

**Release and transfer volume of substances covered by PRTR law from Kuraray plants,
research laboratories and domestic affiliated companies in FY 2013**

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	1.033			1.033				
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	30.872			30.872				
108-05-4	vinyl acetate	28.129			28.129	1.120			1.120
124-40-3	dimethylamine	6.333			6.333				
68-12-2	N,N-dimethylformamide	88.752	1.655		90.407	114.618			114.618
151-21-3	sodium dodecyl sulfate								
108-88-3	toluene	86.235	0.014		86.249	3.106			3.106
*	vanadium compound (vanadium conversion)					115.700			
123-31-9	hydroquinone								
822-06-0	hexamethylene diisocyanate								
-	boron and its compounds		42.598		42.598				
-	poly(oxyethylene) alkyl ether					0.002			0.002
9004-82-4									
50-00-0	formaldehyde	0.680			0.680	0.000			0.000
1321-94-4	methylnaphthalene	0.025			0.025				
101-77-9	4,4'-methylenedianiline								
101-68-8	methylenebis(4,1-phenylene) diisocyanate								
-	dioxins	0.024	2.384		2.408				

Kurashiki Plant (Tamashima area) (including Kuraray Tamashima Co., Ltd., Kuraray Medical Inc., Ltd., Kuraray Techno Co., Ltd.)
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	0.090			0.090	1.623			1.623
127-19-5	N,N-dimethylacetamide								
68-12-2	N,N-dimethylformamide								
100-21-0	terephthalic acid					0.171			0.171
-	poly(oxyethylene) alkyl ether								
7705-08-0	ferric chloride								
1321-94-4	methylnaphthalene	0.0650			0.065				
-	dioxins	3.356	0.002		3.358	28.801			28.801

Kurashiki Plant (Sakazu area) (including Kuraray Medical Inc., Kurashiki Research Center, Kuraray Techno Co., Ltd.)
1621, Sakazu, Kurashiki, Okayama 710-8622, Japan

CAS No	substance	emissions volume				transport volume			
		atmosphere	water area	soil	total	waste	recycled	sewage works	total
67-66-3	chloroform	0.202			0.202	2.126			2.126
108-88-3	toluene	0.485			0.485	6.383			6.383
110-54-3	n-hexane	0.255			0.255	1.062			1.062
1321-94-4	methylnaphthalene	0.005			0.005				

* There is no dioxins.

Saijo Plant (including Kuraray Saijo Co., Ltd., Kuraray Techno Co., Ltd., Kuraray Kikoh 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	0.485			0.485				
-	antimony and its compounds								
7705-08-0	ferric chloride						0.128		0.128
123-91-1	1,4-dioxane		2.698		2.698	0.044			0.044
100-21-0	terephthalic acid								
108-95-2	phenol	0.082	0.131		0.213	2.108			2.108
50-00-0	formaldehyde					0.033			0.033
111-30-8	glutaraldehyde								
1321-94-4	methylnaphthalene	0.010			0.010				

* There is no dioxins.

Niigata Plant (including Kyosei Chemical Co., Ltd., 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
141-32-2	n-butyl acrylate	0.308			0.308	23.543			23.543
96-33-3	methyl acrylate	0.415			0.415		0.527		0.527
75-07-0	acetaldehyde	0.337			0.337				
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					6.291			6.291
100-41-4	ethyl benzene								
—	xylene								
108-05-4	vinyl acetate	4.350			4.350		5.139		5.139
—	inorganic cyanide compounds (hydrogen cyanide)						0.004		0.004
—	inorganic cyanide compounds (sodium cyanide)								
—	inorganic cyanide compounds								
56-23-5	tetrachloromethane								
75-09-2	dichloromethane					1.092			1.092
77-73-6	dicyclopentadiene					1.473			1.473
100-42-5	styrene	0.055			0.055	1.884	0.090		1.974
505-32-8	3,7,11,15-tetramethylhexadeca-1-en-3-ol	0.057	0.000		0.057				
121-44-8	triethylamine					0.657			0.657
108-88-3	toluene	4.299	0.550		4.848	134.975	37.050		172.025
—	lead and its compounds					11.408			11.408
—	nickel compounds								
117-81-7	bis(2-ethylhexyl) phthalate								
110-54-3	n-hexane	0.624			0.624	7.787			7.787
—	manganese and its compounds								
108-31-6	maleic anhydride								
79-41-4	methacrylic acid (production)	0.032			0.032				
79-41-4	methacrylic acid (consumption)					5.580			5.580
80-62-6	methyl methacrylate (production)	3.320			3.320				
80-62-6	methyl methacrylate (consumption)	39.368	0.060		39.428	14.832	19.416		34.248
128-37-0	butylated hydroxytoluene					0.024			0.024
110-00-9	furan								
102-71-6	triethanolamine								
—	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)		0.412		0.412	0.228		0.228	0.456
141-32-2	n-butyl acrylate								
78-79-5	isoprene (production)	2.010			2.010	20.237		20.237	40.474
78-79-5	isoprene (consumption)	2.027			2.027				
149-57-5	2-ethylhexanoic acid					32.173		32.173	64.346
100-41-4	ethylbenzene	0.279			0.279				
75-21-8	ethylene oxide								
111-87-5	1-octanol	0.078			0.078				
98-82-8	cumene	3.463			3.463				
128-37-0	2,6-di-tert-butyl-4-methylphenol								
100-42-5	styrene	0.203			0.203	2.046			2.046
100-21-0	terephthalic acid								
121-44-8	triethylamine								
108-88-3	toluene	0.202			0.202	12.561		0.000	12.561
—	nickel compounds					2.163	0.710	2.163	5.036
106-99-0	1,3-butadiene	1.286			1.286				
110-00-9	furan	0.033			0.033			0.033	0.033
110-54-3	n-hexane	15.185			15.185	0.413		0.113	0.527
—	poly(oxyethylene) alkyl ether					13.853		13.853	27.705
50-00-0	formaldehyde	0.066			0.066	26.038		26.038	52.076
108-31-6	maleic anhydride					0.159		0.159	0.318
80-62-6	methyl methacrylate								
98-83-9	α-methylstyrene								
101-68-8	methylenebis(4,1-phenylene) diisocyanate						0.412		0.412
—	molybdenum and its compounds					0.028		0.028	0.056
—	dioxins	0.212			0.212	0.001		0.001	0.003

Tsukuba Research Center

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

* There is no substances covered by PRTR law.

* There is no dioxins.

2. Domestic Affiliated Companies

Tsurumi Plant, Kuraray Chemical Co., Ltd. (including KC Processing Co., Ltd.)

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	8.527			8.527				
-	xylene	0.103			0.103				
95-63-6	1,2,4-trimethylbenzene	0.119			0.119				

* 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
108-88-3	toluene	0.983			0.983	0.864			
117-81-7	bis(2-ethylhexyl) phthalate					2.490			2.490
1321-94-4	methylnaphthalene	0.018			0.018				

* 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	1.541			1.541	0.784			0.784

* 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.