

**Release and transfer volume of substances covered by PRTR law from Kuraray plants,  
research laboratories and domestic affiliated companies in FY 2016 (Jan.-Dec.)**

1. This table shows the substance used more than one ton in each plant. (Specified Class 1 designated chemical substances are more than 0.5 ton).
2. Unit; metric ton (excepting dioxins; mg-TEQ for dioxins)
3. In this table, the values include affiliated companies in the plant.  
Each company submits the official notice; therefore some figures in this table may not be same with the officially notified figures.
4. The official notice is two significant figure. (Unit; kg)

1. Kuraray Co., Ltd.

Okayama Plant (including Kuraray Engineering Co., Ltd., Kuraray Kuraflex Co., Ltd., Kuraray Okayama Spinning Co., Ltd., Kuraray Techno Co., Ltd.)  
1-2-1, Kaigan-dori, Minami-ku, Okayama 702-8601, Japan

CAS No	substance	emissions volume				transfer volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
75-07-0	acetaldehyde	0.89			0.89				
141-43-5	2-aminoethanol								
-	antimony and its compounds								
60-00-4	ethylenediaminetetraacetic acid								
75-56-9	1,2-epoxypropane								
108-05-4	vinyl acetate	28.16			28.16				
108-05-4	vinyl acetate	21.26			21.26	0.95			0.95
124-40-3	dimethylamine	6.18			6.18	0.38			0.38
68-12-2	N,N-dimethylformamide	103.63	1.31		104.94	39.78			39.78
151-21-3	sodium dodecyl sulfate								
108-88-3	toluene	99.30	0.001		99.30	2.98			2.98
*	vanadium compound (vanadium conversion)					120.74			120.74
*	vanadium compound (vanadium conversion)						0.02		0.02
822-06-0	hexamethylene diisocyanate								
*	boron and its compounds		47.12		47.12				
-	poly(oxyethylene) alkyl ether								
9004-82-4									
50-00-0	formaldehyde	0.71			0.71	0.000001			0.00
1321-94-4	methylnaphthalene	0.01			0.01				
101-68-8	methylene-bis-(4,1-phenylene)=di-isocyanate					3.68			3.68
-	dioxins	0.02			0.02	0.003			0.003

Kurashiki Plant (Tamashima area) (including Kuraray Tamashima Co., Ltd., Kuraray Techno Co., Ltd., Kurashiki Research Center.)

7471, Tamashimaotoshima, Kurashiki, Okayama 713-8550, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
108-05-4	vinyl acetate	0.05			0.05	1.05			1.05
127-19-5	N,N-dimethylacetamide								
68-12-2	N,N-dimethylformamide					0.17			0.17
100-21-0	terephthalic acid					0.22			0.22
-	poly(oxyethylene) alkyl ether								
7705-08-0	ferric chlorride								
1321-94-4	methylnaphthalene	0.20			0.20				
111-30-8	glutaraldehyde								
-	dioxins	4.98			4.98	238.41			238.41

Kurashiki Plant (Sakazu area) (Not calculated (Business unit has been relocated to Niigata Plant))

1621, Sakazu, Kurashiki, Okayama 710-8622, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total

Saijo Plant (including Kuraray Saijo Co., Ltd, Kuraray Techno Co., Ltd.)

892, Tsuitachi, Saijo, Ehime 793-8585, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
75-07-0	acetaldehyde	0.46			0.46				
-	antimony and its compounds								
7705-08-0	ferric chloride						0.16		0.16
123-91-1	1,4-dioxane		2.29		2.29	0.05			0.05
100-21-0	terephthalic acid								
108-95-2	phenol	0.09	0.15		0.23	2.37			2.37
50-00-0	formaldehyde					0.03			0.03
111-30-8	glutaraldehyde								
1321-94-4	methylnaphthalene	0.01			0.01				
-	poly(oxyethylene) alkyl ether	0.001			0.001	0.001	1.67		1.67

\* There is no dioxins.

Niigata Plant (including Kuraray Noritake Dental Inc., Kuraray Techno Co., Ltd.)

