

TOSHIBA

Toshiba Corporation

Mobile Communication Company

Digital Media Network Company

Personal Computer & Network Company

Toshiba TEC Corporation

Guidelines for Green Procurement
Ver.06



Toshiba Group's Basic Policy for the Environment

Recognizing the Earth is an irreplaceable asset and it is humankind's duty to hand it on to future generations in a sound state, Toshiba Group contributes to the development of a sustainable society by pursuing creation of new values and symbiosis with the Earth, in accordance with Toshiba Group's Environmental Vision.

Promotion of environmental management

1. Toshiba considers environmental stewardship to be one of management's primary responsibilities and promotes environmental activities in harmony with economic activities.
2. Toshiba assesses the environmental aspects of its business activities, products and services, and specifies objectives and targets with respect to the reduction of environmental impacts and prevention of pollution.
3. Toshiba strives to continuously improve environmental management through internal audits and reviews of activities.
4. Toshiba complies with all laws and regulations, industry guidelines it has endorsed, and its own standards concerning the environment.
5. Toshiba strives to enhance the awareness of all its employees with respect to the environment and requires that they make a practical contribution to the environment through their work.
6. Toshiba operates globally, and accordingly, promotes environmental activities throughout Toshiba Group.

Development and provision of environmentally conscious products and services, and reduction of environmental impacts of business activities

1. Toshiba recognizes that natural resources are finite and implements vigorous environmental measures to promote their effective and practical use in terms of both products and business processes.
2. Toshiba develops and provides environmentally conscious products and services which contribute to the reduction of environmental impacts throughout their life cycles.
3. Toshiba strives to reduce the environmental impacts of all business processes, encompassing design, manufacturing, logistics, sale, and disposal, with a particular focus on the prevention of global warming, efficient utilization of resources and control of chemical substances.

Responsibility as a member of the global community

1. Toshiba contributes to society through its environmental activities, which include the development and provision of excellent, environmentally conscious technologies and products and cooperation with society at large and with local communities.
2. Toshiba is committed to maximizing disclosure and transparency in communication with stakeholders and society at large in order to facilitate mutual understanding.

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Attached Table:

Details of substances (typical examples) referred in these Guidelines

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I. Green procurement

1. Objective

The objective of these Guidelines is to procure articles with a lower environmental impact from suppliers that aggressively promote activities for environmental conservation, in respect of procurement of parts, materials, units, products and sub-materials (hereafter, articles to be supplied) for products produced by Toshiba Corporation's Mobile Communications Company, Digital Media Network Company, Personal Computer & Network Company, and Toshiba TEC corporation (hereafter, we).

2. Requirements to suppliers

2.1 Suppliers' activities for environmental conservation

We request every supplier to undertake proactive activities for environmental conservation.

We prioritize suppliers who perform such proactive activities in our procurement.

Suppliers are expected to perform such environmental activities as

- 1) Formulating environmental policy
- 2) Establishing and maintaining a system for environmental conservation
- 3) Training and monitoring of system performance

In order to understand suppliers' activities for environmental conservation, we want to investigate the points below, and ask for your understanding and support.

- 1) Document-based inquiry into supplier's environmental activities
- 2) On-site investigation of supplier's environmental activities

2.2 Control of environment-related substances for articles to be supplied

Suppliers are required to comply with Chapter II. "Environment-related substances control criteria" of these Guidelines and supply articles with a lower environmental impact.

In order to ensure this, suppliers should carry out the following items.

- 1) Make every supporting organization and your suppliers understand the requirements stated in these Guidelines.
- 2) Realize the requirements described in our purchase specifications and drawings.
- 3) Reply to our inquiries about control of environment-related substances.

Although inquiries depend on types of articles to be supplied and necessity, the major ones are:

- i) Confirmation of no inclusion of prohibited substances, using "Use/Non-use Declaration of Environment-related Substances".
 - ii) Inquiries about content values of specified substances, using the JGPSSI (Japan Green Procurement Survey Standardization Initiative) form.
 - iii) Requests to provide sample test result.
 - iv) Other necessary inquiries to confirm supplier's performance
- 4) Obtain necessary information from your suppliers as base data for your reply.
 - 5) Perform sample tests or obtain sample test result from your suppliers if these are an effective means to realize our requirements.
 - 6) Investigate your suppliers' control systems (including supplier audit).

II. Environment-related substances control criteria

1. Scope

The scope is environment-related substances in the articles to be supplied to us for production of our products.

“Our products” include products supplied by ODM or OEM vendors, resale products of other company’s brand, spare parts and repaired articles.

“Our products” also include products made by or sold by Toshiba Group companies that have a capital relationship with us and to which you directly supply articles.

2. Definitions

(1) Environment-related substances

Substances considered to have an environmental impact and specified in these Guidelines.

(2) Substances whose use is prohibited

Environment-related substances whose use in articles to be supplied is prohibited by law, regulation or these Guidelines.

(3) Substances whose use is to be reduced or substituted

Environment-related substances specified in these Guidelines whose use in the articles to be supplied should be reduced or substituted.

