

1. Kuraray Co., Ltd.

Remark: the affiliated companies located in the site are included.

Total		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	68,921	72,124	71,042	71,049	71,054
Waste Water		1,000 m ³	61,814	63,272	62,846	63,888	60,723
COD load		tons	501	532	514	554	512
Energy consumption (crude oil equivalent)		1,000 kl	403	413	434	433	431
GHG emissions (inside number: CO2 emissions)		1,000 t-CO2e	1,218	1,250	1,319	1,310	1,301
			1,194	1,227	1,296	1,286	1,275
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
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.2	0.0	0.0	0.0	0.4
Substances covered under JClA's voluntary PRTR management program	No. of items		82	77	82	85	80
	Release	tons	891	905	976	902	855
	Transfer	tons	1,141	1,146	1,292	1,201	1,042
Substances covered under PRTR law	No. of items		60	59	62	61	58
	Release	tons	392	414	431	392	394
	Transfer	tons	616	657	746	658	594
Waste	Generation	tons	76,356	82,900	84,756	87,003	90,262
	Utilized internally	tons	21,461	20,446	21,519	23,118	23,062
	Utilized externally	tons	53,276	60,043	60,446	61,965	64,561
	Unutilized internally	tons	643	889	998	764	904
	Unutilized externally	tons	620	852	849	875	1,735

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	13,537	13,808	13,643	13,163	13,494
Waste Water		1,000 m ³	10,150	10,622	10,824	10,985	11,180
COD load		tons	189	192	182	193	179
Energy consumption (crude oil equivalent)		1,000 kl	191	193	197	191	199
GHG emissions (inside number: CO2 emissions)		1,000 t-CO2e	638	642	654	626	650
			638	641	652	624	649
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
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.2	0.0	0.0	0.0	0.0
Substances covered under JClA's voluntary PRTR management program	No. of items		33	34	31	27	28
	Release	tons	478	529	511	480	473
	Transfer	tons	271	268	316	356	327
Substances covered under PRTR law	No. of items		20	21	20	17	18
	Release	tons	291	309	292	271	280
	Transfer	tons	183	168	210	207	201
Waste	Generation	tons	26,030	29,684	25,793	25,425	25,748
	Utilized internally	tons	2,024	1,377	0	0	0
	Utilized externally	tons	23,078	27,255	24,489	24,606	24,719
	Unutilized internally	tons	596	785	933	758	872
	Unutilized externally	tons	320	267	372	60	157

Kurashiki Plant (Tamashima area) (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	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	7,105	7,080	7,042	7,072	7,769
Waste Water		1,000 m ³	7,214	6,776	6,486	6,555	7,674
COD load		tons	31	37	39	44	51
Energy consumption (crude oil equivalent)		1,000 kl	21	21	25	24	21
GHG emissions (inside number: CO2 emissions)		1,000 t-CO2e	84	92	105	106	106
			63	73	85	85	84
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
Ozone-layer depleting substance emissions		tons of CFC equivalent	0.0	0.0	0.0	0.0	0.0
Substances covered under JClA's voluntary PRTR management program	No. of items		12	12	10	10	12
	Release	tons	32	31	31	29	29
	Transfer	tons	68	63	76	40	36
Substances covered under PRTR law	No. of items		8	8	6	5	6
	Release	tons	0	0	0	0	0
	Transfer	tons	1	2	0	0	0
Waste	Generation	tons	12,605	12,455	11,194	13,178	14,479
	Utilized internally	tons	943	362	2,378	3,489	3,530
	Utilized externally	tons	11,637	12,069	8,796	9,657	10,931
	Unutilized internally	tons	0	0	0	0	0
	Unutilized externally	tons	25	25	20	33	18

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	14,277	15,221	14,175	14,503	14,344
Waste Water		1,000 m ³	12,283	12,641	12,435	12,535	12,558
COD load		tons	32	23	22	23	21
Energy consumption (crude oil equivalent)		1,000 kl	52	55	56	58	57
GHG emissions (inside number: CO2 emissions)		1,000 t-CO2e	178	190	188	193	183
SOx emissions		tons	178	190	188	192	182
NOx emissions		tons	142	149	148	154	142
Soot and dust emissions		tons	400	431	397	407	404
Ozone-layer depleting substance emissions		tons of CFC equivalent	12	10	13	9	9
Substances covered under JCIA's voluntary PRTR management program		No. of items	0.0	0.0	0.0	0.0	0.0
		Release	16	16	16	16	17
		Transfer	140	135	144	144	141
Substances covered under PRTR law		No. of items	5	5	5	4	5
		Release	10	10	10	10	11
		Transfer	3	3	3	3	4
		Unutilized internally	2	2	3	4	3
		Unutilized externally	12,548	14,206	14,547	13,802	14,486
Waste		tons	202	153	0	0	0
		Utilized internally	12,199	13,846	14,304	13,572	14,281
		Utilized externally	0	0	0	0	0
		Unutilized internally	147	207	232	220	205
		Unutilized externally					

