Table 1 Prohibited Substances A-1 (1/2)

The Prohibited Substance A-1 refers to a TDK inclusion prohibited substance which, according to TDK, is very likely included in a produc

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Cadmium/Cadmium compounds	See Table 1-1	See Table 1-1	See Table 1-2, Table 1-11, Table 1-12	See Table 1-2, Table 1-11, Table 1-12 (*1)	See Table 1-2, Table 1-11, Table 1-12	See Table 1-2, Table 1-11, Table 1-12	EU REACH Regulation (EC) No 1907/2006 Annex XVII; EU Directive 2002/95/EC; 2011/65/EC; EU Directive 2006/66/EC; China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50 Swiss Ordinance on Reduction of Risk from Chemical Products; JIG-101 Ed 3.0
Hexavalent chromium compounds; Chromium VI compounds	See Table 1-3	See Table 1-3	See Table 1-4, Table 1-11	See Table 1-4, Table 1-11 (*1)	See Table 1-4, Table 1-11	See Table 1-4, Table 1-11	EU Directive 2002/95/EC; 2011/65/EC; China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50 JIG-101 Ed 3.0
Lead/Lead compounds	See Table 1-5	See Table 1-5	See Table 1-6, Table 1-11, Table 1-12	See Table 1-6, Table 1-11, Table 1-12 (*1)	See Table 1-6, Table 1-11, Table 1-12	See Table 1-6, Table 1-11, Table 1-12	EU Directive 2002/95/EC; 2011/65/EC; EU Directive 2006/66/EC; China MII Methods; Korea RoHS; Japan J-MOSS; U.S. Consumer Product Safety Improvement Act; US/CA SB-20/50; US/CA Proposition 65 Case law; JIG-101 Ed 3.0
Mercury/Mercury compounds	See Table 1-7	See Table 1-7	See Table 1-8, Table 1-11, Table 1-12	See Table 1-8, Table 1-11, Table 1-12 (*1)	See Table 1-8, Table 1-11, Table 1-12	See Table 1-8, Table 1-11, Table 1-12	EU REACH Regulation (EC) No 1907/2006 Annex XVII; EU Directive 2002/95/EC; 2011/65/EC; EU Directive 2006/66/EC; China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50; Vermont act relating to comprehensive management of exposure to mercury; Rhode Island General Laws 23-24.9 and amendment of 2007; Louisiana Mercury Risk Reduction Act; New York : Battery reduction and elimination N.Y. Envtl. Conserv. § 27-0719; Taiwan Restrictions on the Manufacture, Import, and Sale of Dry Cell Batteries; China QZHG 1997 No. 4: Regulation on mercury content limitation for batteries; Korea: Law on quality management and control of safety of industrial products Battery regulation; JIG-101 Ed 3.0

(*1: In case of a compound ,The metal equivalent value is used as the threshold value.)

Table 1 Prohibited Substances A-1 (2/2)

The Prohibited Substance A-1 refers to a TDK inclusion prohibited substance which, according to TDK, is very likely included in a produc

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Specific bromine flame retardant polybrominated biphenyls (PBB's)	See Table 1-9	See Table 1-9	Inclusion prohibited	<1000ppm	Plastic (Resin)	-	EU Directive 2002/95/EC; 2011/65/EC; China MII Methods; Korea RoHS; Japan J-MOSS; JIG-101 Ed 3.0
					All applications other the above		
Specific bromine flame retardant polybrominated diphenyl ethers (PBDE's)	See Table 1-10	See Table 1-10	Inclusion prohibited	<1000ppm	Plastic (Resin)	-	EU Directive 2002/95/EC; 2011/65/EC; China MII Methods; Korea RoHS; Japan J-MOSS; JIG-101 Ed 3.0
					All applications other the above		

Table 2 Prohibited Substances A-2 (1/3)

The Prohibited Substance A-2 refers to any chemical substance which is prohibited by TDK from inclusion in a product, and which is other thar the Prohibited Substances A-1 and B.

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Asbestos	See Table 2-1	See Table 2-1	Inclusion prohibited	-	Electrical and heat insulating materials and filling materials	-	EU REACH Regulation (EC) No 1907/2006 Annex XVII; EU Directive 91/339/EEC; US TSCA; Swiss Ordinance on Reduction of Risk from Chemical Products; JIG-101 Ed 3.0
Certain azo compounds	Depending on the item	Depending on the item	Inclusion prohibited	<30ppm	The actual human contact area of a product that is manufactured to function in continuous contact with human bodies. (Leather and fiber products)	-	EU REACH Regulation (EC) No 1907/2006 Annex XVII; EU Directive 2002/61/EC; EU Directive 2003/03/EEC; JIG-101 Ed 3.0
			Exempt from the Standards	-	All applications other the above	-	-
Arsenic/Arsenic compounds	See Table 2-3	See Table 2-3	Inclusion prohibited	<1000ppm	All applications other than those exempt from the Standards	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6); JIG-101 Ed 3.0
			Exempt from the Standards	-	Semiconductor compounds containing an arsenic constituent; copper foil bonding on printed circuit boards	-	-
Fluorinated greenhouse gases (HFC, PFC, SF6)	See Table 2-4, Table 2-5	See Table 2-4, Table 2-5	Inclusion prohibited	-	All applications (Examples: Refrigerants, blowing agents, extinguishing agents, cleaning agents, insulating media, caustic gas)	-	EU Reg. No. 842/2006; Austrian Ordinance by the Federal Minister for Agriculture, Forestry, Environment and Water Management on Bans and Restrictions for Partly Fluorinated and Fully Fluorinated Hydrocarbons and Sulphur Hexafluoride JIG-101 Ed 3.0

Table 2 Prohibited Substances A-2 (2/3)

The Prohibited Substance A-2 refers to any chemical substance which is prohibited by TDK from inclusion in a product, and which is other thar the Prohibited Substances A-1 and B.

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Formaldehyde	50-00-0	CH_2O	Inclusion prohibited	-	Composite wood (plywood, particle board, MDF) products or Components	-	US/CA CARB Rule; JIG-101 Ed 3.0
			Inclusion prohibited	<75ppm	Textiles	-	Austria - BGB I 1990/194: Formaldehydverordnung, §2, 12/2/1990; Lithuanian Hygiene Norm HN 96:2000 (Hygiene standards and regulations); JIG-101 Ed 3.0
			Exempt from the Standards	-	All applications other the above	-	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers	See Table 2-6	See Table 2-6	Inclusion prohibited	<1000ppm	All applications (Examples: Flame retardant mainly used for expanded polystyrene and some types of fiber)	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6); JIG-101 Ed 3.0
Nickel	7440-02-0	Ni	Inclusion prohibited	$0.5\mu g/cm^2$ /week	Applications with possibility of contact with human skin for a long period of time (Examples: Exterior packaging of portable electronic equipment designed to be carried by a person)	-	EU REACH Regulation (EC) No 1907/2006 Annex XVII; EU Directive 94/27/EC; JIG-101 Ed 3.0
			Exempt from the Standards	-	All applications other the above	-	-
Ozone Depleting Substances	See Table 2-7	See Table 2-7	Inclusion prohibited	-	All applications	-	Montreal Protocol; EU EC No. 2037/2000; US Clean Air Act; JIG-101 Ed 2.0
Perfluorooctane sulfonate (PFOS)	Depending on the item	$C_8F_{17}SO_2X$ (X=OH, metal salt, halide, amide and other derivatives including polymers)	Inclusion prohibited	-	All applications (Examples: antistatic agent for films and plastics)	-	EU Regulation (EC) No 850/2004; EU Directive 2006/122/EC; Canadian Environmental Protection Act SOR/SOR/2008-178; JIG-101 Ed 3.0
Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl); 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-Phenol	3846-71-7	$C_{20}H_{25}N_3O$	Inclusion prohibited	-	All applications (Examples: Adhesives, paints, printing inks, plastics, inked ribbons, putty, caulking or sealing fillers)	-	Japan Law concerning the evaluation of chemical substances; JIG-101 Ed 3.0
Polychlorinated biphenyls (PCB's)	See Table 2-9	See Table 2-9	Inclusion prohibited	-	All applications (Examples: Use in capacitors; heating media, lubrication oil, flame retardants)	-	Japan Law concerning the evaluation of chemical substances; EU REACH Regulation (EC) No 1907/2006 Annex XVII; US TSCA; JIG-101 Ed 3.0
Polychlorinated Terphenyls (PCTs)	61788-33-8	$C_{18}H_nCl_{14-n}$	Inclusion prohibited	-	All applications (Examples: insulation oil, lubricant oil, electrical insulation medium solvent, electrolytic solution; Plasticizers, fire retardants, coatings for electrical wire and cable, dielectric sealants)	-	Japan Law concerning the evaluation of chemical substances; EU REACH Regulation (EC) No 1907/2006 Annex XVII; US TSCA; JIG-101 Ed 3.0
Polychlorinated Naphthalenes (more than 3 chlorine atoms)	See Table 2-10	See Table 2-10	Inclusion prohibited	-	All applications (Examples: Lubrication oil, paints)	-	Japan Law concerning the evaluation of chemical substances; JIG-101 Ed 3.0

Table 2 Prohibited Substances A-2 (3/3)

The Prohibited Substance A-2 refers to any chemical substance which is prohibited by TDK from inclusion in a product, and which is other than the Prohibited Substances A-1 and E

