

**Release and transfer volume of substances covered by PRTR law from domestic Kuraray plants,
research laboratories and affiliated companies in FY 2021 (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	3.26			3.26				
141-43-5	2-aminoethanol								
60-00-4	ethylenediaminetetraacetic acid								
75-56-9	1,2-epoxypropane								
108-05-4	vinyl acetate (production)	32.32			32.32				
108-05-4	vinyl acetate (consumption)	14.28			14.28	1.03			1.03
124-40-3	dimethylamine	2.40			2.40	0.29			0.29
68-12-2	N,N-dimethylformamide	91.85	1.97		93.82	34.05			34.05
151-21-3	sodium dodecyl sulfate								
108-88-3	toluene	94.45	0.01		94.46	3.96			3.96
*	vanadium compound (vanadium conversion, production)					127.01			127.01
*	vanadium compound (vanadium conversion, consumption)						0.02		0.02
822-06-0	hexamethylene diisocyanate								
*	boron and its compounds		39.76		39.76				
—	poly(oxyethylene) alkyl ether								
9004-82-4	Sodium poly(oxyethylene) dodecyl ether sulfonate								
50-00-0	formaldehyde	0.50			0.50	0.05			0.05
1321-94-4	methylnaphthalene								
101-77-9	4,4'-Methylenedianiline								
101-68-8	methylene-bis-(4,1-phenylene)=di-isocyanate					0.56			0.56
—	dioxins	9.49E-06			9.49E-06	3.67E-07			3.67E-07

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 (consumption)	0.04			0.04	0.89			0.89
127-19-5	N,N-dimethylacetamide					0.80			0.80
68-12-2	N,N-dimethylformamide					2.20			2.20
—	poly(oxyethylene) alkyl ether								
7705-08-0	ferric chloride								
1321-94-4	methylnaphthalene	0.16			0.16				
75-01-4	chloroethylene								
—	dioxins	44.89			44.89	0.03			0.03

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	0.26			0.26				
—	antimony and its compounds								
7705-08-0	ferric chloride								
123-91-1	1,4-dioxane		1.77		1.77	0.08			0.08
100-21-0	terephthalic acid					5.30			5.30
108-95-2	phenol	0.07	0.20		0.27	3.27			3.27
50-00-0	formaldehyde					0.01			0.01
111-30-8	glutaraldehyde								
1321-94-4	methylnaphthalene	0.37			0.37				
—	poly(oxyethylene) alkyl ether	1.30E-03			1.30E-03		0.90		0.90
9004-82-4	poly(oxyethylene) sodium sulfate dodecyl ether						1.90		1.90

* 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	0.48			0.48	47.71			47.71
96-33-3	methyl acrylate	0.40			0.40	0.64	0.38		1.02
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								
149-57-5	2-ethylhexanoate					5.31			5.31
—	xylene								
108-05-4	vinyl acetate	4.23			4.23		7.39		7.39
—	inorganic cyanide compounds (hydrogen cyanide)								
77-73-6	dicyclopentadiene					1.92			1.92
100-42-5	styrene	0.09			0.09	1.59	0.63		2.23
121-44-8	triethylamine					0.59			0.59
108-88-3	toluene	8.94	0.60		9.54	113.18	5.28		118.46
*	lead and its compounds					9.64			9.64
—	nickel compounds								
117-81-7	bis(2-ethylhexyl) phthalate					1.56			1.56
110-54-3	n-hexane	0.46			0.46	5.84			5.84
108-31-6	maleic anhydride						0.29		0.29
79-41-4	methacrylic acid (production)	0.04			0.04				
79-41-4	methacrylic acid (consumption)					4.71			4.71
80-62-6	methyl methacrylate (production)	2.02			2.02	7.60			7.60
80-62-6	methyl methacrylate (consumption)	41.90			41.90	38.17	9.49		47.67
128-37-0	butylated hydroxytoluene					0.10			0.10
110-00-9	furan								
111-87-5	1-octanol								
67-66-3	chloroform								
98-83-9	α-methylstyrene						1.07		1.07
507-55-1	Dichloropentafluoropropane								
—	Acrylic acid and its aqueous acrylate					1.30			1.30
68-12-2	N,N-dimethylformamide					0.91			0.91
—	dioxins								

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
—	zinc compounds (water-soluble)		0.81		0.81				
78-79-5	isoprene (production)	2.80			2.80	14.04			14.04
78-79-5	isoprene (consumption)	0.78			0.78				
149-57-5	2-ethylhexanoic acid					6.54		4.67	11.20
100-41-4	ethylbenzene	0.28			0.28				
75-21-8	ethylene oxide								
111-87-5	1-octanol	0.29			0.29				
128-37-0	2,6-di-tert-butyl-4-methylphenol								
68-12-2	N,N-dimethylformamide								
100-42-5	styrene	1.16			1.16				
100-21-0	terephthalic acid								
121-44-8	triethylamine								
108-88-3	toluene	0.27			0.27	1.15			1.15
—	nickel compounds					7.86		7.48	15.34
106-99-0	1,3-butadiene	1.87			1.87				
110-54-3	n-hexane	11.20			11.20	62.55		0.15	62.70
—	poly(oxyethylene) alkyl ether					1.08			1.08
50-00-0	formaldehyde	0.06			0.06	35.04			35.04
108-31-6	maleic anhydride	0.08			0.08	0.05			0.05
101-68-8	methylenebis(4,1-phenylene) diisocyanate								
*	molybdenum and its compounds					0.03			0.03
67-66-3	chloroform					0.33			0.33
7705-08-0	ferric chloride					0.98			0.98
—	dioxins	1.74E-01			1.74E-01	0.0002			2.03E-04

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
108-88-3	toluene	0.08			0.08				
—	xylene	0.09			0.09				
95-63-6	1,2,4-trimethylbenzene	0.11			0.11				
1321-94-4	methylnaphthalene	0.01			0.01				

* There is no dioxins.

* There is no substances covered by PRTR law.

* 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								
108-88-3	toluene	0.04			0.04				
117-81-7	bis(2-ethylhexyl) phthalate					49.32			49.32
149-30-4	2-Mercaptobenzothiazole								
1321-94-4	methylnaphthalene								

* There is no dioxins.

Maruoka Plant, Kuraray Fastening Co., Ltd.

56, Nouno, 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	0.12			0.12	0.06			0.06

* 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.