(4) Intentional inclusion

Inclusion that cannot appropriately be regarded as impurities, as defined in (5). For example, use of a substance as a necessary ingredient in order to obtain functionality or performance.

(5) Not intended inclusion (impurities)

Inclusion which can be regarded as resulting from the natural environment or that is the result of a chemical reaction and that can not be removed by a refining process with existing technology.

(6) Homogenous material

The term "homogeneous material" means a material that cannot be mechanically disjointed into different materials.

The term "homogeneous" means "of uniform composition throughout", so examples of "homogeneous materials" are plastics, ceramics, glass, metals, alloys, paper, board, resins and coatings.

The term "mechanically disjointed" means that the materials can be, in principle, separated by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.

Example:

- A plastic cover is homogenous material if it consisted exclusively of one type of plastic that was not coated with or had attached to it (or inside it) any other kinds of materials.
- An electric cable that consisted of material wires surrounded by non-metallic insulation materials is not homogenous material because mechanical processes could separate the different materials.
- A semi-conductor package contains many homogenous materials, which include the plastic molding material, the tin-electroplating coatings on the lead frame, the lead frame alloy and the gold-bonding wires.

3. Requirements for environment-related substances control for articles to be supplied

3.1 Substances whose inclusion in articles to be supplied is prohibited

For substances listed in Table 1 following inclusion is prohibited.

- 1) Intentional inclusion
- 2) Inclusion exceeding the maximum tolerance concentration

The maximum tolerance concentration for each substance is defined on Table 3.

Regarding substances for which maximum tolerance densities are not defined, impurities must be well controlled.

However, for uses listed in Table 2, neither inclusion 1) nor inclusion 2) is prohibited (exempted uses).

Moreover, in some cases such as use for spare parts, we might procure parts, unit or materials which include the prohibited substances. In these cases, please follow the instructions of the person in charge.

Please be aware that some uses of the substances whose use is to be reduced or substituted, as described in section 3.2, are prohibited. Please refer notes of Table 6.

Table 1 Substances whose inclusion in articles to be supplied is prohibited

Ref. No.	Substance
1	Cadmium and its compounds
2	Hexavalent chromium and its compounds
3	Lead and its compounds
4	Mercury and its compounds
5	Polybrominated biphenyls (PBBs)
6	Polybrominated diphenyl ethers (PBDEs)
7	Bis(tributyltin)=oxide (TBTO)
8	Polychlorinatedbiphenyls (PCBs)
9	Polychloronaphtalenes (with 3 or more chlorine atoms)
10	Short Chain Chlorinated Paraffins (with carbon length 10 through 13)
11	Asbestos
12	Azo pigments and dyes (only those able to form certain amines and are directly and continuously applied to the human body)
13	Ozone depleting substances (ODS)
14	Tributyltins (TBTs) & Tripheniltins (TPTs)
15	Radioactive Substances
16	Aldrin
17	Endrin
18	Yellow Phosphorus
19	Chlordanes
20	N,N'-ditolyl-p-phenylenediamin, N-tolyl-N'-xylyl-p-phenylenediamine or N,N'-dixylyl-p-phenylene diamine
21	Dioxins
22	DDT
23	Dieldrin
24	Toxaphene
25	2,4,6-Tri-t-Butylphenol
26	4-Nitrobiphenyl and its salt
27	Bis(chloromethyl)ether
28	Hexachlorobenzene
29	Benzene
30	Mirex
31	Carcinogenic substances (Group1 and group2A: defined by IARC(The International Agency for Research on Cancer))
32	2-benzotriazol-2-yl-4,6-ditert-butyl-phenol

(*) Ref. No.: Reference number to the attached table "Details of substances (Typical examples)".

Please refer the attached table for details.

Table 2 Exempted uses (Allowable uses)

Substance	Exempted uses (Allowable uses)
Cadmium and its compounds	<p>(a) Cadmium in plating of electrical contact that requires high reliability used when no substitute material is available.</p> <p>(b) Cadmium in optical and filter glass.</p> <p>(c) Cadmium in printing inks for the application of enamels on borosilicate glass.</p>
Lead and its compounds	<p>(a) Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.</p> <p>(b) Lead as an alloying element in steel containing up to 0,35 % lead by weight, aluminium containing up to 0,4 % lead by weight and as a copper alloy containing up to 4 % lead by weight.</p> <p>(c) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).</p> <p>(d) Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications.</p> <p>(e) Lead in electronic ceramic parts (e.g. piezoelectric devices).</p> <p>(f) Lead in lead-bronze bearing shells and bushes</p> <p>(g) Lead used in compliant pin connector systems.</p> <p>(h) Lead as a coating material for the thermal conduction module c-ring.</p> <p>(i) Lead in optical and filter glass.</p> <p>(j) 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.</p> <p>(k) Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.</p> <p>(l) Lead in linear incandescent lamps with silicate coated tubes.</p> <p>(m) Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications.</p> <p>(n) 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 (BaSi2O5:Pb) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb).</p> <p>(o) 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).</p> <p>(p) Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).</p> <p>(q) Lead and cadmium in printing inks for the application of enamels on borosilicate glass.</p> <p>(r) Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems.</p> <p>(s) Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with copper lead frames.</p> <p>(t) Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.</p> <p>(u) Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes.</p> <p>(v) Lead oxide in the glass envelope of Black Light Blue (BLB) lamps.</p> <p>(w) 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.</p> <p>(x) 29. Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC.</p>
Mercury and its compounds	<p>(a) Mercury in compact fluorescent lamps not exceeding 5 mg per lamp.</p> <p>(b) Mercury in straight fluorescent lamps for general purposes not exceeding:</p> <ul style="list-style-type: none"> - halophosphate 10mg - triphosphate with normal lifetime 5mg - triphosphate with long lifetime 8mg <p>(c) Mercury in straight fluorescent lamps for special purposes.</p> <p>(d) Mercury in other lamps not specifically mentioned in this column.</p>