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Polyvinyl Chloride	9002-86-2	$(CH_2CHCl)_n$	Inclusion prohibited	<1000ppm	Packaging materials; All applications other than those exempt from the Standards (Examples: power cords, connecting codes, sheets, insulating plates, PVC wires for in-equipment wiring, other units containing cords, heat shrinkable tubes, and adhesive tapes)	-	IEEE1680 (EPEAT: Electronic Product Environmental Assessment Tool); JIG-101 Ed 3.0
			Exempt from the Standards	-	Magnetic tapes; Recording media with no customer-specific requirements	-	-
Radioactive substances	See Table 2-11	See Table 2-11	Inclusion prohibited	-	All applications	-	EU-D 96/29/Euratom; Japan Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986; US NRC; JIG-101 Ed 3.0
Shortchain Chlorinated Paraffins (C10 – C13)	85535-84-8	Depending on the item	Inclusion prohibited	-	All applications	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 Norway Product Regulations FOR-2004-06-01-922; Swiss Ordinance on Reduction of Risk from Chemical Products; JIG-101 Ed 3.0
Tributyl Tin (TBT) and Triphenyl Tin (TPT) compounds	See Table 2-12	See Table 2-12	Inclusion prohibited	-	All applications	-	Japan Law concerning the evaluation of chemical substances; JIG-101 Ed 3.0
Tributyl Tin Oxide (TBTO), Tri-substiituted organostannic compounds	See Table 2-13	See Table 2-13	Inclusion prohibited the concentration is greater than the equivalent of 0,1 % by weight of tin.		All applications	–	EU REACH (EC) No 1907/2006 Annex XVII Japan Law concerning the evaluation of chemical substances; JIG-101 Ed 3.0
Dimethylfumarate (DMF)	624-49-7	C6H8O4	Inclusion in a mixture or product (parts) in excess of 0.1 ppm is prohibited.		All applications	–	EU COMMISSION DECISION (2009/251/EC) JIG-101 Ed 3.0
Dibutyltin (DBT) compounds Dioctyltin (DOT) compounds	See Table 2-14	See Table 2-14	Inclusion as a tin in a mixture or product (parts) in excess of 0.1 wt% is prohibited.		<Dibutyltin (DBT) compounds> All uses other than listed in the exempted items are to be prohibited -Exemptions • one-component and two-component room temperature vulcanisation sealants (RTV-1 and RTV-2 sealants) and adhesives • paints and coatings containing DBT compounds as catalysts when applied on articles • soft polyvinyl chloride (PVC) profiles whether by themselves or coextruded with hard PVC • outdoor rainwater pipes, gutters and fittings, as well as covering material for roofing and façades • All uses less than 1,000 ppm (of tin) -Exemptions expire on July 1,2014. <Dioctyltin (DOT) compounds> • Textile articles intended to come into contact with the skin • Wall and floor coverings • Two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)	–	EU REACH(EC) No 1907/2006 Annex XVII JIG-101 Ed 3.0

Table 3 Prohibited Substances B

The Prohibited Substance B refers to any chemical substance which is prohibited by TDK from inclusion only if the product is sold or distributed in a non-solid state by TDK.

Substance name
Please refer to "Regulation by laws about Green Procurement"and" 【Table3-1】Prohibited substances B"

Table 4 Inclusion Controlled Substances A

The Inclusion Controlled Substance A refers to a chemical substance which is not prohibited from inclusion but which, according to TDK, strongly calls for inclusion monitorin

Substance name	CAS No.	Chemical formula, Molecular formula, etc.	Classification	Threshold level	Applications of substance and scope of the Standards	Analysis report required	Key Legal and Regulatory citation
Beryllium/Beryllium compounds	Depending on the item	Depending on the item	Inclusion controlled	<1000ppm	All applications other than those exempt from the Standards	-	JIG 101A
			Exempted	-	Beryllium copper alloy, beryllium nickel alloy, beryllium gold alloy	-	-
Selenium/Selenium compounds	Depending on the item	Depending on the item	Inclusion controlled	<1000ppm	All applications other than those exempt from the Standards	-	JIG 101A
			Exempted	-	Optical components containing zinc selenide (Examples: Reflecting mirrors, lenses); JIS compliant stainless steel containing selenium	-	-
Antimony/Antimony compounds	Depending on the item	Depending on the item	Inclusion controlled	<1000ppm	All applications	-	JIG 101A
Bismuth/Bismuth compounds	Depending on the item	Depending on the item	Inclusion controlled	<1000ppm	All applications	-	JIG 101A
Brominated flame retardants (Except PBB's, PBDE's, and HBCDD)	See Table 4-1	See Table 4-1	Inclusion controlled	<1000ppm	All applications	-	JIG-101 Ed 3.0
Phthalate esters	See Table 4-2	See Table 4-2	Inclusion controlled	<1000ppm	All applications	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6); EU Directive 2005/84/EC; U.S. Consumer Product Safety Improvement Act; JIG-101 Ed 3.0
Perchlorates	See Table 2-8	See Table 2-8	Inclusion controlled	<0.006ppm	All applications	-	US/CA DTSC Rulemaking; JIG-101 Ed 3.0
Anthracene	120-12-7	$C_{14}H_{10}$	Inclusion controlled	<1000ppm	All applications	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6)
Cobalt dichloride	7646-79-9	Cl_2Co	Inclusion controlled	<1000ppm	All applications	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6)
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	$C_{12}H_{15}N_3O_6$	Inclusion controlled	<1000ppm	All applications	-	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (See Table 6)
Halogens and their compounds (For bromine and chlorine only)	Depending on the item	Depending on the item	Inclusion controlled	＜900ppm and total ＜1500ppm	All applications	–	Voluntary standards

Table 5 Inclusion Controlled Substances B

The Inclusion Controlled Substance B refers to a chemical substance which is not prohibited from inclusion by TDK, but which, according to TDK, strongly calls for the monitoring of informatio relating to inclusion only if the product is sold or distributed in a non-solid state by TDK

Substance name
Please refer to "Regulation by laws about Green Procurement"and" 【Table5-1】"

Table 6 List of SVHC under REACH Regulation

The List of SVHC under REACH Regulation lists the chemical substances which TDK does not ban from inclusion in products but which TDK consideres it highly necessary to monitor inclusion.
The substances published in latest authorization candidate list (Candidate list), refer to the home page of ECHA (European chemical agency). （http://echa.europa.eu/web/guest/candidate-list-table）

Substance name
See Table6-1,2,3,4,5,6,7

Table 1-1 Cadmium/Cadmium compounds (representative examples)

Note: This is the supplementary table for Table 1.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Cadmium	7440-43-9
Cadmium oxide	1306-19-0
Cadmium sulfide	1306-23-6
Cadmium chloride	10108-64-2
Cadmium sulfate	10124-36-4
Other cadmium compounds	-

Table 1-2 Cadmium/Cadmium compounds (criteria)

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.
* Refer to Table 1-12 for batteries and accumulators.

Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Inclusion prohibited	<5 ppm (See Table 1-11)	- Packaging *6: Plastic (Resin)	Analysis report required See Table 1-13
	<100 ppm (See Table 1-11)	- Packaging *6: Others	Analysis report required See Table 1-13
	<5ppm	- Plastic (Resin) (including rubber) (Including binder resin, adhesive, adhesive tape, insulating tape) (Except for resin that is included in sheets and pastes and burns away) - Paints and inks - Foregoing applications as covering for wires	Analysis report required See Table 1-13
		- Resin that is included in sheets and pastes and burns away *3	
	<20ppm	- Solder (independently purchased as solder)	
	<100ppm	- Recording media with no customer-specific requirements	
		- All applications other than the foregoing and those exempt from the Standards (Examples follow.) - Surface treatment material (Plating, coating) - Photographic film - Fluorescent lamp (compact and straight tubular lamp) - Electrical contacts in DC motors, switches, relays, breakers, etc - glass (glass frits) and glass paint - Fluorescent materials included in fluorescent display devices - Fusible materials in thermal fuses - Zinc and zinc alloys, zinc compounds	
Exempt from the Standards	---	See Table 1-14	

*1) Cadmium, lead, mercury and Hexavalent chromium must individually be less than their respective threshold levels; and concurrently, the total of the 4 heavy metals must be less than 100 ppm, for each of the individual components, paints, and inks that constitute the packing. Hexavalent chromium must be analyzed as part of total chromium, and the total of the 4 elements must be less than 100 ppm. If it is 100 ppm or greater, analyze the Hexavalent chromium independently within the total chromium to verify whether the total is less than 100 ppm.

*2) No analysis report is required, although threshold level is 5ppm(Cd) & 100ppm(Pb).

Table 1-3 Hexavalent chromium compounds (representative examples)

Note: This is the supplementary table for Table 1.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Chromium (VI) oxide	1333-82-0
Barium chromate	10294-40-3
Calcium chromate	13765-19-0
Chromium trioxide	1333-82-0
Lead (II) chromate	7758-97-6
Sodium chromate	7775-11-3
Sodium dichromate	10588-01-9
Strontium chromate	7789-06-2
Potassium dichromate	7778-50-9
Potassium chromate	7789-00-6
Zinc chromate	13530-65-9
Other hexavalent chromium compounds	-

Table 1-4 Hexavalent chromium compounds (criteria)

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.

Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Inclusion prohibited	<100ppm (See Table 1-11.)	- Packing materials *1	Analysis report required See Table 1-13
	<1000ppm	- All applications other than the foregoing and those exempt form the Standards (Examples follow.) - Plated coating - Paints and inks	
Exempt from the Standards	---	See Table 1-14	

*1) Cadmium, lead, mercury and Hexavalent chromium must individually be less than their respective threshold levels; and concurrently, the total of the 4 heavy metals must be less than 100 ppm, for each of the individual components, paints, and inks that constitute the packing.
Hexavalent chromium must be analyzed as part of total chromium, and the total of the 4 elements must be less than 100 ppm.
If it is 100 ppm or greater, analyze the Hexavalent chromium independently within the total chromium to verify whether the total is less than 100 ppm.

Table 1-5 Lead/Lead compounds (representative examples)

Note: This is the supplementary table for Table 1.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Lead	7439-92-1
Lead (II) sulfate	7446-14-2
Lead (II) carbonate	598-63-0
Lead hydrocarbonate	1319-46-6
Lead acetate	301-04-2
Lead (II) acetate, trihydrate	6080-56-4
Lead phosphate	7446-27-7
Lead selenide	12069-00-0
Lead (IV) oxide	1309-60-0
Lead (II,IV) oxide	1314-41-6
Lead (II) sulfide	1314-87-0
Lead (II) oxide	1317-36-8
Lead (II) carbonate basic	1319-46-6
Lead hydroxidcarbonate	1344-36-1
Lead (II) phosphate	7446-27-7
Lead (II) chromate	7758-97-6
Lead (II) titanate	12060-00-3
Lead sulfate, sulphuric acid, lead salt	15739-80-7
Lead sulphate, tribasic	12202-17-4
Lead stearate	1072-35-1
Other lead compounds	-

Table 1-6 Lead/Lead compounds (criteria) (1/2)

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.
* Refer to Table 1-12 for batteries and accumulators.

Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Inclusion prohibited	<100 ppm (See Table 1-11.)	- Packing materials *1	Analysis report required See Table 1-13
	<100 ppm	- Plastic resin (including rubber) (Including binder resin, adhesive, adhesive tape, insulating tape) - Paints and inks - Foregoing applications as covering for wires	Analysis report required See Table 1-13
		- Resin that is included in sheets and pastes and burns away *2	
	<1000ppm	- All applications other than the foregoing and those exempt from the Standards (For example: External terminals on parts, surface treatment materials on lead wires, soldering materials, various alloys other than those exempt from the Standards, and solder for making connections) - Lead in thick film conductor material used for wiring and in chip components (limited to company manufactured items) *3	
Exempt from the Standards	---	See Table 1-14 *4,*5	

*1) Cadmium, lead, mercury and Hexavalent chromium must individually be less than their respective threshold levels; and concurrently, the total of the 4 heavy metals must be less than 100 ppm, for each of the individual components, paints, and inks that constitute the packing. Hexavalent chromium must be analyzed as part of total chromium, and the total of the 4 elements must be less than 100 ppm. If it is 100 ppm or greater, analyze the Hexavalent chromium independently within the total chromium to verify whether the total is less than 100 ppm.

*2) No analysis report is required, although threshold level is 5ppm(Cd) & 100ppm(Pb).

*3) Lead glass in electronic components are exempt from RoHS, but the glass frit material in thick film conductor paste that TDK uses (includes) in chip components (e.g., lead glass in the conductor paste manufactured internally and purchased that is used in external terminals) shall not include lead.

*4) Ferrite is under the “electronic ceramic parts” that are exempt from RoHS; but a continuous program leading to a total ban must be implemented.

*5) (*Full Lead Crystal, Lead Crystal or Crystal Glass, Refer to original text of directive for detailed definition: http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1969/L/01969L0493-19860101-en.pdf）

Table 1-7 Mercury/Mercury compounds (representative examples)

Note: This is the supplementary table for Table 1.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Mercury	7439-97-6
Mercuric chloride	33631-63-9
Mercury (II) chloride	7487-94-7
Mercuric sulfate	7783-35-9
Mercuric nitrate	10045-94-0
Mercuric (II) oxide	21908-53-2
Mercuric sulfide	1344-48-5
Other mercury compounds	-

Table 1-8 Mercury/Mercury compounds (criteria)

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.
* Refer to Table 1-12 for batteries and accumulators.

Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Inclusion prohibited	<100ppm (See Table 1-11.)	- Packaging materials *1	Analysis report required See Table 1-13
	<1000ppm	- All applications other than the foregoing and those exempt from the Standards; (Examples follow.) - Plastic resin (including rubber) (Including binder resin, adhesive, adhesive tape, insulating tape) - Paints and inks - Timepieces; - Relays, switches, sensors;	
	---	- Compact fluorescent lamps (exceeding 5 mg/lamp) - Straight tube fluorescent lamps (exceeding 10 mg/lamp)	
Exempt from the Standards	---	See Table 1-14	

*1) Cadmium, lead, mercury and Hexavalent chromium must individually be less than their respective threshold levels; and concurrently, the total of the 4 heavy metals must be less than 100 ppm, for each of the individual components, paints, and inks that constitute the packing. Hexavalent chromium must be analyzed as part of total chromium, and the total of the 4 elements must be less than 100 ppm. If it is 100 ppm or greater, analyze the Hexavalent chromium independently within the total chromium to verify whether the total is less than 100 ppm.

Table 1-9 Specific bromine flame retardant polybrominated biphenyls (PBB's)

Note: This is the supplementary table for Table 1.

English substance name	Chemical formula, etc.	CAS No.
Polybrominated Biphenyls	$C_{12}H_{10-x}Br_x$	59536-65-1
Bromobiphenyl	$C_{12}H_9Br$ / 2-Bromo Biphenyl	2052-07-5
	$C_{12}H_9Br$ / 3-Bromo Biphenyl	2113-57-7
	$C_{12}H_9Br$ / 4-Bromo Biphenyl	92-66-0
Dibromophenyl	$C_{12}H_8Br_2$ / Dibromo Biphenyl	92-86-4
Tribromobiphenyl	$C_{12}H_7Br_3$ / Tribromo Biphenyl	59090-34-1
Tetrabromobiphenyl	$C_{12}H_6Br_4$ / Tetrabromo Biphenyl	40088-45-7
Pentabrphenyl	$C_{12}H_5Br_5$ / Pentabromo Biphenyl	56307-79-0
Hexabromobiphenyl	$C_{12}H_4Br_6$ / Hexabromo Biphenyl	59080-40-9
	$C_{12}H_4Br_6$ / Hexabromo-1,1'-Biphenyl	36355-01-8
	Polybrominated Biphenyls /（Firemaster FF-1)	67774-32-7
Heptabromobiphenyl	$C_{12}H_3Br_7$ / Heptabromo Biphenyl	35194-78-6
Octabromobiphenyl	$C_{12}H_2Br_8$ / Octabromo Biphenyl	61288-13-9
Nonabromobiphenyl	$C_{12}HBr_9$ / Nonabromo Biphenyl	27753-52-2
Decabromobiphenyl	$C_{12}Br_{10}$ / Decabromo Biphenyl	13654-09-6

Table 1-10 Specific bromine flame retardant polybrominated diphenyl ethers (PBDE's)

Note: This is the supplementary table for Table 1.

English substance name	Chemical formula, etc.	CAS No.
Poly bromodiphenyl ether	$C_{12}H_{10}$-xBrxO / Polybromo Diphenyl Ether	101-55-3
Dibromodiphenyl ether	$C_{12}H_8Br_2O$ / Dibromo Diphenyl Ether	2050-47-7
Tribromodiphenyl ether	$C_{12}H_7Br_3O$ / Tribromo Diphenyl Ether	49690-94-0
Tetrabromodiphenyl ether	$C_{12}H_6Br_4O$ / Tetrabromo Diphenyl Ether	40088-47-9
Pentabromodiphenyl ether (note:Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.)	$C_{12}H_5Br_5O$ / Pentabromo Diphenyl Ether	32534-81-9 (CAS number used for commercial grades of PeBDPO)
Hexabromodiphenyl ether	$C_{12}H_4Br_6O$ / Hexabromo Diphenyl Ether	36483-60-0
Heptabromodiphenyl ether	$C_{12}H3Br_7O$ / Hexabromo Diphenyl Ether	68928-80-3
Octabromodiphenyl ether	$C_{12}H_2Br_8O$ / Octabromo Diphenyl Ether	32536-52-0
Nonabromodiphenyl ether	$C_{12}HBr_9O$ / Nonabromo Diphenyl ether	63936-56-1
Decabromodiphenyl ether	$C_{12}Br_{10}O$ / Decabromo Diphenyl Ether	1163-19-5

*1) Deca-BDE's (in PBDE's) are also prohibited.

Table 1-11 About Prohibited Substances A-1 in packaging applications

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.
The Prohibited Substance A-1 refers to a TDK inclusion prohibited substance which, according to TDK, is very likely included in a product.

Substance name (Common name, abbreviated name, chemical name, etc.)	Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Mercury, cadmium, Hexavalent chromium, and lead	Inclusion prohibited	Total (*1) <100 ppm	- Applications as packaging materials (for distributing and protecting TDK products) (Examples: Trays, reels, sticks, bags, cushioning, staples, sheets, wraps, corrugated cardboard, tapes, tie bands, labels, printing inks, paints, and the like.)	Analysis report required See Table 1-13
	Exempt from the Standards	---	- Reusable shuttling boxes	

*1) Cadmium, lead, mercury and Hexavalent chromium must individually be less than their respective threshold levels; and concurrently, the total of the 4 heavy metals must be less than 100 ppm, for each of the individual components, paints, and inks that constitute the packing.
Hexavalent chromium must be analyzed as part of total chromium, and the total of the 4 elements must be less than 100 ppm.
If it is 100 ppm or greater, analyze the Hexavalent chromium independently within the total chromium to verify whether the total is less than 100 ppm.

Table 1-12 About Prohibited Substances A in batteries and accumulators

Note: This is the supplementary table for Table 1.
*Refer to [Example 1] of 4(4) for the explanation of threshold level.
The Prohibited Substance A-1 refers to a TDK inclusion prohibited substance which, according to TDK, is very likely included in a product.
Substances not specified in Table 1-12 shall comply with Table 1, Table 2, Table 3, Table 4, and Table 5.
Built-in batteries, accumulators, and portable batteries or accumulators in electrical and electronic equipment shall comply with the criterion of Mercury/Mercury compounds, Cadmium/Cadmium compounds, Lead/Lead compounds in Table 1, in addition to Table 1-12.

Substance name (Common name, abbreviated name, chemical name, etc.)	Classification	Threshold level*	Applications of substance and scope of the Standards	Remarks
Mercury/ Mercury compounds *1)	Inclusion prohibited	<5ppm *2)	- Batteries and accumulators (other than button cell) *3) *5)	*9)
		<20000ppm *2)	- Batteries and accumulators (button cell) *3) *5)	*9)
Cadmium/ Cadmium compounds *1)	Inclusion prohibited	<20ppm *2)	- Portable batteries or accumulators other than those exempt from the Standards *4)	*9)
	Exempt from the Standards	---	- Portable batteries or accumulators for Emergency and alarm systems, including emergency lighting; Medical equipment; or Cordless power tools. *4)	*9)
Lead/ Lead compounds *1)	Exempt from the Standards	---	- Batteries and accumulators	*9)

*1) Even if content is less than threshold level, labelling (marked with the symbol) is required in the EU Directive on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC (2006/66/EC).

*2) Threshold level limited to Table 1-12 refers to the impurity inclusion level, not in excess of the tolerated limit, in total amount of batteries, accumulators, and portable batteries or accumulators, etc. (Not inclusion level in an individual subpart of them.)

*3) 'battery' or 'accumulator' means any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (nonrechargeable) or consisting of one or more secondary battery cells (rechargeable).

*4) 'portable battery or accumulator' means any battery, button cell, battery pack or accumulator that: *3) *5) *6)
(a) is sealed; and
(b) can be hand-carried; and
(c) is neither an industrial battery or accumulator nor an automotive battery or accumulator. *7) *8)

*5) 'button cell' means any small round portable battery or accumulator whose diameter is greater than its height and which is used for special purposes such as hearing aids, watches, small portable equipment and back-up power.

