

**Release and transfer volume of substances covered by PRTR law from Kuraray plants,
research laboratories and domestic affiliated companies in FY 2011**

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	0.828			0.828				
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	54.704			54.704	21.575			21.575
124-40-3	dimethylamine	4.103			4.103				
68-12-2	N,N-dimethylformamide	94.922	1.308		96.230	102.883			102.883
108-88-3	toluene	122.872	0.024		122.896	3.211			3.211
123-31-9	hydroquinone								
822-06-0	hexamethylene diisocyanate								
—	boron and its compounds		40.164		40.164				
—	poly(oxyethylene) alkyl ether					0.003			0.003
50-00-0	formaldehyde	0.592			0.592	0.012			0.012
101-77-9	4,4'-methylenedianiline								
101-68-8	methylenebis(4,1-phenylene) diisocyanate					2.468			2.468
—	dioxins	0.000	6.877		6.877	0.001			0.001

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
—	zinc compounds(water-soluble)		0.118		0.118				
7705-08-0	ferric chloride								
108-05-4	vinyl acetate	0.032			0.032	0.562			0.562
127-19-5	N,N-dimethylacetamide								
68-12-2	N,N-dimethylformamide								
100-21-0	terephthalic acid					0.440			0.440
—	poly(oxyethylene) alkyl ether								
—	dioxins	0.001	0.008		0.009				

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	0.361			0.361	3.728			3.728
108-88-3	toluene	0.599			0.599	8.047			8.047
110-54-3	n-hexane	0.792			0.792	2.464			2.464

* 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	0.442			0.442				
—	antimony and its compounds								
7705-08-0	ferric chloride						0.039		0.039
111-30-8	glutaraldehyde								
123-91-1	1,4-dioxane		3.628		3.628				
100-21-0	terephthalic acid								
108-95-2	phenol	0.004	0.159		0.163	3.427			3.427
50-00-0	formaldehyde					4.074			4.074

* 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	0.198			0.198	11.846			11.846
96-33-3	methyl acrylate	0.493			0.493		0.200		0.200
75-07-0	acetaldehyde	0.337			0.337				
75-86-5	acetone cyanohydrin								
78-67-1	2,2'-azodiisobutyronitrile								
107-18-6	allyl alcohol					8.592			8.592
100-41-4	ethyl benzene	2.515			2.515				
—	xylene	3.773			3.773				
108-05-4	vinyl acetate	4.306			4.306		4.365		4.365
—	inorganic cyanide compounds	0.606	0.075		0.681	0.414			0.414
56-23-5	tetrachloromethane	0.001			0.001				
75-09-2	dichloromethane					1.500			1.500
77-73-6	dicyclopentadiene					2.038			2.038
128-37-0	2,6-di-tert-butyl-4-cresol					0.023			0.023
100-42-5	styrene	0.042			0.042	2.573			2.573
505-32-8	3,7,11,15-tetramethylhexadeca-1-en-3-ol	0.026	0.000		0.026				
121-44-8	triethylamine					0.963			0.963
108-88-3	toluene	2.576	0.259		2.835	43.646	68.600		112.246
—	lead and its compounds					15.581			15.581
—	nickel compounds								
117-81-7	bis(2-ethylhexyl) phthalate								
110-54-3	n-hexane	0.357			0.357	9.151			9.151
—	manganese and its compounds		1.320		1.320				
108-31-6	maleic anhydride								
79-41-4	methacrylic acid	0.030			0.030	7.621			7.621
80-62-6	methyl methacrylate	47.548	0.068		47.616	16.122	2.500		18.622
—	dioxins	0.153	0.001		0.154	0.001			0.001

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)		0.348		0.348			0.329	0.329
141-32-2	n-butyl acrylate	0.041			0.041				
78-79-5	isoprene	4.216			4.216			5.511	5.511
149-57-5	2-ethylhexanoic acid							30.455	30.455
100-41-4	ethylbenzene	0.279			0.279				
75-21-8	ethylene oxide								
111-87-5	1-octanol	0.077			0.077				
98-82-8	cumene	1.416			1.416				
128-37-0	2,6-di-tert-butyl-4-methylphenol								
100-42-5	styrene	0.210			0.210	6.522			6.522
100-21-0	terephthalic acid								
121-44-8	triethylamine								
108-88-3	toluene	3.366			3.366	286.382		0.889	287.271
—	nickel compounds						1.035	2.073	3.108
106-99-0	1,3-butadiene	0.906			0.906	65.655			65.655
110-00-9	furan	0.041			0.041			0.041	0.041
110-54-3	n-hexane	12.232			12.232	0.169		0.085	0.254
—	poly(oxyethylene) alkyl ether							8.510	8.510
50-00-0	formaldehyde	0.074			0.074			25.090	25.090
108-31-6	maleic anhydride							0.144	0.144
80-62-6	methyl methacrylate	0.163			0.163				
98-83-9	α-methylstyrene								
101-68-8	methylenebis(4,1-phenylene) diisocyanate						5.350		5.350
—	molybdenum and its compounds							0.038	0.038
—	dioxins	0.262			0.262			0.000	0.000

Tsukuba Research Center

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* 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	8.171			8.171				

* 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
117-81-7	bis(2-ethylhexyl) phthalate					1.980			1.980

* 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	1.223			1.223	0.623			0.623

* 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.