(*) Deca-BDE is not exempted in the Guidelines. Its use is prohibited.

Table 3 Maximum tolerance concentration as impurities

Substance	Uses and regal requirements	Maximum tolerance concentration (*1)(*2)
Cadmium and its compounds	Use other than described bellow. Under the RoHS Directive.	0.01wt% (100ppm)
	Use restricted by EU chemical substances restriction (EU Directive 76/769/EEC and its amendments.) - Resin, paint, ink, etc	0.0075wt% (75ppm)
Hexavalent chromium compounds	All uses. Under the RoHS Directive.	0.1wt% (1000ppm)
Lead and its compounds	All uses. Under the RoHS Directive.	0.1wt% (1000ppm)
Mercury and its compounds	All uses. Under the RoHS Directive.	0.1wt% (1000ppm)
PBB	All uses. Under the RoHS Directive.	0.1wt% (1000ppm)
PBDE	All uses. Under the RoHS Directive.	0.1wt% (1000ppm) (*3)

(*1) Maximum tolerance concentration as impurities of each substance is defined as the weight percentage in homogeneous materials.

(*2) Maximum tolerance concentration of heavy metal compounds is defined as the weight percentage of metal element in homogeneous materials.

e.g.) In the case of cadmium and its compound the concentration relates to the cadmium element.

(*3) Maximum tolerance concentration of PBDE is defined as the accumulated concentration of all PBDEs, including Deca-BDE, in the homogenous materials.

Table 4 List of specific amines (generated by the decomposition of one or more azo group)

Substance	Chemical formula	CAS No.
4-amino azobenzene	$C_{12}H_{11}N_3$	60-09-3
o-anisidine	C_7H_9NO	90-04-0
2-naphthylamine	$C_{10}H_9N$	91-59-8
3, 3'-dichlorobenzidine	$C_{12}H_{10}Cl_2N_2$	91-94-1
Biphenyl-4-ylamine	$C_{12}H_{11}N$	92-67-1
Benzidine	$C_{12}H_{12}N_2$	92-87-5
o-toluidine	C_7H_9N	95-53-4
4-chloro- o-toluidine	C_7H_8ClN	95-69-2
2, 4-toluenediamine	$C_7H_{10}N_2$	95-80-7
o-aminoazotoluene	$C_{14}H_{15}N_3$	97-56-3
5- nitro-o-toluidine	$C_7H_8N_2O_2$	99-55-8
3, 3'-dichloro-4, 4'-diaminodiphenylmethane	$C_{13}H_{12}Cl_2N_2$	101-14-4
4, 4'-methylenedianiline	$C_{13}H_{14}N_2$	101-77-9
4, 4'-diaminodiphenylether	$C_{12}H_{12}N_2O$	101-80-4
p-chloroaniline	C_6H_6ClN	106-47-8
3, 3'-dimethoxybenzidine	$C_{14}H_{16}N_2O_2$	119-90-4
3, 3'-dimethylbenzidine	$C_{14}H_{16}N_2$	119-93-7
2-methoxy-5-methylaniline	$C_8H_{11}NO$	120-71-8
2, 4, 5-trimethylaniline	$C_9H_{13}N$	137-17-7
4,4'-Thiodianiline	$C_{12}H_{12}N_2S$	139-65-1
2,4'-methoxy-m-Phenylenediamine	$C_7H_{10}N_2O$	615-05-4
4, 4'-methylenedi- o -toluidine	$C_{15}H_{18}N_2$	838-88-0

Table 5 Ozone depleting substances (ODS)

CFC	(Defined in Appendix A group I of Montreal Protocol)
Halon	(Defined in Appendix A group II of Montreal Protocol)
CFC other than above	(Defined in Appendix B group I of Montreal Protocol)
Carbon tetrachloride	(Defined in Appendix B group II of Montreal Protocol)
1, 1, 1-Trichloroethane	(Defined in Appendix B group III of Montreal Protocol)
HCFC	(Defined in Appendix C group I of Montreal Protocol))
HBFC	(Defined in Appendix C group II of Montreal Protocol))
Bromochloromethane	(Defined in Appendix C group III of Montreal Protocol)
Methylbromide	(Defined in Appendix E of Montreal Protocol)

3.2 Substances whose inclusion in articles to be supplied is subject to reduction and substitution

The volume of substances listed in Table 6 should be reduced in articles to be supplied, or should be replaced with other substances. We give priority to articles that do not include these substances, if commercially available.

