

**Release and transfer volume of substances covered by PRTR law from Kuraray plants,
research laboratories and domestic affiliated companies in FY 2017 (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	0.94			0.94				
141-43-5	2-aminoethanol								
60-00-4	ethylenediaminetetraacetic acid								
75-56-9	1,2-epoxypropane								
108-05-4	vinyl acetate	27.79			27.79				
108-05-4	vinyl acetate	25.43			25.43	1.12			1.12
124-40-3	dimethylamine	3.14			3.14	0.41			0.41
68-12-2	N,N-dimethylformamide	93.24	1.26		94.51	76.02			76.02
151-21-3	sodium dodecyl sulfate								
108-88-3	toluene	91.43	0.01		91.44	3.20			3.20
*	vanadium compound (vanadium conversion)					129.20			129.20
*	vanadium compound (vanadium conversion)						0.02		0.02
822-06-0	hexamethylene diisocyanate								
*	boron and its compounds		48.18		48.18				
-	poly(oxyethylene) alkyl ether								
9004-82-4	Sodium poly(oxyethylene) dodecyl ether sulfonate								
50-00-0	formaldehyde	0.62			0.62	0.02			0.02
1321-94-4	methylnaphthalene	0.01			0.01				
101-77-9	4,4'-Methylenedianiline								
101-68-8	methylene-bis-(4,1-phenylene)=di-isocyanate					0.46			0.46
-	dioxins	0.003			0.003	0.000			0.000

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
127-19-5	N,N-dimethylacetamide								
68-12-2	N,N-dimethylformamide					0.14			0.14
100-21-0	terephthalic acid								
-	poly(oxyethylene) alkyl ether								
7705-08-0	ferric chloride								
1321-94-4	methylnaphthalene	0.27			0.27				
-	dioxins	1.62			1.62	394.59			394.59

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	0.40			0.40				
-	antimony and its compounds								
7705-08-0	ferric chloride					0.06			0.06
123-91-1	1,4-dioxane		2.12		2.12	0.05			0.05
100-21-0	terephthalic acid								
108-95-2	phenol	0.09	0.15		0.24	2.47			2.47
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	1.370		1.371

* There is no dioxins.

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
141-2-2	n-butyl acrylate	0.43			0.43	44.47			44.47
96-33-3	methyl acrylate	0.47			0.47		0.33		0.33
75-07-0	acetaldehyde	13.73			13.73				
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					4.98			4.98
100-41-4	ethyl benzene								
-	xylene								
108-05-4	vinyl acetate	4.45			4.45		10.46		10.46
-	inorganic cyanide compounds (hydrogen cyanide)						0.00		0.00
-	inorganic cyanide compounds (sodium cyanide)								
-	inorganic cyanide compounds								
56-23-5	tetrachloromethane								
75-09-2	dichloromethane								
77-73-6	dicyclopentadiene					1.28			1.28
100-42-5	styrene	0.08			0.08	1.49	0.64		2.13
505-32-8	3,7,11,15-tetramethylhexadeca-1-en-3-ol								
121-44-8	triethylamine					0.61			0.61
108-88-3	toluene	6.13	0.73		6.86	330.86	3.83		334.69
*	lead and its compounds					9.03			9.03
-	nickel compounds								
117-81-7	bis(2-ethylhexyl) phthalate								
110-54-3	n-hexane	0.70			0.70	7.48			7.48
-	manganese and its compounds								
108-31-6	maleic anhydride								
79-41-4	methacrylic acid (production)	0.04			0.04				
79-41-4	methacrylic acid (consumption)					4.42			4.42
80-62-6	methyl methacrylate (production)	46.51			46.51				
80-62-6	methyl methacrylate (consumption)	0.04	0.08		0.12	17.71	7.08		24.79
128-37-0	butylated hydroxytoluene					0.10			0.10
110-00-9	furan								
75-05-8	acetonitrile								
111-87-5	1-octanol	0.06			0.06				
67-66-3	chloroform					0.15			0.15
507-55-1	Dichloropentafluoropropane					0.97			0.97
-	dioxins								

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
-	zinc compounds (water-soluble)		0.66		0.66				
141-32-2	n-butyl acrylate								
78-79-5	isoprene (production)	2.21			2.21	14.98		14.98	29.95
78-79-5	isoprene (consumption)	2.44			2.44				
149-57-5	2-ethylhexanoic acid					35.06		35.06	70.11
100-41-4	ethylbenzene	0.28			0.28				
75-21-8	ethylene oxide								
111-87-5	1-octanol	0.43			0.43				
98-82-8	cumene	2.84			2.84				
128-37-0	2,6-di-tert-butyl-4-methylphenol								
68-12-2	N,N-dimethylformamide								
100-42-5	styrene	10.08			10.08	5.09			5.09
100-21-0	terephthalic acid								
121-44-8	triethylamine								
108-88-3	toluene	0.24			0.24	10.75		0.00	10.76
-	nickel compounds					7.74	1.01	7.74	16.48
106-99-0	1,3-butadiene	1.81			1.81				
110-00-9	furan	0.01			0.01				
110-54-3	n-hexane	35.69			35.69	0.45		0.24	0.68
-	poly(oxyethylene) alkyl ether					1.70		1.70	3.40
50-00-0	formaldehyde	0.11			0.11	30.93		30.93	61.86
108-31-6	maleic anhydride					0.18		0.18	0.36
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	3.02			3.02
67-66-3	chloroform								
-	dioxins	0.15			0.15	0.0002			0.0002

Tsurumi Plant (Former Kuraray Chemical Co., Ltd. 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	5.92			5.92				
-	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.

Tsukuba Research Center

41, Miyukiqaoka, 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	0.02			0.02				

* There is no dioxins.

2. Domestic Affiliated Companies

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	Bis(diethylthiocarbamoyl) Disulfide	0.01			0.01				
108-88-3	toluene	0.03			0.03				
117-81-7	bis(2-ethylhexyl) phthalate						63.42		63.42
149-30-4	2-Mercaptobenzothiazole	0.01			0.01				
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	0.88			0.88	0.45			0.45
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.