0.3	0.1	0.2
NOx emissions		tons	1.2	20	0.9	0.5	0.6
Soot and dust emissions		tons	0.1	1.5	0.2	0.1	0.1
COD emissions		tons	0.1	2.1	0.4	0.4	0.7
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	-	14	12	6	7	7
	Emissions	tons	119	52	90	102	112
	Transfer	tons	12	2.9	2.4	2.4	66
Substances covered under PRTR law	Number of items	-	8	7	3	4	3
	Emissions	tons	18	13	0.9	0.9	0.2
	Transfer	tons	5.0	0.6	0.4	0.5	59
Waste materials	Generated	tons	6,762	7,076	1,671	1,674	1,523
	Utilized (recycled)	tons	6,509	6,794	1,199	1,323	1,214
	Unutilized (including landfill)	tons	243	397	472	351	308
	Landfill	tons	135	150	150	171	255

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

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

Main products:	Hoses, driving pipes, laminates, compounds

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	3.2	3.2	3.3	3.4	3.0
(inside number: CO_2 emissions)		1,000 t-CO_2e	3.2	3.2	3.3	3.4	3.0
Energy consumption (crude oil equivalent)		1,000 kl	1.5	1.5	1.6	1.7	1.5
Raw materials used		1,000 tons	16	7.9	8.3	8.1	8.0
Water intake		1,000 m^3	514	549	682	641	696
Wastewater		1,000 m^3	514	553	682	642	696
SOx emissions		tons	0.2	0.2	0.1	0.0	0.0
NOx emissions		tons	0.5	0.4	0.5	0.2	0.2
Soot and dust emissions		tons	0.1	0.1	0.1	0.0	0.0
COD emissions		tons	0.4	0.8	0.3	0.0	0.7
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	-	8	7	5	5	5
	Emissions	tons	73	34	85	98	109
	Transfer	tons	8.9	0.0	0.0	0.0	65
Substances covered under PRTR law	Number of items	-	5	4	2	2	2
	Emissions	tons	0.4	0.0	0.0	0.0	0.0
	Transfer	tons	4.5	0.0	0.0	0.5	59
Waste materials	Generated	tons	787	624	547	716	607
	Utilized (recycled)	tons	711	426	510	680	462
	Unutilized (including landfill)	tons	66	198	37	36	144
	Landfill	tons	42	13	30	28	143

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

(1) Address: 56, Noune, Maruoka-cho, Sakai-gun, Fukui prefecture

(2) Site area: 22,950 m^2

(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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	4.0	4.0	4.0	3.5	2.9
(inside number: CO_2 emissions)		1,000 t-CO_2e	4.0	4.0	4.0	3.5	2.9
Energy consumption (crude oil equivalent)		1,000 kl	1.6	1.6	1.6	1.6	1.4
Water intake		1,000 m^3	50	44	34	41	43
Wastewater		1,000 m^3	48	42	33	37	41
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	-	3	4	3	2	2
	Emissions	tons	5.6	5.8	4.8	4.7	2.1
	Transfer	tons	2.8	2.9	2.4	2.4	1.1
Substances covered under PRTR law	Number of items	-	2	2	2	1	1
	Emissions	tons	1.0	1.2	0.9	0.9	0.2
	Transfer	tons	0.5	0.6	0.4	0.5	0.1
Waste materials	Generated	tons	269	228	269	271	229
	Utilized (recycled)	tons	254	216	250	247	208
	Unutilized (including landfill)	tons	15	12	20	24	21
	Landfill	tons	0.0	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 m^2