Please be aware that some of these substances used for specified application are prohibited. Refer to the notes of Table 6.

Table 6 Substances whose inclusion in articles to be supplied is subject to reduction and substitution

Ref. No.	Substance
33	Polyvinyl chloride (PVC)
34	Tetrabromo-bisphenol A (TBBPA)
35	Brominated flame retardant (except Ref. No.5, No.6 and No.34)
36	Antimony and its compounds
37	Arsenic and its compounds
38	Beryllium and its compounds
39	Bismuth and its compounds
40	Nickel and its compounds (*1)
41	Some Phthalic Esters
42	Selenium and its compounds
43	Zinc and its compounds
44	Chlorinated paraffin (except some short chain chlorinated paraffins (Ref. No.10))
45	Chromium compounds (III)
46	Cyanogen compounds
47	Perfluorocarbon (PFC)
48	Hydrogenerated fluorocarbon (HFC)
49	Hydrogenerated organic compounds (except those listed in Table1 (No.5, No.6, etc.)
50	Manganese and its compounds
51	Organic Tin Compounds (except TBTO (Ref. No.7) and TBT/TPT (Ref. No.14))
52	Sulfur hexafluoride (SF6)

(*1) The use of nickel and its compounds for the area expected for direct and prolonged skin contact is prohibited.

(*) Ref. No.: Reference number to the attached table “Details of substances (typical examples) referred in these Guidelines”. Please refer the attached table for details.

4. Requirements for packaging materials

All packaging materials to be supplied, not limited to individual packaging, must fulfill the requirements of section 3. “Requirements for environment-related substances control for articles to be supplied”, and also must not include substances listed in Table 7. For substance where a maximum tolerance concentration is defined, any inclusion exceeding that concentration is prohibited. For substances that do not define a maximum tolerance concentration, intentional inclusion is prohibited.

Table 7 Substances whose inclusion in the packaging to be supplied is prohibited

Ref. No.	Substance	Restriction	Maximum tolerance concentration (*1)(*2)
1-4	Lead, cadmium, mercury, hexavalent chromium and their compounds	Inclusion of cadmium, hexavalent chromium, lead, mercury and their compounds in the packaging when the accumulated concentration of these substances at any portion of the packaging exceeds the maximum tolerance concentration.	0.01wt% (100ppm)
33	Polyvinyl chloride (PVC)	Intentional use of PVC in the packaging	- (Intentional use)

(*1) Maximum tolerance concentration is defined as the weight percentage in homogeneous materials.

(*2) Maximum tolerance concentration of metal compounds is defined as the weight percentage of metal element in homogeneous materials.

5. Requirements for batteries

Any type of batteries or accumulators, whether stand-alone or installed in units or products, must comply with the EU Battery Directives (2006/66/EEC and 91/157/EEC. The latter will be repealed, with effect from 26 September 2008.). The requirements of 2006/66/EEC include prohibition of inclusion exceeding the maximum tolerance concentration described on Table 8.

The area other than cells of the battery device, such as battery pack, must fulfill not only requirements described in this section but also those described in section 3. “Requirements for environment-related substances control for articles to be supplied”.

Table 8 Substances whose inclusion in the battery is prohibited

Ref. No.	Substance	Restriction	Maximum tolerance concentration (*1)
1	Cadmium and its compounds	Portable batteries or accumulators that contain cadmium and its compounds exceeding the maximum tolerance concentration.	0.002wt% (20ppm)
4	Mercury and its compounds	All batteries or accumulators, except button batteries, that contain mercury and its compounds exceeding the maximum tolerance concentration.	0.0005wt% (5ppm)
		Button batteries that contain mercury and its compounds exceeding the maximum tolerance concentration.	2wt%(20000ppm)

(*1) Maximum tolerance concentration is defined as the weight percentage of metal element in the battery.

6. Additional requirements relating to specified products

This section describes additional requirements relating to specified products of our companies. If a supplier knows that an article to be supplied is for use in one of these specified products, the supplier must meet requirements described in this section in addition to those described in section 3. - 5.

6.1 Articles for personal computers

For any article supplied to Personal Computer & Network Company, if the supplier is certain that will be used in personal computers, the restriction described on Table 9 must be fulfilled.

Table 9 Restrictions for articles for personal computers

Ref. No.	Substance	Restriction	Maximum tolerance concentration
-	Halogen compounds	Halogen compounds use in the plastic of packaging : fluorine (F), chlorine (Cl), bromine (Br), iodine (I) and astatine (At)	- (Intentional use)

6.2 Articles for hard disk drive (HDD)

For any article supplied to Digital Media Network Company, if the supplier is certain that will be used in hard disk drives (HDD), the maximum tolerance concentration described on Table 10 must be fulfilled. These requirements apply to resin, paint and ink used not only in the parts and materials that construct HDD, but also in packaging materials used for HDD shipments from us.