*6) 'battery pack' means any set of batteries or accumulators that are connected together and/or encapsulated within an outer casing so as to form a complete unit that the enduser is not intended to split up or open.

*7) 'industrial battery or accumulator' means any battery or accumulator designed for exclusively industrial or professional uses or used in any type of electric vehicle.

*8) 'automotive battery or accumulator' means any battery or accumulator used for automotive starter, lighting or ignition power.

*9) In addition to the EU Directive on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC (2006/66/EC), other requirements may be established in some of EU member states.

Table 1-13 Prohibited Substances A-1: Items Concerning the Analytical Methods

Note: This is the supplementary table for Table 1.
The Prohibited Substance A-1 refers to a TDK inclusion prohibited substance which, according to TDK, is very likely included in a product.
1) “Analysis report required”
A quantitative analysis must be conducted on each subpart of the item. The result must be within the threshold level.
2) The minimum quantitative limit in an analysis by other than the methods shown below will be acceptable if it guarantees the required minimums of 5 ppm, 5 ppm, 2 ppm, and 30 ppm for mercury, cadmium, total chromium, and lead, respectively, in a particular combination of preliminary processing and instruments.
3) If the test data are to be used as an analysis certificate, describe the test method used.

Substance name (Common name, abbreviated name, chemical name, etc.)	Preliminary processing:	Analytical instruments:
Cadmium/Cadmium compounds, Lead/Lead compounds, Chromium/Chromium compounds	Prepare a solution by wet decomposition method (including pressure decomposition) in the presence of, for example, sulfuric acid, nitric acid, hydrochloric acid, hydrofluoric acid, or hydrogen peroxide; by incineration in the presence of sulfuric acid; or by pressurized acid decomposition (microwave decomposition). If precipitation occurs in the solution, dissolve it completely into a solution by, for example, hydrofluoric acid decomposition or by alkali fusion decomposition.	Examples - Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES [ICP-OES]), inductively coupled plasma mass spectrometer (ICP-MS), atomic absorption spectrometer (AAS, FLAAS).
Mercury/Mercury compounds	Dissolve into a solution using, for example, sulfuric acid, nitric acid, or potassium permanganate; and in a pressure decomposition flask, or a decomposing flask equipped with a reflux condenser to prevent mercury emission. A microwave decomposition method may also be used.	Examples—Reduction vaporization ICP emitted light spectrometer (ICP-AES [ICP-OES]), atomic absorption spectrometer (reduction vaporization, heated vaporization), inductively coupled plasma mass spectrometer (ICP-MS).
Cadmium/Cadmium compounds, Lead/Lead compounds, Chromium/Chromium compounds, Mercury/Mercury compounds	Laser ablation inductively coupled plasma mass spectrometer (LA-ICP-MS) The LA-ICP-MS, if used, must be the one obtained at the TDK Materials Analysis Center under the following conditions. (a) Not applicable to compound materials and non-homogeneous materials. (b) Perform measurements using the same volume of sample as for the wet decomposition method/ICP-AES method (minimum of 0.1 g).	
	Analytical method: In conformance to IEC 62321 Ed.1.0.2008 "Electrotechnical Products: Determination of levels of six regulated substances" with following requirements 1 and 2 added: 1. Analyze by the subpart. For the definition of subpart, see section 4. "Definition of Terms" in the Standards document. 2. Dissolve completely in the pre-treatment.	
Hexavalent chromium compounds	Elute Hexavalent chromium into water solution by, for example, by hot water extraction, or decomposition in alkali solution, etc.	Example—absorptiometer and ion chromatograph, etc.
PBB and PBDE (for reference only)*4	Dissolve in an organic solvent or extract with a Soxhlet extractor. Use the silica gel column process to obtain a solution.	Example—Gas chromatograph mass spectrometer (GC-MS)

4) No analysis of PBB and PBDE is required by this Standards document, however, this method is recommended for analysis if it is to be conducted to meet Customer's requirements.

Table 1-14 List of Exemptions for Prohibited Substance A-1

List of Exemptions		
Exemption		**Scope and dates of applicability**
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a)	For general lighting purposes < 30 W: 5 mg	Expires on 31 December 2011; 3.5mg may be used per burner after 31 December 2011 until 31 December 2012; 2.5mg mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes >= 30 W and < 50 W: 5 mg	Expires on 31 December 2011; 3.5mg may be used per burner after 31 December 2011
1(c)	For general lighting purposes ≥ 50 Watts and < 150 Watts: 5 mg	
1(d)	For general lighting purposes >150 Watts: 15 mg	
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤17 mm	No limitation of use until 31 december 2011; 7 mg may be used per burner after 31 December 2011
1(f)	For special purposes: 5 mg	
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 5 mg	Expires on 31 December 2011; 4 mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 5 mg	Expires on 31 December 2011; 3 mg may be used per lamp after 31 December 2011
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8): 5 mg	Expires on 31 December 2011; 3.5 mg may be used per lamp after 31 December 2011
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	Expires on 31 December 2012; 3.5 mg may be used per lamp after 31 December 2012
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25,000h): 8 mg	Expires on 31 December 2011; 5 mg may be used per lamp after 31 December 2011
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(1)	Linear halophosphate lamps with tube diameter >28 mm (e.g. T10 and T12): 10 mg	Expires on 13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15 mg	Expires on 13 April 2016
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	No limitation of use until 31 december 2011; 15 mg may be used per lamp after 31 December 2011
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	No limitation of use until 31 december 2011; 15 mg may be used per lamp after 31 December 2011
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	
3(a)	Short length (≤500 mm)	No limitation of use until 31 december 2011; 3.5 mg may be used per lamp after 31 December 2011
3(b)	Medium length (>500mm and ≤ 1500 mm)	No limitation of use until 31 december 2011; 5 mg may be used per lamp after 31 December 2011
3(c)	Long length (> 1500 mm)	No limitation of use until 31 December 2011; 13 mg may be used per lamp after 31December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 31December 2011; 15 mg may be used per lamp after 31December 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:	
4(b)-Ⅰ	P≤ 155 W	No limitation of use until 31December 2011; 30 mg may be used per burner after 31December 2011
4(b)-Ⅱ	155W < P ≤ 405 W	No limitation of use until 31December 2011; 40 mg may be used per burner after 31December 2011
4(b)-Ⅲ	P > 405 W	No limitation of use until 31December 2011; 40 mg may be used per burner after 31December 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c)-Ⅰ	P ≤ 155 W	No limitation of use until 31December 2011; 25 mg may be used per burner after 31December 2011
4(c)-Ⅱ	155W < P < 405W	No limitation of use until 31December 2011; 30 mg may be used per burner after 31December 2011
4(c)-Ⅲ	P > 405 W	No limitation of use until 31December 2011; 40 mg may be used per burner after 31December 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e)	Mercury in metal halide lamps(MH)	
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	

List of Exemptions		
Exemption		Scope and dates of applicability
5(a)	Lead in glass of cathode ray tubes	
5(b)	Lead in the glass of fluorescent tubes not exceeding 0,2% by weight	
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight	
6(b)	Lead as an alloying element in aluminium containing up to 0.4% lead by weight	
6(c)	Copper alloy containing up to 4% lead by weight	
7(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)	
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
7(c)-(III)	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on he market before 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75 % by weight in the cooling solution	
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	
11(a)	Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before [insert the date of notification]
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
12	Lead as a coating material for the thermal conduction module C-ring	May be used in spare parts for EEE placed on the market before [insert the date of notification]
13(a)	Lead in white glasses used for optical applications	
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight	Expires on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
16	Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb)	Expires on 1 January 2011
18(b)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ($BaSi_2O_5$:Pb)	
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps(ESL)	Expires on 1 June 2011
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 1 June 2011
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less	May be used in spare parts for EEE placed on the market before [insert the date of notification]
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	
26	Lead oxide in the glass envelope of black light blue lamps	Expires on 1 June 2011

List of Exemptions		
Exemption		Scope and dates of applicability
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on [insert the date of notification]
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
33	Lead in solders for the soldering of thin copper wires of 100 μm diameter and less in power transformers	
34	Lead in cermet-based trimmer potentiometer elements	
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expires on 1 July 2010
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39	Cadmium in colour converting II-VI LEDs (< 10 μg Cd per mm^2 of light-emitting area) for use in solid state illumination or display systems	Expires on 1 July 2014

*Note: Use of the substance in the applications listed is banned after the expiration date.

Table 2-1 Asbestos

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Asbestos		1332-21-4
Crocidolite	$Na_2Fe_5(Si_8O_{22})(OH)_2$	12001-28-4
Chrysotile	$Mg_3Si_2O_5(OH)_4$	12001-29-5
Amosite	$(Mg,Fe)_6Si_8O_{22}(OH)_2$	12172-73-5
Anthophyllite	$(Mg,Fe)_7Si_8O_{22}(OH)_2$	17068-78-9
Tremolite	$Ca_2Mg_5Si_8O_{22}(OH)_2$	14567-73-8
Actionolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	13768-00-8