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	31,412	33,428	33,330	33,160	32,281
Waste Water		1,000 m ³	29,142	30,194	30,080	30,651	26,160
COD load		tons	161	180	170	191	160
Energy consumption (crude oil equivalent)		1,000 kl	63	65	65	65	63
GHG emissions (inside number: CO2 emissions)		1,000 t-CO2e	138	141	139	139	136
SOx emissions		tons	136	139	138	138	134
NOx emissions		tons	21	6	2	10	18
Soot and dust emissions		tons	52	51	62	61	58
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		No. of items	52	41	37	46	36
		Release	106	112	120	112	110
		Transfer	411	466	482	386	357
Substances covered under PRTR law		No. of items	35	27	27	30	25
		Release	59	62	73	63	64
		Transfer	326	400	423	313	296
Waste		tons	15,200	16,256	16,989	16,531	17,785
		Utilized internally	10,548	10,654	10,733	10,542	10,638
		Utilized externally	4,147	4,829	5,283	5,254	6,085
		Unutilized internally	0	0	0	0	0
		Unutilized externally	37	95	40	463	1,062

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water Usage		1,000 m ³	2,305	2,466	2,461	2,703	2,726
Waste Water		1,000 m ³	2,407	2,743	2,665	2,773	2,760
COD load		tons	88	100	98	101	99
Energy consumption (crude oil equivalent)		1,000 kl	73	76	80	82	79
GHG emissions		1,000 t-CO ₂ e (inside number: CO ₂ emissions)	172	178	190	201	196
			172	178	190	201	196
SOx emissions		tons	4	4	6	8	7
NOx emissions		tons	48	47	51	53	52
Soot and dust emissions		tons	1.8	3.6	2.0	4.0	3.0
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	No. of items		42	38	41	40	35
	Release	tons	133	98	163	124	94
	Transfer	tons	376	345	413	414	317
Substances covered under PRTR law	No. of items		26	24	25	26	22
	Release	tons	38	40	56	41	38
	Transfer	tons	98	84	110	135	93
Waste	Generation	tons	9,883	10,146	10,368	11,580	11,846
	Utilized internally	tons	7,744	7,901	8,408	9,088	8,894
	Utilized externally	tons	2,025	1,897	1,780	2,444	2,642
	Unutilized internally	tons	47	104	65	5	32
	Unutilized externally	tons	84	252	115	43	277

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water usage		1,000 m ³	297	317	357	420	410
Waste water		1,000 m ³	191	224	291	312	312
COD load		tons	1	1	2	2	2
Energy consumption (crude oil equivalent)		1,000 kl	8	9	9	10	9
GHG emissions		1,000 t-CO ₂ e (inside number: CO ₂ emissions)	38	43	37	39	24
			38	43	37	39	24
SOx emissions		tons	12	14	8	20	67
NOx emissions		tons	26	19	21	26	6
Soot and dust emissions		tons	1	1	1	2	3
Ozone-layer depleting substance emissions		tons of CFC	0	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items		6	6	10	5	5
	Release	tons	17	12	6	14	8
	Transfer	tons	0	0	0	0	0
Substances covered under PRTR law	No. of items		5	5	6	4	4
	Release	tons	16	12	6	13	7
	Transfer	tons	0	0	0	0	0
Waste	Generation	tons	5,171	5,676	5,745	6,378	5,797
	Utilized internally	tons	0	0	0	0	0
	Utilized externally	tons	5,160	5,650	5,680	6,328	5,781
	Unutilized internally	tons	0	0	0	0	0
	Unutilized externally	tons	12	27	65	51	15

2. Domestic Affiliated Companies

Total

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Water usage	1,000 m ³	895	955	783	755	801
Waste water	1,000 m ³	780	823	719	682	745
COD load	tons	2	2	0	0	1
Energy consumption (crude oil equivalent)	1,000 kl	12	14	5	5	4
GHG emissions	1,000 t-CO ₂ e (inside number: CO ₂ emissions)	47	53	11	11	9
		47	53	11	11	9
SOx emissions	tons	12	15	0	0	0
NOx emissions	tons	27	20	1	1	1
Soot and dust emissions	tons	1	1	0	0	0
Ozone-layer depleting substance emissions	tons of CFC	0	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	14	12	6	7	7
	Release	tons	119	52	90	102
	Transfer	tons	12	3	2	2
	No. of items	8	7	3	4	3
Substances covered under PRTR law	Release	tons	18	13	1	1
	Transfer	tons	5	1	0	0
	Generation	tons	6,762	7,076	1,671	1,674
	Utilized internally	tons	57	38	25	25
	Utilized externally	tons	6,453	6,757	1,174	1,298
	Unutilized internally	tons	5	0	0	0
	Unutilized externally	tons	238	397	472	351