Table10 Maximum tolerance concentration as impurities in articles for HDD

Ref. No.	Substance	Restriction	Maximum tolerance concentration (*1)(*2)
1	Cadmium and its compounds	Resin (all materials including resin ingredient), paint and ink	0.0005wt% (5ppm)
3	Lead and its compounds	Resin (all materials including resin ingredient), paint and ink	0.01wt% (100ppm)

(*1) Maximum tolerance concentration is defined as the weight percentage in homogeneous materials.

(*2) Maximum tolerance concentration of metal compounds is defined as the weight percentage of metal element in homogeneous materials.

e.g.) In the case of cadmium and its compound the concentration relates to the cadmium element.

**Attached Table:
Details of substances (typical examples)
referred in these Guidelines**

Attached Table: Details of substances (typical examples) referred in these guidelines

No.	CAS	Chemical substance name	Chemical formula
		Cadmium and its compounds	
1	7440-43-9	Cadmium	Cd
	1306-19-0	Cadmium oxide	CdO
	1306-23-6	Cadmium sulfide	CdS
	10108-64-2	Cadmium chloride	CdCl ₂
	10124-36-4	Cadmium sulfate	CdSO ₄
	-	Other cadmium compounds	-
		Hexavalent chromium compounds	
2	10588-01-9	Sodium dichromate	Na ₂ Cr ₂ O ₇
	1333-82-0	Chromium(VI) oxide	CrO ₃
	13765-19-0	Calcium chromate	CaCrO ₄
	7758-97-6	Lead (II) chromate	PbCrO ₄
	7778-50-9	Potassium dichromate	K ₂ Cr ₂ O ₇
	7789-00-6	Potassium chromate	K ₂ CrO ₄
	-	Other hexavalent chromium compounds	
		Lead and its compounds	
3	7439-92-1	Lead	Pb
	598-63-0	Lead(II) carbonate	PbCO ₃
	1309-60-0	Lead(IV) oxide	PbO ₂
	1314-41-6	Lead(II,IV) oxide	Pb ₃ O ₄
	1314-87-0	Lead(II) sulfide	PbS
	1317-36-8	Lead(II) oxide	PbO
	1319-46-6	Lead(II) carbonate basic	2PbCO ₃ ·Pb(OH) ₂
	1344-36-1	Lead Hydroxidcarbonate	2PbCO ₃ ·Pb(OH) ₂
	7446-14-2	Lead(II) sulfate	PbSO ₄
	7446-27-7	Lead(II) phosphate	Pb ₃ (PO ₄) ₂
	7758-97-6	Lead(II) chromate	PbCrO ₄
	12060-00-3	Lead(II) titanate	PbTiO ₃
	15739-80-7	Lead sulfate,sulphuric acid,lead salt	PbSO ₄
	12202-17-4	Lead sulfate,tribasic	PbSO ₄ ·H ₂ O
	1072-35-1	Lead stearate	Pb(C ₁₇ H ₃₅ COO) ₂
	56189-09-4	Lead stearate,dibasic	2PbO·Pb(C ₁₇ H ₃₅ COO) ₂
	-	Other lead compounds	-
		Mercury and its compounds.	
4	7439-97-6	Mercury	Hg
	7487-94-7	Mercury(II) chloride	HgCl ₂
	21908-53-2	Mercury(II) oxide	HgO
	-	Other mercury compounds	-
		Polybrominated biphenyls (PBBs)	
5	59536-65-1	Polybrominated biphenyls	C ₁₂ H _x Br _(10-x)
	-	Other polybrominated biphenyls	-
		Polybrominated diphenyl ethers (PBDEs)	
6	1163-19-5	Polybrominated diphenyl ethers	C ₁₂ H _x Br _(10-x) O
	-	Othr Polybrominated diphenyl ethers	-
		Bis(tributyltin)oxide	
7	56-35-9	Bis(Tri-n-butyltin)oxide	O(Sn(C ₄ H ₉) ₃) ₂
		Polychlorinatedbiphenyls (PCBs)	
8	1336-36-3	PCB(Polychlorinated biphenyls)	C ₁₂ H _n Cl _(10-n) (n: 0-9)
	61788-33-8	PCT(Polychlorinated terphenyls)	-
	-	Other PCBs	-
		Polychlorinated naphthalene(Cl≥3)	
9	70776-03-3	Polychlorinated naphthalene(Cl≥3)	-
	-	Other Polychlorinated naphthalene(Cl≥3)	-
		Short chain chlorinated paraffins	
10	85535-84-8	Short chain chlorinated paraffins(C10-13)	C _n H _{2n+2-x} Cl _x (n:10-13)
		Asbestos	
11	77536-66-4	Actinolite	Ca ₂ (Mg,Fe) ₅ (Si ₈ O ₂₂)(OH) ₂
	12172-73-5	Amosite	Fe ₅ Mg ₂ (Si ₈ O ₂₂)(OH) ₂
	77536-67-5	Anthophyllite	(Mg, Fe) ₇ Si ₈ O ₂₂ (OH) ₂