Main products:	Industrial resin belts

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	0.6	0.5	0.5	0.3	0.5
(inside number: CO_2 emissions)		1,000 t-CO_2e	0.6	0.5	0.5	0.3	0.5
Energy consumption (crude oil equivalent)		1,000 kl	0.2	0.2	0.2	0.1	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	4.0	3.0	4.0
Wastewater		1,000 m^3	4.0	4.0	4.0	3.0	4.0
SOx emissions		tons	0.2	0.2	0.2	0.1	0.2
NOx emissions		tons	0.4	0.4	0.4	0.3	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	2
	Emissions	tons	0.2	0.2	0.2	0.1	0.3
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Substances covered under PRTR law	Number of items	-	0	0	0	0	0
	Emissions	tons	0.0	0.0	0.0	0.0	0.0
	Transfer	tons	0.0	0.0	0.0	0.0	0.0
Waste materials	Generated	tons	49	46	41	25	58
	Utilized (recycled)	tons	47	43	40	24	55
	Unutilized (including landfill)	tons	1.3	2.2	1.2	0.8	3.1
	Landfill	tons	0.0	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	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions (Scope1+Scope2)		1,000 t-CO_2e	952	933	1,032	1,868	1,921
	Scope1 emissions	1,000 t-CO_2e	91	76	93	862	939
	Scope2 emissions	1,000 t-CO_2e	862	856	939	1,006	981
Energy consumption (crude oil equivalent)		1,000 kl	443	437	500	595	606
Water intake		1,000 m^3	49,808	56,167	51,727	55,830	68,259
	Tapwater	1,000 m^3	5,133	6,186	6,417	5,352	3,149
	Subterranean river water	1,000 m^3	0.0	0.0	0.0	0.0	0.0
	Groundwater	1,000 m^3	395	75	40	2,624	2,583
	Industrial water	1,000 m^3	3,828	3,725	4,635	9,334	12,144
	Seawater	1,000 m^3	40,451	46,181	40,635	38,520	50,383
Wastewater		1,000 m^3	6,484	7,987	8,795	7,818	9,007
SOx emissions		tons	0.0	1.6	0.7	1,081	1,126
NOx emissions		tons	38	53	51	439	482
Substances covered under JCIA's voluntary PRTR management program	Number of items	-	11	11	11	11	11
	Emissions	tons	328	483	790	633	449
	Transfer	tons	5,631	8,158	6,504	7,680	11,105
Waste materials	Generated	tons	34,427	39,330	37,365	76,277	80,702
	Utilized (recycled)	tons	15,551	15,708	16,196	30,483	31,633
	Unutilized (including landfill)	tons	18,876	23,622	21,169	45,793	49,069
	Landfill	tons	5,783	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. 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	FY2015	FY2016	FY2017	FY2018	FY2019
Carbon dioxide (CO_2)	1,000 t-CO_2e	1,176	1,181	1,217	1,976	2,035
Methane (CH_4)	1,000 t-CO_2e	1.1	1.2	1.3	1.3	1.5
Nitrous oxide (N_2O)	1,000 t-CO_2e	21	20	21	22	23
Hydrofluorocarbons (HFCs)	1,000 t-CO_2e	1.6	1.4	0.8	0.8	1.2
Perfluorocarbons (PFCs)	1,000 t-CO_2e	0.0	0.0	0.0	0.0	0.0
Sulfur hexafluoride (SF_6)	1,000 t-CO_2e	0.0	0.0	0.0	0.0	0.0
Nitrogen trifluoride (NF_3)	1,000 t-CO_2e	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-CO_2e)/Net sales (million yen)
GHG emissions intensity index (production)＝GHG emissions (t-CO_2e)/Production volume (tons)

(Coverage: 99.7%)

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
GHG emissions intensity index (net sales)	t-CO_2/million yen	4.2	4.6	4.7	5.1	5.5
GHG emissions intensity index (production)	t-CO_2/ton	1.8	1.8	1.9	1.9	2.1

<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:
Production intensity index (Kuraray Group in Japan)=Converted production volume/GHG emissions
Production intensity index (Kuraray Group outside Japan)=Converted production volume/Energy consumption

(Coverage: 99.7%)

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Production intensity index compared to the previous year (Kuraray Group in Japan)	–	–	Reference year	2.9%	-3.5%	-1.7%
Production intensity index compared to the previous year (Kuraray Group outside Japan)	–	–		-7.4%	9.1%	-5.0%

<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	FY2015	FY2016	FY2017	FY2018	FY2019
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.