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water usage	1,000 m ³	514	549	682	641	696
Waste water	1,000 m ³	514	553	682	642	696
COD load	tons	0.4	0.8	0.3	0.0	0.7
Energy consumption (crude oil equivalent)	1,000 kl	1	2	2	2	2
GHG emissions	1,000 t-CO ₂ e (inside number: CO ₂ emissions)	3	3	3	3	3
		3	3	3	3	3
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
Ozone-layer depleting substance emissions	tons of CFC	0	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	8	7	5	5	5
	Release	tons	73	34	85	98
	Transfer	tons	9	0	0	0
	No. of items	5	4	2	2	2
Substances covered under PRTR law	Release	tons	0.4	0.0	0.0	0.0
	Transfer	tons	4	0	0	0
	Generation	tons	787	624	547	716
	Utilized internally	tons	0	0	0	0
	Utilized externally	tons	711	538	510	680
	Unutilized internally	tons	5	0	0	0
	Unutilized externally	tons	61	202	37	36

Kuraray Fastening Co., Ltd.

(1) Address: 56, Nouno, 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: <i>MAGICTAPE</i> (hook and loop fastener), <i>MAGILOCK</i> (molded plastic hook and loop fastener)

		FY2015	FY2016	FY2017	FY2018	FY2019
Water usage	1,000 m ³	50	44	34	41	43
Waste water	1,000 m ³	48	42	33	37	41
COD load	tons	—	—	—	—	—
Energy consumption (crude oil equivalent)	1,000 kl	2	2	2	2	1
GHG emissions	1,000 t-CO ₂ e (inside number: CO ₂ emissions)	4	4	4	4	3
		4	4	4	4	3
SOx emissions	tons	—	—	—	—	—
NOx emissions	tons	—	—	—	—	—
Soot and dust emissions	tons	—	—	—	—	—
Ozone-layer depleting substance emissions	tons of CFC	0	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	3	4	3	2	2
	Release	tons	6	6	5	5
	Transfer	tons	3	3	2	1
Substances covered under PRTR law	No. of items	2	2	2	1	1
	Release	tons	1	1	1	0
	Transfer	tons	0	1	0	0
Waste	Generation	tons	269	228	269	271
	Utilized internally	tons	0	0	0	0
	Utilized externally	tons	254	216	250	247
	Unutilized internally	tons	0	0	0	0
	Unutilized externally	tons	15	12	20	24

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	FY2015	FY2016	FY2017	FY2018	FY2019
Water usage	1,000 m ³	4	4	4	3	4
Waste water	1,000 m ³	4	4	4	3	4
COD load	tons	—	—	—	—	—
Energy consumption (crude oil equivalent)	1,000 kl	0.2	0.2	0.2	0.1	0.2
GHG emissions (inside number: CO ₂ emissions)	1,000 t-CO ₂ e	0.6	0.5	0.5	0.3	0.5
		0.6	0.5	0.5	0.3	0.5
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
Ozone-layer depleting substance emissions	tons of CFC	0	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	2	2	2	2	2
	Release	0.2	0.2	0.2	0.1	0.3
	Transfer	0	0	0	0	0
Substances covered under PRTR law	No. of items	0	0	0	0	0
	Release	—	0	0	0	0
	Transfer	—	0	0	0	0
Waste	Generation	49	46	41	25	58
	Utilized internally	45	23	0	0	0
	Utilized externally	3	21	40	24	55
	Unutilized internally	0	0	0	0	0
	Unutilized externally	1	2	1	1	3

3. Kuraray Group outside Japan

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

	Unit	FY2015	FY2016	FY2017	FY2018	FY2019	
Water usage (excepte sea water)	1,000 m ³	9,357	9,986	11,092	17,242	17,612	
Waste water	1,000 m ³	6,484	7,987	8,795	7,757	9,007	
TOC release	tons	2,340	2,229	2,637	2,462	2,469	
Energy consumption (crude oil equivalent)	1,000 kl	443	437	500	595	606	
CO ₂ emmissions	1,000 tons of CO ₂ equivalent	952	933	1,032	1,868	1,921	
SOx emmissions	tons	0	2	1	1,081	1,126	
NOx emmissions	tons	38	53	51	439	482	
Substances covered under PRTR law	No. of items	14	14	14	11	14	
	Emission	tons	328	483	790	633	449
	Transfer	tons	5,631	8,158	6,504	7,680	11,105
Waste	Generation	tons	34,649	39,330	37,331	76,277	80,702
	Utilization	tons	15,551	15,708	16,196	30,483	31,633
	Landfill	tons	5,783	8,718	9,043	24,983	27,593

* Since TOC emissions are treated by outside wastewater treatment businesses, the amount of discharge to public water areas is substantially lower than the above figures.