	12001-29-5	Chrysotile	$Mg_3(Si_2O_5)(OH)_4$
	12001-28-4	Crocidolite	$Na_2Fe^{2+}_3Fe^{3+}_2Si_8O_{22}(OH)_2$
	77536-68-6	Tremolite	$Ca_2Mg_5Si_8O_{22}(OH)_2$
	-	Other asbestos	-
		Azo compounds.	
	60-09-3	4-Aminoazobenzene	$C_{12}H_{11}N_3$
	90-04-0	<i>o</i> -Anisidine	C_7H_9NO
	91-59-8	2-Naphthylamine	$C_{10}H_9N$
	91-94-1	3,3'-Dichlorobenzidine	$C_{12}H_{10}Cl_2N_2$
	92-67-1	4-Biphenylamine	$C_{12}H_{11}N$
	92-87-5	Benzidine	$C_{12}H_{12}N_2$
	95-53-4	<i>o</i> -Toluidine	C_7H_9N
	95-69-2	4-Chloro- <i>o</i> -toluidine	C_7H_8ClN
	95-80-7	2,4-Toluendiamine	$C_7H_{10}N_2$
	97-56-3	<i>o</i> -Aminoazotoluene	$C_{14}H_{15}N_3$
12	99-55-8	5-Nitro- <i>o</i> -toluidine	$C_7H_8N_2O_2$
	101-14-4	3,3'-Dichloro-4,4'-diaminodiphenylethan	$C_{13}H_{12}Cl_2N_2$
	101-77-9	4,4'-Methylenedianiline	$C_{13}H_{14}N_2$
	101-80-4	4,4'-Diaminodiphenylether	$C_{12}H_{12}N_2O$
	106-47-8	<i>p</i> -Chloroaniline	C_6H_6ClN
	119-90-4	3,3'-Dimethoxybenzidine	$C_{14}H_{16}N_2O_2$
	119-93-7	3,3'-Dimethylbenzidine	$C_{14}H_{16}N_2$
	120-71-8	2-Methoxy-5-methylaniline	$C_8H_{11}NO$
	137-17-7	2,4,5-Trimethylaniline	$C_9H_{13}N$
	139-65-1	4,4'-Thiodianiline	$C_{12}H_{12}N_2S$
	615-05-4	4-Methoxy- <i>m</i> -phenylenediamine	$C_7H_{10}N_2O$
	838-88-0	4,4'-Diamino-3,3'-dimethyldiphenylmethanmethoxybenzidine	$C_{15}H_{18}N_2$
13		Ozone Depleting Substances (ODS)	
	75-69-4	CFC-11	$CFCl_3$
	75-71-8	CFC-12	CF_2Cl_2
	76-13-1	CFC-113	$C_2F_3Cl_3$
	76-14-2	CFC-114	$C_2F_4Cl_2$
	76-15-3	CFC-115	C_2F_5Cl
	353-59-3	Halon1211	CF_2BrCl
	75-63-8	Halon1301	CF_3Br
	124-73-2	Halon2402	$C_2F_4Br_2$
	75-72-9	CFC-13	CF_3Cl
	354-56-3	CFC-111	C_2FCl_5
	28605-74-5	CFC-112	$C_2F_2Cl_4$
	422-78-6	CFC-211	C_3FCl_7
	3182-26-1	CFC-212	$C_3F_2Cl_6$
	2354-06-5	CFC-213	$C_3F_3Cl_5$
	2268-46-4	CFC-214	$C_3F_4Cl_4$
	76-17-5	CFC-215	$C_3F_5Cl_3$
	661-97-2	CFC-216	$C_3F_6Cl_2$
	422-86-6	CFC-217	C_3F_7Cl
	56-23-5	Carbon tetrachloride	CCl_4
	71-55-6	1,1,1-Trichloroethane	$C_2H_3Cl_3$
	1868-53-7	Dibromofluoromethane	$CHFBr_2$
	1511-62-2	Bromodifluoromethane	CHF_2Br
	373-52-4	Bromofluoromethane	CH_2FBr
	306-80-9	Tetrabromofluoroethane	C_2HFBr_4
	-	Tribromodifluoroethane	$C_2HF_2Br_3$
	354-04-1	Dibromotrifluoroethane	$C_2HF_3Br_2$
	124-72-1	Bromotetrafluoroethane	C_2HF_4Br
	-	Tribromofluoroethane	$C_2H_2FBr_3$
	75-62-1	Dibromodifluoroethane	$C_2H_2F_2Br_2$
	421-06-7	Bromotrifluoroethane	$C_2H_2F_3Br$
	358-97-4	Dibromofluoroethane	$C_2H_3FBr_2$
	359-07-9	Bromodifluoroethane	$C_2H_3F_2Br$
	762-49-2	Bromofluoroethane	C_2H_4FBr