Table 2-2 Amines generated from azo dyes and pigments

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
4-Aminobiphenyl Biphenyl-4-ylamine	$C_{12}H_{11}N$	92-67-1
Benzidine	$C_{12}H_{12}N_2$	92-87-5
4-Chloro-o-toluidine	C_7H_8ClN	95-69-2
2-Naphthylamine	$C_{10}H_9N$	91-59-8
2-Aminoazotoluene; 4-Amino-2',3-dimethylazobenzene; 4-o-Tolylazo-o-toluidine o-Aminoazotoluene	$C_{14}H_{15}N_3$	97-56-3
2-Amino-4-nitrotoluene; 5-Nitro-o-toluidine	$C_7H_8N_2O_2$	99-55-8
4-Chloroaniline	C_6H_6ClN	106-47-8
2,4-Diaminoanisole; 4-Methoxy-m-phenylenediamine	$C_7H_{10}N_2O$	615-05-4
4,4'-Diaminobiphenylmethane; 4,4'-Methylenedianiline	$C_{13}H_{14}N_2$	101-77-9
3,3'-Dichlorobenzidine	$C_{12}H_{10}Cl_2N_2$	91-94-1
3,3'-Dimethoxybenzidine; 2-Dianisidine	$C_{14}H_{16}N_2O_2$	119-90-4
3,3'-Dimethylbenzidine; 2-Tolidine	$C_{14}H_{16}N_2$	119-93-7
3,3'-Dimethyl-4,4'-diaminobiphenylmethane; Bis(4-amino-3-methylphenyl)methane; 4,4'-Methylenedi-o-toluidine	$C_{15}H_{18}N_2$	838-88-0
4-Cresidine; 6-methoxy-m-toluidine	$C_8H_{11}NO$	120-71-8
3,3'-Dichloro-4,4'-diaminodiphenylmethane; 4,4'-Methylenebis-(2-chloroamine); 4,4'-Diamino-3,3'-dichlorodiphenylmethane; MOCA	$C_{13}H_{12}Cl_2N_2$	101-14-4
4,4'-Oxydianiline; 4,4'-Diaminodiphenylether	$C_{12}H_{12}N_2O$	101-80-4
4,4'-Thiodianiline; 4,4'-thiobisbenzenamine; p,p'-Diaminodiphenyl sulfide	$C_{12}H_{12}N_2S$	139-65-1
2-Toluidine; 2-Aminotoluene o-Toluidine	C_7H_9N	95-53-4
Toluylene-2,4-diamine; 2,4-Diaminotoluene; Diaminomethylbenzene; Methylphenylene-2,4-diamine; 4-Methyl-m-phenylenediamine	$C_7H_{10}N_2$	95-80-7
2,4,5-Trimethylaniline	$C_9H_{13}N$	137-17-7
2-Anisidine o-Anisidine	C_7H_9NO	90-04-0
4-Aminoazobenzene	$C_{12}H_{11}N_3$	60-09-3

Table 2-3 Arsenic/Arsenic compounds

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Diarsenic pentaoxide	As_2O_5	1303-28-2
Diarsenic trioxide	As_2O_3	1327-53-3
Triethyl arsenate	$C_6H_{15}AsO_4$	15606-95-8
Other arsenic compound	-	-

Table 2-4 Fluorinated greenhouse gases (Hydrochlorofluorocarbons and their isomers)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Dichlorofluoromethane (HCFC 21)	CHCl2F	75-43-4
Chlorodifluoromethane (HCFC 22)	CHClF2	75-45-6
Chlorofluoromethane (HCFC 31)	CH2ClF	593-70-4
Tetrachlorofluoroethane (HCFC 121)	C_2HCl_4F	134237-32-4
1,1,1,2-tetrachloro-2-fluoroethane (HCFC 121a)		354-11-0
1,1,2,2-tetracloro-1-fluoroethane		354-14-3
Trichlorodifluoroethane (HCFC 122)	C2HF2Cl3	41834-16-6
1,2,2-trichloro-1,1-difluoroethane		354-21-2
Dichlorotrifluoroethane(HCFC 123)	CHCl2CF3,C2HF3Cl2	34077-87-7
Dichloro-1,1,2-trifluoroethane		90454-18-5
2,2-dichloro-1,1,1-trifluroethane		306-83-2
1,2-dichloro-1,1,2-trifluroethane (HCFC-123a)		354-23-4
1,1-dichloro-1,2,2-trifluroethane (HCFC-123b)		812-04-4
2,2-dichloro-1,1,2-trifluroethane (HCFC-123b)		812-04-4
Chlorotetrafluoroethane (HCFC 124)	C2HF4Cl,CHFClCF3	63938-10-3
2-chloro-1,1,1,2-tetrafluoroethane		2837-89-0
1-chloro-1,1,2,2-tetrafluoroethane (HCFC 124a)		354-25-6
Trichlorofluoroethane (HCFC 131)	C2H2FCl3	27154-33-2; (134237-34-6)
1-Fluoro-1,2,2-trichloroethane		359-28-4
1,1,1-trichloro-2-fluoroethane (HCFC131b)		811-95-0
1-Chloro-1-fluoroethane (HCFC-151)	C2H4FCl	1615-75-4
Dichlorodifluoroethane (HCFC 132)	C2H2F2Cl2	25915-78-0
1,2-dichloro-1,1-difluoroethane (HCFC 132b)		1649-08-7
1,1-dichloro-1,2-difluoroethane (HCFC 132c)		1842-05-3
1,2-dichloro-1,2-difluoroethane		431-06-1
Chlorotrifluoroethane (HCFC 133)	C2H2ClF3	1330-45-6
1-chloro-1,2,2-trifluoroethane		1330-45-6
2-chloro-1,1,1-trifluoroethane (HCFC-133a)		75-88-7

Table 2-4 Fluorinated greenhouse gases (Hydrochlorofluorocarbons and their isomers)（2／3）

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Dichlorofluoroethane(HCFC 141)	C2H3FCl2	1717-00-6; (25167-88-8)
1,1-dichloro-1-fluoroethane (HCFC-141b)	CH3CFCl2	1717-00-6
1,2-dichloro-1-fluoroethane		430-57-9
Chlorodifluoroethane (HCFC 142)	C2H2F2Cl	25497-29-4
1-chloro-1,1-difluoroethane (HCFC142b)	CH3CClF2	75-68-3
1-chloro-1,2-difluoroethane (HCFC142a)		25497-29-4
Hexachlorofluoropropane (HCFC 221)	C3HFCl6	134237-35-7
Pentachlorodifluoropropane (HCFC 222)	C3HF2Cl5	134237-36-8
Tetrachlorotrifluropropane (HCFC 223)	C3HF3Cl4	134237-37-9
Trichlorotetrafluoropropane (HCFC 224)	C3HF4Cl3	134237-38-0
Dichloropentafluoropropane, (Ethyne, fluoro-) (HCFC 225)	C3HF5Cl2	127564-92-5; (2713-09-9)
2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC 225aa)	CF3CF2CHCl2	128903-21-9
2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC 225ba)	CF2ClCF2CHClF	422-48-0
1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225bb)		422-44-6
3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC 225ca)		422-56-0
1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb)		507-55-1
1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC 225cc)		13474-88-9
1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC 225da)		431-86-7
1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC 225ea)		136013-79-1
1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC 225eb)		111512-56-2
Chlorohexafluoropropane (HCFC 226)	C3HF6Cl	134308-72-8
Pentachlorofluoropropane (HCFC 231)	C3H2FCl5	134190-48-0
Tetrachlorodifluoropropane (HCFC 232)	C3H2F2Cl4	134237-39-1
Trichlorotrifluoropropane (HCFC 233)	C3H2F3Cl3	134237-40-4
1,1,1-Trichloro-3,3,3-trifluoropropane		7125-83-9
Dichlorotetrafluoropropane (HCFC 234)	C3H2F4Cl2	127564-83-4
Chloropentafluoropropane (HCFC 235)	C3H2F5Cl	134237-41-5
1-Chloro-1,1,3,3,3-pentafluoropropane		460-92-4
Tetrachlorofluoropropane (HCFC 241)	C3H3FCl4	134190-49-1
Trichlorodifluoropropane (HCFC 242)	C3H3F2Cl3	134237-42-6

Table 2-4 Fluorinated greenhouse gases (Hydrochlorofluorocarbons and their isomers)（3／3）

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Dichlorotrifluoropropane (HCFC 243)	C3H3F3Cl2	134237-43-7
1,1-dichloro-1,2,2-trifluoropropane		7125-99-7
2,3-dichloro-1,1,1-trifluoropropane		338-75-0
3,3-Dichloro-1,1,1-trifluoropropane		460-69-5
Chlorotetrafluoropropane (HCFC 244)	C3H3F4Cl	134190-50-4
3-chloro-1,1,2,2-tetrafluoropropane		679-85-6
Trichlorofluoropropane (HCFC 251)	C3H4FCl3	134190-51-5
1,1,3-trichloro-1-fluoropropane		818-99-5
Dichlorodifluoropropane (HCFC 252)	C3H4F2Cl2	134190-52-6
Chlorotrifluoropropane (HCFC 253)	C3H4F3Cl	134237-44-8
3-chloro-1,1,1-trifluoropropane (HCFC 253fb)		460-35-5
Dichlorofluoropropane (HCFC 261)	C3H5FCl2	134237-45-9
1,1-dichloro-1-fluoropropane		7799-56-6
Chlorodifluoropropane (HCFC 262)	C3H5F2Cl	134190-53-7
2-chloro-1,3-difluoropropane		102738-79-4
Chlorofluoropropane (HCFC 271)	C3H6FCl	134190-54-8
2-chloro-2-fluoropropane		420-44-0

Table 2-5 Fluorinated greenhouse gases (PFC, SF6, etc)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Carbon tetrafluoride (Perfluoromethane)	75-73-0
Perfluoroethane (Hexafluoroethane)	76-16-4
Perfluoropropane (Octafluoroproane)	76-19-7
Perfluorobutane (Decafluorobutane)	355-25-9
Perfluoropentane (Dodecafluoropentane)	678-26-2
Perfluorohexane (Tetradecafluorohexane)	355-42-0
Perfluorocyclobutane	115-25-3
Sulfur Hexafluoride (SF6)	2551-62-4
Trifluoromethane - (HFC-23)	75-46-7
Difluoromethane - (HFC-32)	75-10-5
Methyl fluoride - (HFC-41)	593-53-3
2H,3H-Decafluoropentane - (HFC-43-10mee)	138495-42-8
Pentafluoroethane (HFC-125)	354-33-6
1,1,2,2-Tetrafluoroethane - (HFC-134)	359-35-3
1,1,1,2-Tetrafluoroethane - (HFC-134a)	811-97-2
1,1-Difluoroethane - (HFC-152a)	75-37-6
1,1,2-Trifluoroethane-(HFC-143)	430-66-0
1,1,1-Trifluoroethane - (HFC-143a)	420-46-2
2H-Heptafluoropropane- (HFC-227ea)	431-89-0
1,1,1,2,2,3-hexafluoro-propane (HFC-236cb)	677-56-5
1,1,1,2,3,3-Hexafluoropropane - (HFC-236ea)	431-63-0
1,1,1,3,3,3-Hexafluoropropane - (HFC-236fa)	690-39-1
1,1,2,2,3-Pentafluoropropane - (HFC-245ca)	679-86-7
1,1,1,3,3-Pentafluoropropane - (HFC-245fa)	460-73-1
1,1,1,3,3-Pentafluorobutane - (HFC-365mfc)	406-58-6

Table 2-6 Hexabromocyclododecane (HBCDD) and all major diastereoisomers

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Hexabromocyclododecane (HBCDD)	$C_{12}H_{18}Br_6$	25637-99-4 3194-55-6
alpha – Hexabromocyclododecane		134237-50-6
beta – Hexabromocyclododecane		134237-51-7
gamma – Hexabromocyclododecane		134237-52-8