2-28, Kurashiki-cho, Tainai, Niigata 959-2691, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
141-2-2	n-butyl acrylate	0.37			0.37	30.93			30.93
96-33-3	methyl acrylate	0.46			0.46		0.42		0.42
75-07-0	acetaldehyde	0.34			0.34				
75-86-5	acetone cyanohydrin (production)								
75-86-5	acetone cyanohydrin (consumption)								
78-67-1	2,2'-azodiisobutyronitrile								
107-18-6	allyl alcohol								
149-57-5	2-ethylhexanoate					6.61			6.61
100-41-4	ethyl benzene								
-	xylene								
108-05-4	vinyl acetate	4.39			4.39				
-	inorganic cyanide compounds (hydrogen cyanide)						0.00		0.00
-	inorganic cyanide compounds (sodium cyanide)								
-	inorganic cyanide compounds								
56-23-5	tetrachloromethane	0.19			0.19				
75-09-2	dichloromethane								
77-73-6	dicyclopentadiene					2.07			2.07
100-42-5	styrene	0.07			0.07	1.98	0.71		2.69
505-32-8	3,7,11,15-tetramethylhexadeca-1-en-3-ol								
121-44-8	triethylamine					1.00			1.00
108-88-3	toluene	7.92	1.01		8.93	306.56	14.24		320.80
*	lead and its compounds					11.99			11.99
-	nickel compounds								
117-81-7	bis(2-ethylhexyl) phthalate								
110-54-3	n-hexane	0.53			0.53	6.78			6.78
-	manganese and its compounds								
108-31-6	maleic anhydride								
79-41-4	methacrylic acid (production)	0.03			0.03				
79-41-4	methacrylic acid (consumption)					5.86			5.86
80-62-6	methyl methacrylate (production)	1.85			1.85				
80-62-6	methyl methacrylate (consumption)	45.13	0.10		45.24	26.48	7.64		34.12
128-37-0	butylated hydroxytoluene					0.08			0.08
110-00-9	furan								
75-05-8	acetonitrile								
111-87-5	1-octanol	0.04			0.04				
-	dioxins								

Kashima Plant (including Kuraray Techno Co., Ltd.)

36, Towada, Kamisu, Ibaraki 314-0197, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
-	zinc compounds (water-soluble)		0.72		0.72				
141-32-2	n-butyl acrylate								
78-79-5	isoprene (production)	2.02			2.02	14.98			14.98
78-79-5	isoprene (consumption)	2.98			2.98				
149-57-5	2-ethylhexanoic acid					14.50			14.50
100-41-4	ethylbenzene	0.28			0.28				
75-21-8	ethylene oxide								
111-87-5	1-octanol	0.18			0.18				
98-82-8	cumene	0.33			0.33				
128-37-0	2,6-di-tert-butyl-4-methylphenol								
68-12-2	N,N-dimethylformamide								
100-42-5	styrene	1.00			1.00	1.32			1.32
100-21-0	terephthalic acid								
121-44-8	triethylamine								
108-88-3	toluene	0.25			0.25	11.02			11.02
-	nickel compounds					4.92	1.05		5.97
106-99-0	1,3-butadiene	1.60			1.60				
110-00-9	furan								
110-54-3	n-hexane	30.44			30.44	0.19		0.19	0.38
-	poly(oxyethylene) alkyl ether					1.67			1.67
50-00-0	formaldehyde	0.07			0.07			31.63	31.63
108-31-6	maleic anhydride							0.12	0.12
80-62-6	methyl methacrylate								
98-83-9	α-methylstyrene								
101-68-8	methylenebis(4,1-phenylene) diisocyanate								
-	molybdenum and its compounds		0.05		0.05				
-	dioxins	0.44			0.44	0.0001		0.001	0.001

Tsukuba Research Center

41, Miyukigaoka, Tsukuba, Ibaraki 305-0841, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
108-88-3	toluene	0.04			0.04		2.95		2.95

\* There is no dioxins.

## 2. Domestic Affiliated Companies

Tsurumi Plant, Kuraray Chemical Co., Ltd. (This company has been acquired by Kuraray Co., Ltd. since FY2017)

4342, Tsurumi, Bizen, Okayama 705-0025, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
108-88-3	toluene	11.68			11.68				
-	xylene	0.07			0.07				
95-63-6	1,2,4-trimethylbenzene	0.08			0.08				
1321-94-4	methylnaphthalene	0.01			0.01				
-	Copper water-soluble salt (copper conversion)								

\* There is no dioxins.

Ibuki Plant, Kuraray Plastics Co., Ltd. (including Ibuki Kosan Co., Ltd.)

4330, Osa, Tarui-cho, Fuwa-gun, Gifu 503-2122, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
97-77-8									
108-88-3	toluene	0.15			0.15				
117-81-7	bis(2-ethylhexyl) phthalate								
149-30-4									
1321-94-4	methylnaphthalene	0.02			0.02				

\* There is no dioxins.

Maruoka Plant, Kuraray Fastening Co., Ltd.

56, Noune, Maruoka-cho, Sakai, Fukui 910-0273, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
108-88-3	toluene	1.17			1.17	0.59			0.59
1321-94-4	methylnaphthalene	0.03			0.03				

\* There is no dioxins.

Okayama Plant, Kuraray Trading Co., Ltd

1099, Kawabe, Mabi-cho, Kurashiki, Okayama 710-1313, Japan

\* There is no substances covered by PRTR law.

\* There is no dioxins.