-	Hexabromofluoropropane	C ₃ HFB ₆
-	Pentabromodifluoropropane	C ₃ HF ₂ Br ₅
-	Tetrabromotrifluoropropane	C ₃ HF ₃ Br ₄
-	Tribromotetrafluoropropane	C ₃ HF ₄ Br ₃
431-78-7	Dibromopentafluoropropane	C ₃ HF ₅ Br ₂
2252-79-1	Bromhexafluoropropane	C ₃ HF ₆ Br
-	Pentabromofluoropropane	C ₃ H ₂ FB ₅
-	Tetrabromodifluoropropane	C ₃ H ₂ F ₂ Br ₄
-	Tribromotrifluoropropane	C ₃ H ₂ F ₃ Br ₃
-	Dibromotetrafluoropropane	C ₃ H ₂ F ₄ Br ₂
480-88-8	Bromopentafluoropropane	C ₃ H ₂ F ₅ Br
-	Tetrabromofluoropropane	C ₃ H ₃ FB ₄
70192-80-2	Tribromodifluoropropane	C ₃ H ₃ F ₂ Br ₃
70192-83-5	Dibromotrifluoropropane	C ₃ H ₃ F ₃ Br ₂
679-84-5	Bromotetrafluoropropane	C ₃ H ₃ F ₄ Br
75372-14-4	Tribromofluoropropane	C ₃ H ₄ FB ₃
460-25-3	Dibromodifluoropropane	C ₃ H ₄ F ₂ Br ₂
421-46-5	Bromotrifluoropropane	C ₃ H ₄ F ₃ Br
51584-26-0	Dibromofluoropropane	C ₃ H ₅ FB ₂
-	Bromodifluoropropane	C ₃ H ₅ F ₂ Br
352-91-0	Bromofluoropropane	C ₃ H ₆ FBr
74-97-5	Chlorobromomethane	CH ₂ BrCl
74-83-9	Methylbromide	CH ₃ Br
75-43-4	HCFC-21	CHFCl ₂
75-45-6	HCFC-22	CHF ₂ Cl
593-70-4	HCFC-31	CH ₂ FCI
134237-32-4	HCFC121	C ₂ HFCl ₄
41834-16-6	HCFC-122	C ₂ HF ₂ Cl ₃
34077-87-7	HCFC-123	C ₂ HF ₃ Cl ₂
306-83-2	HCFC-123	CHCl ₂ CF ₃
63938-10-3	HCFC-124	C ₂ HF ₄ Cl
2837-89-0	HCFC-124	CHFClCF ₃
134237-34-6	HCFC-131	C ₂ H ₂ FCl ₃
25915-78-0	HCFC-132	C ₂ H ₂ F ₂ Cl ₂
75-88-7	HCFC-133	C ₂ H ₂ F ₃ Cl
25167-88-8	HCFC-141	C ₂ H ₃ FCl ₂
1717-00-6	HCFC-141(b)	C ₂ H ₃ FCl ₂
25497-29-4	HCFC-142	C ₂ H ₃ F ₂ Cl
75-68-3	HCFC-142(b)	CH ₃ CF ₂ Cl
1615-75-4	HCFC-151	C ₂ H ₄ FCl
134237-35-7	HCFC-221	C ₃ HFCl ₆
134237-36-8	HCFC-222	C ₃ HF ₂ Cl ₅
134237-37-9	HCFC-223	C ₃ HF ₃ Cl ₄
134237-38-0	HCFC-224	C ₃ HF ₄ Cl ₃
127564-92-5	HCFC-225	C ₃ HF ₅ Cl ₂
422-56-0	HCFC-225 ca	CF ₃ CF ₂ CHCl ₂
507-55-1	HCFC-225 cb	CF ₂ ClCF ₂ CHClF
134308-72-8	HCFC-226	C ₃ HF ₆ Cl
134190-48-0	HCFC-231	C ₃ H ₂ FCl ₅
134237-39-1	HCFC-232	C ₃ H ₂ F ₂ Cl ₄
134237-40-4	HCFC-233	C ₃ H ₂ F ₃ Cl ₃
127564-83-4	HCFC-234	C ₃ H ₂ F ₄ Cl ₂
134237-41-5	HCFC-235	C ₃ H ₂ F ₅ Cl
134190-49-1	HCFC-241	C ₃ H ₃ FCl ₄
134237-42-6	HCFC-242	C ₃ H ₃ F ₂ Cl ₃
134237-43-7	HCFC-243	C ₃ H ₃ F ₃ Cl ₂
134190-50-4	HCFC-244	C ₃ H ₃ F ₄ Cl
134190-51-5	HCFC-251	C ₃ H ₄ FCl ₃
134190-52-6	HCFC-252	C ₃ H ₄ F ₂ Cl ₂
134237-44-8	HCFC-253	C ₃ H ₄ F ₃ Cl
134237-45-9	HCFC-261	C ₃ H ₅ FCl ₂