Table 2-7 Ozone layer depleting substances (1/2)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Trichlorofluoromethane	CFCl3	75-69-4
Dichlorodifluoromethane (CFC12)	CF2Cl2	75-71-8
Chlorotrifluoromethane (CFC 13)	CF3Cl	75-72-9
Pentachlorofluoroethane (CFC 111)	C2FCl5	354-56-3
Tetrachlorodifluoroethane (CFC 112)	C2F2Cl4	76-12-0
Trichlorotrifluoroethane (CFC 113)	C2F3Cl3	354-58-5
1,1,2 Trichloro-1,2,2 trifluoroethane		76-13-1
Dichlorotetrafluoroethane (CFC 114)	C2F4Cl2	76-14-2
Monochloropentafluoroethane (CFC 115)	C2F5Cl	76-15-3
Heptachlorofluoropropane (CFC 211)	C3FCl7	422-78-6
		135401-87-5
Hexachlorodifluoropropane (CFC 212)	C3F2Cl6	3182-26-1
Pentachlorotrifluoropropane (CFC 213)	C3F3Cl5	2354-06-5
		134237-31-3
Tetrachlorotetrafluoropropane (CFC 214)	C3F4Cl4	29255-31-0
1,1,1,3-Tetrachlorotetrafluoropropane		2268-46-4
Trichloropentafluoropropane (CFC 215)	C3F5Cl3	1599-41-3
1,1,1-Trichloropentafluoropropane		4259-43-2
1,2,3-Trichloropentafluoropropane		76-17-5
Dichlorohexafluoropropane (CFC 216)	C3F6Cl2	661-97-2
Monochloroheptafluoropropane (CFC 217)	C3F7Cl	422-86-6
Bromochlorodifluoromethane (Halon 1211)	CF2BrCl	353-59-3
Bromotrifluoromethane (Halon 1301)	CF3Br	75-63-8
Dibromotetrafluoroethane (Halon 2402)	C2F4Br2	124-73-2
Carbon Tetrachloride (Tetrachloromethane)		56-23-5

Table 2-7 Ozone layer depleting substances (2/2)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Bromomethane (Methyl Bromide)		74-83-9
Dibromofluoromethane	CHFBr2	1868-53-7
Bromodifluoromethane	CHF2Br	1511-62-2
Bromofluoromethane	CH2FBr	373-52-4
Tetrabromofluoroethane	C2HFBr4	306-80-9
Tribromodifluoroethane		-
Dibromotrifluoroethane	C2HF3Br2	354-04-1
Bromotetrafluoroethane	C2HF4Br	124-72-1
Tribromofluoroethane		-
Dibromodifluoroethane	C2H2F2Br2	75-82-1
Bromotrifluoroethane	C2H2F3Br	421-06-7
Dibromofluoroethane	C2H3FBr2	358-97-4
Bromodifluoroethane		420-47-3
Bromofluoroethane	C2H4FBr	762-49-2
Hexabromofluoropropane		-
Pentabromodifluoropropane		-
Tetrabromotrifluoropropane		-
Tribromotetrafluoropropane		-
Dibromopentafluoropropane		431-78-7
Bromohexafluoropropane		2252-78-0
Pentabromofluoropropane		-
Tetrabromodifluoropropane		-
Tribromotrifluoropropane		-
Dibromotetrafluoropropane		-
Bromopentafluoropropane	C3H2F5Br	460-88-8
Tetrabromofluoropropane		-
Tribromodifluoropropane	C3H3F2Br3	70192-80-2
Dibromotrifluoropropane	C3H3F3Br2	431-21-0
Bromotetrafluoropropane	C3H3F4Br	679-84-5
Tribromofluoropropane	C3H4FBr3	75372-14-4
Dibromodifluoropropane	C3H4F2Br2	460-25-3
Bromotrifluoropropane		421-46-5
Dibromofluoropropane		51584-26-0
Bromodifluoropropane		-
Bromofluoropropane	C3H6FBr	1871-72-3
Bromochloromethane		74-97-5

Table 2-8 Perchlorates

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Lithium perchlorate	7791-03-9
Other perchlorate compounds	-

Table 2-9 Polychlorinated biphenyls (PCB's)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
PCB; Polychlorinated biphenyls	1336-36-3

Table 2-10 Polychlorinated naphthalenes (with chlorine valence number 3 and over)

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	CAS No.
Polychlorinated naphthalene	
Trichloro naphthalene	1321-65-9
Tetrachloro naphthalene	1335-88-2
Pentachloro naphthalene	1321-64-8
Octachloro naphthalene	2234-13-1

Table 2-11 Radioactive substances

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
uranium	U	7440-61-1
plutonium	Pu	－
radon	Rn	10043-92-2
americium	Am	14596-10-2
thorium	Th	7440-29-1
cesium (Radioactive Isotopes only)	Cs	7440-46-2 (Cs-137: 010045-97-3)
Strontium (Radioactive Isotopes only)	Sr	(elemental: 7440-29-6) (Sr-90: 10098-97-2)
Other radioactive substances	－	－

Table 2-12 Tributyl Tin (TBT) and Triphenyl Tin (TPT) compounds

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

Only tributyl and triphenyl compounds are object. (Dibutyl and diphenyl compounds, as well as, metallic tin, tin alloys and inorganic tin compounds are not targeted substances.)

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Tributyl tin bromide	$(C_4H_9)_3SnBr$	1461-23-0
Triphenyl tin	$(C_6H_5)_3Sn$	668-34-8
Triphenyl tin bromide	$(C_6H_5)_3SnBr$	
Triphenyl tin chloride	$(C_6H_5)_3SnCl$	639-58-7
Triphenyl tin hydroxide	$(C_6H_5)_3SnOH$	76-87-9
Triphenyl tin N,N'-dimethyldithiocarbamate	$(C_6H_5)_3Sn(CH_3)_2NCS_2$	1803-12-9
Triphenyl tin fluoride (fentin fluoride)	$(C_6H_5)_3SnF$	379-52-2
Triphenyl tin acetate (fentin acetate)	$(C_6H_5)_3SnOCOCH_3$	900-95-8
Triphenyl tin fatty acid salts		18380-71-7 18380-72-8 47672-31-1 94850-90-5
Triphenyl tin chloroacetate	$(C_6H_5)_3SnOCOCH_2Cl$	7094-94-2
Tributyl tin methacrylate	$(C_4H_9)_3SnC_4H_5O_2$	2155-70-6
Bis(tributyl tin) fumarate	$C_2H_2(COO)_2$ $[(C_4H_9)_3Sn]_2$	6454-35-9
Tributyl tin fluoride	$(C_4H_9)_3SnF$	1983-10-4
Bis(tributyl tin)2,3-dibromosuccinate	$[(C_4H_9)_3Sn]_2$ $C_2H_2Br_2(COO)_2$	31732-71-5
Tributyl tin acetate	$(C_4H_9)_3SnOCOCH_3$	56-36-0
Tributyl tin laurate	$(C_4H_9)_3SnC_{12}H_{23}O_2$	3090-36-6
Bis(tributyl tin)phthalate	$(C_6H_4)(COO)_2$ $[(C_4H_9)_3Sn]_2$	4782-29-0
Tributyl tin sulfamate	$(C_4H_9)_3SnSO_3NH_2$	6517-25-5
Bis(tributyl tin)maleate	$C_{28}H_{56}O_4Sn_2$	14275-57-1
Tributyl tin chloride	$(C_4H_9)_3SnCl$	1461-22-9 7342-38-3
Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyl tin naphthenate)		5409-17-2
Mixture of tributyl tin 1,2,3, 4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylate and its analogs (Tributyl tin rosin salt)		26239-64-5
Copolymer of alkyl acrylate, methyl methacrylate and tributyl tin methacrylate(alkyl;C=8)		67772-01-4

Table 2-13Tributyl Tin Oxide (TBTO),Tri-substiituted organostannic compounds

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Tributyl Tin Oxide (TBTO)	C24H54OSn2	56-35-9
Triphenyl tin N,N'-dimethyldithiocarbamate	$(C_6H_5)_3Sn(CH_3)_2NCS_2$	1803-12-9
Triphenyl tin fluoride (fentin fluoride)	$(C_6H_5)_3SnF$	379-52-2
Triphenyl tin acetate (fentin acetate)	$(C_6H_5)_3SnOCOCH_3$	900-95-8
Triphenyl tin chloride	$(C_6H_5)_3SnCl$	639-58-7
Triphenyl tin hydroxide	$(C_6H_5)_3SnOH$	76-87-9
Triphenyl tin fatty acid salts		18380-71-7 18380-72-8 47672-31-1 94850-90-5
Triphenyl tin chloroacetate	$(C_6H_5)_3SnOCOCH_2Cl$	7094-94-2
Tributyl tin methacrylate	$(C_4H_9)_3SnC_4H_5O_2$	2155-70-6
Bis(tributyl tin) fumarate	$C_2H_2(COO)_2$ $[(C_4H_9)_3Sn]_2$	6454-35-9
Tributyl tin fluoride	$(C_4H_9)_3SnF$	1983-10-4
Bis(tributyl tin)2,3-dibromosuccinate	$[(C_4H_9)_3Sn]_2$ $C_2H_2Br_2(COO)_2$	31732-71-5
Tributyl tin acetate	$(C_4H_9)_3SnOCOCH_3$	56-36-0
Tributyl tin laurate	$(C_4H_9)_3SnC_{12}H_{23}O_2$	3090-36-6
Bis(tributyl tin)phthalate	$(C_6H_4)(COO)_2$ $[(C_4H_9)_3Sn]_2$	4782-29-0
Copolymer of alkyl acrylate, methyl methacrylate and tributyl tin methacrylate(alkyl;C=8)		67772-01-4
Tributyl tin sulfamate	$(C_4H_9)_3SnSO_3NH_2$	6517-25-5
Bis(tributyl tin)maleate	$C_{28}H_{56}O_4Sn_2$	14275-57-1
Tributyl tin chloride	$(C_4H_9)_3SnCl$	1461-22-9 7342-38-3
Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyl tin naphthenate)		85409-17-2
Mixture of tributyl tin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylate and its analogs (Tributyl tin rosin salt)		26239-64-5
Other tri-substituted organostannic compounds	-	-

