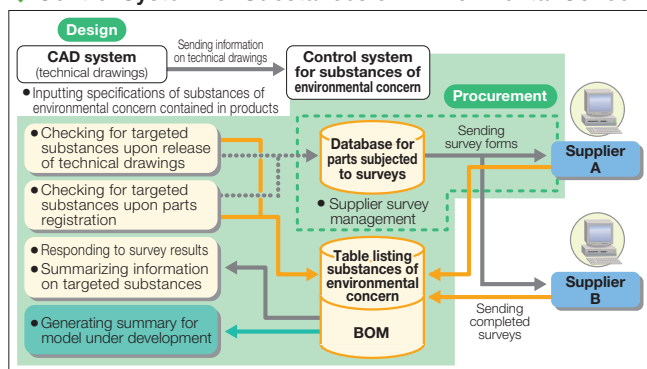


Reducing the Use of Substances of Environmental Concern and Complying with the EU REACH Regulation

Responding to the increase in environmental conservation awareness around the world, Komatsu has been making efforts from an early stage to reduce the use of asbestos, lead, and other substances of environmental concern. In FY1999, Komatsu stipulated its own list of banned substances and substances approved for use only in limited circumstances (see chart right), using as its base the chemical substances banned under Japan's Law Concerning the Examination and Regulation of Manufacture of Chemical Substances Control¹, as well as other regulations in individual countries. At the same time, Komatsu began comprehensive control of substances of environmental concern. The company has already reduced its dependence on substances approved for limited use, in keeping with its medium- and long-term targets for developing environmental technology.

In response to the enactment of the EU regulation addressing Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)² in 2007, Komatsu reviewed the list of substances approved for limited use and revised the designation of certain substances to "reduced" or "banned," as appropriate. Through cooperation with suppliers, the company has initiated a system to strengthen control of substances of environmental concern in products. This system has been deployed by the corporations in Japan 2009, in Europe 2010, and is planned to be deployed in the U.S.A. 2011.

Control System for Substances of Environmental Concern



Names of Class I Designated Chemical Substances and the Amounts Released and Transferred by Group Manufacturing Facilities in Japan (handling 1 ton or more)

Number under the PRTR Law	Name	Amount handled	Amount released				Amount transferred		Chemically transformed or eliminated	Amount contained in products
			Air	Water	Soil	Buried	Sewerage	Waste		
412	Manganese and its compounds	656.5	1.1	—	—	—	—	12.9	—	642.5
80	Xylene	377.1	263.0	—	—	—	—	27.8	83.8	2.5
53	Ethylbenzene	220.7	189.0	—	—	—	—	14.1	17.1	0.5
87	Chromium and chromium (III) compounds	185.0	0.0	—	—	—	—	3.2	—	181.7
300	Toluene	135.8	103.0	—	—	—	—	20.1	9.0	3.7
438	Methylnaphthalene	72.0	—	—	—	—	—	—	72.0	—
453	Molybdenum and its compounds	59.6	0.0	—	—	—	—	0.0	—	59.6
448	Methylenebis(4,1 phenylene)=diisocyanate	38.9	0.0	—	—	—	—	0.0	8.7	30.2
308	Nickel	27.7	—	—	—	—	—	0.5	—	27.3
296	1,2,4-trimethylbenzene	27.0	2.4	—	—	—	—	0.3	24.4	—
88	Chromium (VI) compounds ^{1,2}	25.1	0.0	—	—	—	—	6.2	—	—
321	Vanadium compounds	21.2	—	—	—	—	—	—	—	21.2
297	1,3,5-trimethylbenzene	9.8	4.2	—	—	—	—	0.7	4.8	—
277	Triethylamine	9.3	1.1	—	—	—	—	0.0	8.2	0.0
132	Cobalt and its compounds	8.5	—	—	—	—	—	0.5	—	8.0
258	Hexamethylenetetramine	8.1	—	—	—	—	—	—	8.1	—
188	N,N-dicyclohexylamine	8.1	0.5	0.0	—	—	—	7.1	0.3	0.2
349	Phenol ³	5.7	0.0	—	—	—	—	0.0	5.6	0.1
392	Hexane	5.6	5.6	—	—	—	—	0.0	0.0	—
405	Boron compounds	4.7	—	—	—	—	—	0.2	4.6	—
207	2,6-Di-tert-butyl-4-methylphenol	2.0	—	0.0	—	—	—	1.0	0.0	1.0
71	Ferric chloride	1.2	—	—	—	—	—	1.2	—	—
407	Poly(oxyethylene) = Alkyl ether(Limited to Alkyl carbon numbers 12 to 15 and their compounds)	1.1	—	0.0	—	—	—	0.4	0.8	—
400	Benzene ²	0.7	0.0	—	—	—	—	—	0.4	0.3

¹: During chrome plating, chromium (VI) compounds become chromium (III) compounds. Therefore, the amount transferred and the amount contained in products are entered under "chromium and chromium (III) compounds."

²: PRTR Class 1 Specified Chemical Substances

³: Although the contained amount of those substances is so little that it is needless to register on PRTR, the amount of releasing them exceeds 1 ton, and we disclose the fact herein.

Substances of Environmental Concern Banned or to Be Reduced for Use in Products

Designation	Number of substances	Name
Banned	10	<ul style="list-style-type: none"> PCBs Asbestos Specified chlorofluorocarbons/hydro chlorofluorocarbons (HCFCs) Triethanolamine Chromium (VI) Trichloroethylene PBB/PBDE³ Cadmium
To be reduced (subject to limited use)	16	<ul style="list-style-type: none"> Lead Mercury Arsenic Selenium Hydrofluorocarbons (HFCs) Methanol Hexachlorobenzene Specified phthalate ester (DEHP/DBP/BBP⁴, DIBP⁵) HBCCD³ Specified polycyclic aromatic hydrocarbons Perfluorooctanesulfonic acid (PFOS) Specified Organotin Compounds (Tri-substituted Organotin Compounds • DBT • DOT⁶) Short chain chlorinated paraffins
Substances of Very High Concern (SVHC) under the EU REACH regulation	(46)	<p>Komatsu is currently examining whether to designate the following substances, which might be used in Komatsu products, as substances to be reduced.</p> <ul style="list-style-type: none"> Lead arsenate/ diarsenic pentoxide/ diarsenic trioxide Triethyl arsenate DEHP/DBP/BBP⁴, DIBP⁵ Short chain chlorinated paraffins Bis (tributyltin) oxide

¹: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture etc.

²: REACH(Registration, Evaluation, Authorization and Restriction of Chemicals);

EU regulations for Registration, Evaluation, Authorization and Restriction of Chemicals

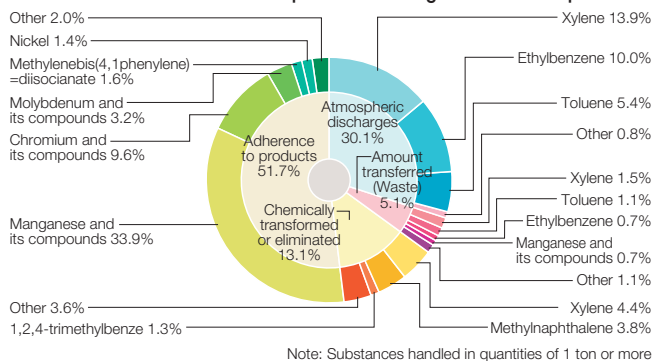
³: Specified brominated fire retardants

⁴: Diethylhexyl phthalate, dibutyl phthalate, benzyl butyl phthalate

⁵: Disobutyl phthalate

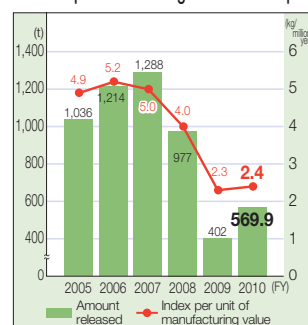
⁶: Dibutyltin compounds • Triphenyltin compounds

Breakdown of the Amount of PRTR-related Substances Released and Transferred at Komatsu Group Manufacturing Facilities in Japan



Note: Substances handled in quantities of 1 ton or more

Changes in the Amounts of PRTR-related Substances Released* at Group Manufacturing Facilities in Japan



*Substances handled in quantities of 1 ton or more

Amount of VOCs Released by Group Manufacturing Facilities in Japan