Table 2-14 Dibutyltin (DBT) compoundsDioctyltin (DOT) compounds

Note: This is the supplementary table for Table 2.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Dibutyltin oxide		818-08-6
Dibutyltin diacetate		1067-33-0
Dibutyltin dilaurate		77-58-7
Dibutyltin maleate		78-04-6
Other dibutyltin compounds		639-58-7
Dioctyl Tin Oxide		870-08-6
Dioctyltin dilaurate		3648-18-8
Other Dioctyltin compounds		7094-94-2

Table 4-1 Brominated Flame Retardants (other than PBBs, PBBEs, or HBCDD)(1/2)

Note: This is the supplementary table for Table 4.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (14) (Aliphatic/alicyclic brominated compounds)		
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (15) (Aliphatic/Alicyclic brominated compounds in combination with antimony compounds)		
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (16) (Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls)		
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (17) (Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls in combination with antimony compounds)		
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (22) (Alphatic/Alicyclic chlorinated and brominated compounds)		
Brominated flame retardant that comes under notation of ISO 1043-4 code number FR (42) (Brominated organic phosphorus compounds)		
Poly(2,6-dibromo-phenylene oxide	$(C_6H_2Br_2O)n$	69882-11-7
Tetra-decabromo-diphenoxy-benzene	$C_{18}Br_{14}O_2$	58965-66-5
1,2-Bis(2,4,6-tribromo-phenoxy)ethane	$C_{14}H_8Br_6O_2$	37853-59-1
3,5,3',5'-Tetrabromo-bisphenol A(TBBA)	$C_{15}H_{12}Br_4O_2$	79-94-7
TBBA, unspecified		30496-13-0
TBBA(epichlorhydrin oligomer)	$(C_{15}H_{12}Br_4O_2.C_3H_5ClO)x$	40039-93-8
TBBA(TBBA-diglycidyl-ether oligomer)		70682-74-5
TBBA(carbonate oligomer)	$(C_{15}H_{12}Br_4O_2.CCl_2O)x$	28906-13-0
(TBBA-carbonate oligomer,phenoxy end capped)	$(C_7H_5O_2).(C_{16}H_{10}Br_4O_3)n.(C_6H_5O)$	94334-64-2
(TBBA-corbonate oligomer, 2,4,5-tribromo-phenol terminated)	$(C_7H_2Br_3O_2).(C_{16}H_{10}Br_4O_3)n.(C_6H_2Br_3O)$	71342-77-3
TBBA-bisphenol A-phosgene polymer	$(C_{15}H_{16}O_2.C_{15}H_{12}Br_4O_2.CCl_2O)x$	32844-27-2
Brominated epoxy resin end-capped with tribromophenol		139638-58-7 135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	$C_{21}H_{20}Br_8O_2$	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	$C_{19}H_{20}Br_4O_4$	4162-45-2
TBBA-bis(allyl-ether)	$C_{21}H_{20}Br_4O_2$	25327-89-3
TBBA-dimethyl-ether		37853-61-5
Tetrabromo-bisphenol S	$C_{12}H_6Br_4O_4S$	39635-79-5
TBBA bis-(2,3-dibromo-propyl-ether)	$C_{18}H_{14}Br_8O_4S$	42757-55-1
2,4-Dibromo-phenol	$C_6H_4Br_2O$	615-58-7
2.4.6-Tribromo-phenol	$C_6H_3Br_3O$	118-79-6
Pentabromo-phenol	C_6HBr_5O	608-71-9
2,4,6-Tribromo-phenyl-allyl-ether	$C_9H_7Br_3O$	3278-89-5
Tribromo-phenyl-allyl-ether(unspecified)	$C_9H_7Br_3O$	26762-91-4

Table 4-1 Brominated Flame Retardants (other than PBBs, PBBEs, or HBCDD)(2/2)

Note: This is the supplementary table for Table 4.
Following substances are representative examples—not necessarily a comprehensive list of substances.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.
Bis(methyl)tetrabromo-phthalate	$C_{10}H_6Br_4O_4$	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	$C_{24}H_{34}Br_4O_4$	26040-51-7
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	$C_{15}H_{16}Br_4O_7$	20566-35-2
TBPA,glycol-and propylene-oxide ester		75790-69-1
N,N'ethylene-bis-(tetrabromo-phthalimide)	$C_{18}H_4Br_8N_2O_4$	32588-76-4
Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	$C_{20}H_{20}Br_4N_2O_4$	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	$C_4H_6Br_2O_2$	3234-02-4
Dibromo-neopentyl-glycol	$C_5H_{10}Br_2O_2$	3296-90-0
Dibromo-propanol	$C_3H_6Br_2O$	96-13-9
Tribromo-neopentyl-alcohol	$C_5H_9Br_3O$	36483-57-5
Poly tribromo-styrene	$(C_8H_5Br_3)n$	57137-10-7
Tribromo-styrene	$C_8H_5Br_3$	61368-34-1
Dibromo-styrene grafted PP		171091-06-8
Poly-dibromo-styrene	$C_8H_6Br_2$	31780-26-4
Bromo-/Chloro-paraffines		68955-41-9
Bromo-/Chloro-alpha-olefin		82600-56-4
Vinylbromide	C_2H_3Br	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	$C_{12}H_{15}Br_6N_3O_3$	52434-90-9
Tris-(2,3-dibromo-propyl)-phosphate	$C_{18}H_9Br_6O_4P$	49690-63-3
Tris(tribromo-neopentyl)phosphate	$C_{15}Br_9H_{24}PO_4$	19186-97-1
Chlorinated and brominated phosphate ester		125997-20-8
Pentabromo-toluene	$C_7H_3Br_5$	87-83-2
Pentabromo-benzyl bromide		38521-51-6
1,3-Butadiene homopolymer,brominated		68441-46-3
Pentabromo-benzyl-acrylate,monomer		59447-55-1
Pentabromo-benzyl-acrylate,polymer	$(C_{10}H_5Br_5O_2)x$	59447-57-3
Decabromo-diphenyl-ethane	$C_{14}H_4Br_{10}$	84852-53-9
Tribromo-diphenyl-maleinimide	$C_{10}H_4Br_3NO_2$	59789-51-4
Brominated trimethylphenyl-indane	$C_{18}H_{12}Br_n$	59789-51-4
Other Brominated Flame Retardants		-
Tetrabromo-cyclo-octane	$C_8H_{12}Br_4$	31454-48-5
1,2-dibromo-4-4(1,2 dibromo-methyl)-cyclo-hexane	$C_8H_{12}Br_4$	3322-93-8
TBPA Na salt	$C_8H_2Br_4O_4.2Na$	25357-79-3
Tetrabromo phthalic anhydride	$C_8Br_4O_3$	632-79-1

Table 4-2 Phthalate esters

Note: This is the supplementary table for Table 4.

English substance name	Chemical formula, Molecular formula, etc.	CAS No.	Note
Bis(2-ethylhexyl) phthalate DEHP(or DOP)	$C_{24}H_{38}O_4$	117-81-7	*1
Dibutyl phthalate DBP	$C_{16}H_{22}O_4$	84-74-2	*1
Butyl benzyl phthalate BBP	$C_{19}H_{20}O_4$	85-68-7	*1
Diisononyl phthalate DINP	$C_{26}H_{42}O_4$	28553-12-0 68515-48-0	*2
Diisodecyl phthalate DIDP	$C_{28}H_{46}O_4$	26761-40-0 68515-49-1	*2
Di-n-octyl phthalate DNOP	$C_{24}H_{38}O_4$	117-84-0	*2

*1. The EU Directive Limiting Phthalates Used in Toys and Childcare Articles (2005/84/EC) limits the total of three phthalates (DEHP, DBP, and BBP) used in resins in toys and childcare articles to less than 0.1%.
Customer requirements must be confirmed concerning products delivered to toy makers and makers that prohibit use of these phthalates.

*2. The same directive as indicated in 1 (2005/84/EC) limits the total of three phthalates (DINP, DIDP, and DNOP) used in resins in toys and childcare articles that can potentially be put in a child's mouth to less than 0.1%.
Customer requirements must be confirmed concerning products delivered to toy makers and makers that prohibit use of these phthalates.

*3. In the Taiwan CNS47497 (Safety Standards for Toys):
Total of all 6 susbstances (DEHP, DBP, BBP, DINP, DIDP, DNOP) is under 0.1%

*4. Work toward total banning in other products must be undertaken continuously.

Note: Effective June 1, 2009, EU Directive (2005/84/EU) of the European Parliament and of the Council restricting the use of phthalate ester in toys and childcare articles is superceded by Appendix XVII of the Regulation (EC) No.1907/2006 of the European Parliament and of the Council of 18 December, 2006 (EU REACH Regulation).

Table 6-1 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substance on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.
Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on October 28, 2008.
Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/chem_data/candidate_list_en.asp) for the latest information.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
Anthracene	$C_{14}H_{10}$	120-12-7	Inclusion Controlled Substance A (See Table 4.)
4,4'- Diaminodiphenylmethane	$C_{13}H_{14}N_2$	101-77-9	Prohibited Substance A-2 (A group in the certain aromatic amines (Table 2))
Dibutyl phthalate	$C_{16}H_{22}O_4$	84-74-2	Inclusion Controlled Substance A (See Table 4 and Table 4-2.)
Cobalt(Ⅱ) dichloride	Cl_2Co	7646-79-9	Inclusion Controlled Substance A (See Table 4.)
Diarsenic pentaoxide	As_2O_5	1303-28-2	Prohibited Substance A-2 (Arsenic/arsenic compounds (Table 2))
Diarsenic trioxide	As_2O_3	1327-53-3	Prohibited Substance A-2 (Arsenic/arsenic compound (Table 2))
Sodium dichromate ,dihydrate	$Cr_2Na_2O_7$, Cr2Na2O7.2H2O	e.g. 10588-01-9, 7789-12-0	Prohibited Substance A-1 (A chromium VI compound (Table 1))
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	$C_{12}H_{15}N_3O_6$	81-15-2	Inclusion Controlled Substance A (See Table 4.)
Bis (2-ethyl(hexyl)phthalate) (DEHP)	$C_{24}H_{38}O_4$	117-81-7	Inclusion Controlled Substance A (See Tables 4 and 4-2.)
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α – HBCDD, β-HBCDD, γ-HBCDD)	$C_{12}H_{18}Br_6$	e.g. 25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	Prohibited Substance A-2 (See Tables 2 and 2-6.)
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	-	e.g. 85535-84-8	Prohibited Substance A-2 (See Table 2.)
Bis(tributyltin)oxide	$C_{24}H_{54}OSn_2$	56-35-9	Prohibited Substance A-2 (See Tables 2.)
Lead hydrogen arsenate	$AsHO_4Pb$	7784-40-9	Prohibited Substance A-1 (Lead/lead compound (Table 1))
Benzyl butyl phthalate	$C_{19}H_{20}O_4$	85-68-7	Inclusion Controlled Substance A (See Tables 4 and 4-2.)
Triethyl arsenate	$C_6H_{15}AsO_4$	15606-95-8	Prohibited Substance A-2 (Arsenic/arsenic compound (Table 2))

Table 6-2 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substanc on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.

Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on January 13, 2010.

Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/chem_data/candidate_list_en.asp) for th latest information.

Note 4: Acrylamide is a substance that ECHA has added to the SVHC List dated January 13, 2010 and released the resulting List on March 30, 2010.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
Anthracene oil	—	90640-80-5	—
Anthracene oil, anthracene paste, distn. Lights	—	91995-17-4	—
Anthracene oil, anthracene paste, anthracene fraction	—	91995-15-2	—
Anthracene oil, anthracene-low	—	90640-82-7	—
Anthracene oil, anthracene paste	—	90640-81-6	—
Pitch, coal tar, high temp.	—	65996-93-2	—
~~**Aluminosilicate**~~ ~~Refractory Ceramic Fibres Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008, and fulfil the two following conditions:~~ ~~a) Al2O3 and SiO2 are present within the following concentration ranges:~~ ~~•Al2O3: 43.5 – 47 % w/w, and SiO2: 49.5 – 53.5 % w/w, or~~ ~~•Al2O3: 45.5 – 50.5 % w/w, and SiO2: 48.5 – 54 % w/w,~~ ~~b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometers (μm).~~ Integrated into Table 6-6 (June 18, 2012)	—	—	—
~~**Zirconia Aluminosilicate**~~, ~~Refractory Ceramic Fibres~~ ~~Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008, and fulfil the two following conditions:~~ ~~a) Al2O3, SiO2 and ZrO2 are present within the following concentration ranges:~~ ~~•Al2O3: 35 – 36 % w/w, and~~ ~~•SiO2: 47.5 – 50 % w/w, and~~ ~~•ZrO2: 15 - 17 % w/w,~~ ~~b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometers (μm).~~ Integrated into Table 6-6 (June 18, 2012)	—	—	—
2,4-Dinitrotoluene	C7H6N2O4	121-14-2	Prohibited Substance B
Diisobutyl phthalate	C16H22O4	84-69-5	Inclusion Controlled Substance A (A group in the Phthalate esters (Table 4-2))
Lead chromate	CrO4Pb	7758-97-6	Prohibited Substance A-1 (Lead/lead compound / A chromium VI compound (Table 1))
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	PbMoO4	12656-85-8	Prohibited Substance A-1 (Lead/lead compound / A chromium VI compound (Table 1))
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	Pb(Cr,S)O4	1344-37-2	Prohibited Substance A-1 (Lead/lead compound / A chromium VI compound (Table 1))
tris(2-chloroethyl)phosphate	C6H12Cl3O4P	115-96-8	Inclusion Controlled Substance B
Acrylamide	C3H5NO	79-06-1	Inclusion Controlled Substance B

Table 6-3 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substance on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.
Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on June 18, 2010.
Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/chem_data/candidate_list_en.asp) for the latest information.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
Trichloroethylene	CHCl=CCl2 C2HCl3	79-01-6	Prohibited Substance B (Chemical product)
Boric acid	B(OH)3	10043-35-3 11113-50-1	Inclusion controlled Substance B (Chemical product)
Disodium tetraborate, anhydrous	B4Na2O7	1303-96-4 1330-43-4 12179-04-3	Inclusion controlled Substance B (Chemical product)
Tetraboron disodium heptaoxide, hydrate	—	12267-73-1	Inclusion controlled Substance B (Chemical product)
Sodium chromate	Na2CrO4	7775-11-3	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)
Potassium chromate	CrK2O4	7789-00-6	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)
Ammonium dichromate	Cr2H8N2O7	7789-9-5	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)
Potassium dichromate	K2Cr2O7	7778-50-9	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)

Table 6-4 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substance on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.
Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on Dec 15, 2010.
Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/chem_data/candidate_list_en.asp) for the latest information.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
Cobalt(II) sulphate	CoO4S	10124-43-3	Inclusion controlled Substance B (Chemical product)
Cobalt(II) dinitrate	Co(NO3)2	10141-05-6	Inclusion controlled Substance B (Chemical product)
Cobalt(II) carbonate	CCoO3	513-79-1	Inclusion controlled Substance B (Chemical product)
Cobalt(II) diacetate	Co(CH3COO)2	71-48-7	Inclusion controlled Substance B (Chemical product)
2-Methoxyethanol	C3H8O2	109-86-4	Inclusion controlled Substance B (Chemical product)
2-Ethoxyethanol	C4H10O2	110-80-5	Inclusion controlled Substance B (Chemical product)
Chromium trioxide	CrO3	1333-82-0	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)
Acids generated from chromium trioxide and their oligomers Group containing: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	—	7738-94-5 13530-68-2	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)

Table 6-5 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substance on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.
Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on June 20, 2011.
Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/chem_data/candidate_list_en.asp) for the latest information.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
2-ethoxyethyl acetate	C6H12O3	111-15-9	Inclusion controlled Substance B (Chemical product)
Strontium chromate	SrCrO4	7789-06-2	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)
1,2-benzenedicarboxylic acid; di-C7-11-branched and linear alkyl esters (DHNUP)	—	68515-42-4	—
Hydrazine	H4N2 H2O H4N2	7803-57-8 302-01-2	Inclusion controlled Substance B (Chemical product)
1-methyl-2-pyrrolidone	C5H9NO	872-50-4	Inclusion controlled Substance B (Chemical product)
1,2,3-trichloropropane	C3H5Cl3	96-18-4	Inclusion controlled Substance B (Chemical product)
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	—	71888-89-6	Inclusion controlled Substance A

Table 6-6 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substance on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation.
Note 2: The substances are listed here in the same order as they appear in the press release by the ECHA (European Chemicals Agency) on December 19, 2011.
Note 3: Check the ECHA (European Chemicals Agency) website (http://echa.europa.eu/web/guest/candidate-list-table) for the latest information.

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
Lead styphnate	C6HN3O8Pb	15245-44-0	Prohibited Substance A-1 (Lead/lead compound (Table 1))
Lead diazide; Lead azide	N6Pb	13424-46-9	Prohibited Substance A-1 (Lead/lead compound (Table 1))
Lead dipicrate	C12H4N6O14Pb	6477-64-1	Prohibited Substance A-1 (Lead/lead compound (Table 1))
Phenolphthalein	C20H14O4	77-09-8	-
2,2'-dichloro-4,4'-methylenedianiline	C13H12Cl2N2	101-14-4	Prohibited Substance A-2 (Certain azo compounds (Table 2))
N,N-dimethylacetamide	C4H9NO	127-19-5	Inclusion controlled Substance B (Chemical product)
Trilead diarsenate; Lead(II) arsenate	As2O8Pb3	3687-31-8	Prohibited Substance A-1 (Lead/lead compound (Table 1))
Calcium arsenate	As2Ca3O8	7778-44-1	Prohibited Substance A-2 (Arsenic/arsenic compound (Table 2))
Arsenic acid	H3AsO4	7778-39-4	Prohibited Substance A-2 (Arsenic/arsenic compound (Table 2))
Bis(2-methoxyethyl) ether	C6H14O3	111-96-6	-
1,2-Dichloroethane	C2H4Cl2	107-06-2	Prohibited Substance B
4-(1,1,3,3-tetramethylbutyl)phenol; 4-tert-octyl phenol	C14H22O	140-66-9	Inclusion controlled Substance B (Chemical product)
2-Methoxyaniline; o-Anisidine	C7H9NO	90-04-0	Inclusion controlled Substance B (Chemical product)
Bis(2-methoxyethyl) phthalate	C14H18O6	117-82-8	-
Formaldehyde, oligomeric reaction products with aniline (technical MDA)	(C6H7N・CH2O)x	25214-70-4	-
Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	-
Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	-
Pentazinc chromate octahydroxide	CrH8O12Zn5	49663-84-5	-
Potassium hydroxyoctaoxodizincatedichromate	Cr2K2O8Zn	11103-86-9	Inclusion controlled Substance B (Chemical product)
Dichromium tris(chromate)	Cr8O21	24613-89-6	Prohibited Substance A-1 (Prohibited as a chromium (VI) compound)

Table 6-7 List of SVHC under the REACH Regulation

Note 1: The SVHC for the purpose of this table is an abbreviation for Substances of Very High Concern, and refers to a substanc on the Candidate List of Substances of Very High Concern for authorization under the EU REACH Regulation

Note 2: The substances are listed here in the same order as they appear in the Candidate list Table by the ECHA (European Chemicals Agency) on June 18, 2012.

Note 3: Check the ECHA (European Chemicals Agency) website（http://echa.europa.eu/web/guest/candidate-list-table）for the latest information

English substance name	Chemical formula, Molecular formula	CAS No.	Is the substance classified as Prohibited Substance A-1/A-2, or Inclusion Controlled Substance A?
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	C25H30ClN3	548-62-9	
β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	C12H15N3O6	59653-74-6	
1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	C8H18O4	112-49-2	
4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	C24H29N3O	561-41-1	
Lead(II) bis(methanesulfonate)	C2H6O6PbS2	17570-76-2	Prohibited Substance A-1 (Lead/lead compound (Table 1))
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	C4H10O2	110-71-4	
Diboron trioxide	B2O3	1303-86-2	
α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	C33H33N3O	6786-83-0	
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	C12H15N3O6	2451-62-9	Prohibited Substance B (Chemical product)
4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	C17H20N2O	90-94-8	
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	C17H22N2	101-61-1	Prohibited Substance B (Chemical product)
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) *[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]*	C33H32ClN3	2580-56-5	
Formamide	CH3NO	75-12-7	