	134190-53-7	HCFC-262	C ₃ H ₃ F ₂ Cl
	134190-54-8	HCFC-271	C ₃ H ₆ FCl
		Tributyltin, Triphenyltin	
	1803-12-9	Triphenyltin N,N'-dimethyldithiocarbamat	(C ₆ H ₅) ₃ Sn(CH ₃) ₂ NCS ₂
	379-52-2	Triphenyltin fulorid	(C ₆ H ₅) ₃ SnF
	900-95-8	Triphenyltin acetate	(C ₆ H ₅) ₃ SnOCOCH ₃
	639-58-7	Triphenyltin chloride	(C ₆ H ₅) ₃ SnCl
	76-87-9	Triphenyltin hydroxide	(C ₆ H ₅) ₃ SnOH
	47672-31-1	Triphenyltin fatty acid saits(C=9-11)	-
	7094-94-2	Triphenyltin chloroacetate	(C ₆ H ₅) ₃ SnOCOCH ₂ Cl
	2155-70-6	Triphenyltin methacrylate	(C ₄ H ₉) ₃ SnC ₄ H ₅ O ₂
	6454-35-9	Bis(tributyltin)2,3-dibromosuccinate	C ₂ H ₂ (COO) ₂ ((C ₄ H ₉) ₃ Sn) ₂
	1983-10-4	Tributyltin fluoride	(C ₄ H ₉) ₃ SnF
14	31732-71-5	Bis(tributyltin) 2,3-dibromosuccinate	((C ₄ H ₉) ₃ Sn) ₂ C ₂ H ₂ (Br) ₂ (COO) ₂
	56-36-0	Tributyltin acetate	(C ₄ H ₉) ₃ SnOCOCH ₃
	3090-36-6	Tributyltin laurate	(C ₄ H ₉) ₃ SnC ₁₂ H ₂₃ O ₂
	4782-29-0	Bis(tributyltin)phthalate	(C ₆ H ₄)(COO) ₂ ((C ₄ H ₉) ₃ Sn) ₂
	-	Copolymer of alkyl acrylate,methyl methacrylate and tributyltin methacrylate (alkyl;C=8)	-
	6517-25-5	Tributyltin sulfamate	(C ₄ H ₉) ₃ SnSO ₃ NH ₂
	14275-57-1	Bis(tributyltin)maleate	C ₂ H ₂ (COO) ₂ ((C ₄ H ₉) ₃ Sn) ₂
	1461-22-9	tributyltin chloride	(C ₄ H ₉) ₃ SnCl
	-	Mixture of tributyltin cyclopentane carboxylate and itsanalogs(tributyltin naphthenate)	-
	-	Mixture of tributyltin cyclopentane carboxylate and itsanalogs(tributyltin naphthenate)	-
	-	Other tributyltins & triphenyltins	-
		Radioactive substances	
15	7440-61-1	Uranium	U
	7440-07-5	Plutonium	Pu
	10043-92-2	Radon	Rn
	7440-35-9	Americium	Am
	7440-29-1	Thorium	Th
	7440-46-2	Cesium	Cs
	7440-24-6	Strontium	Sr
	-	Other radioactive substances	-
16		Aldrin	
	309-00-2	Aldrin	C ₁₂ H ₈ Cl ₆
17		Endrin	
	72-20-8	Endrin	C ₁₂ H ₈ Cl ₆ O
18		Yellow Phosphorus	
	7723-14-0	Yellow Phosphorus	P ₄
19		Chlordanes	
	3734-48-3	Gamma-chlordene	C ₁₀ H ₆ C ₁₆
	5103-74-2	Trans- chlordene	C ₁₀ H ₆ C ₁₈
	5103-71-9	Cis- chlordene	C ₁₀ H ₆ C ₈
	76-44-8	Heptachlor	C ₁₀ H ₅ Cl ₇
	27304-13-8	Oxychlordane	C ₁₀ H ₄ C ₁₈ O
	39765-80-5	Trans-nonachlor	C ₁₀ H ₅ Cl ₉
	5103-73-1	Cis-nonachlor	C ₁₀ H ₅ Cl ₉
20		N,N'-ditolyl-p-phenylenediamin, N-tolyl-N'-xylyl-p-phenylenediamine and N,N'-dixylyl-p-phenylenediamine	
	27417-40-9	N,N'-ditolyl-p-phenylenediamin	-
	28726-30-9	N-Tolyl-N'-Xylyl-p-phenylenediamine	-
	70290-05-0	N,N'-dixylyl-p- phenylenediamine	-
21		Dioxins	
	-	Polychlorinated dibenzo- <i>p</i> -dioxin	-
	-	Polychlorinated dibenzofuran	-
	-	Co- PCBs	-
22		DDT	
	50-29-3	DDT	C ₁₄ H ₉ Cl ₅
23		Dieldrin	

	60-57-1	Dieldrin	$C_{12}H_8Cl_6O$
24		Toxaphene	
	8001-35-2	Toxaphene	$C_{10}H_{10}Cl_8$
25		2,4,6-Tri-t-butylphenol	
	732-26-3	2,4,6-Tri-t-butylphenol	$C_{18}H_{30}O$
26		4-Nitrobiphenyl and its salt	
	92-93-3	4-Nitrobiphenyl	$C_{12}H_9NO_2$
27		Bis(chloromethyl)ether	
	542-88-1	Bis(Chloromethyl)ether	$C_2H_4Cl_2O$
28		Hexachlorobenzene	
	118-74-1	Hexachlorobenzene	C_6Cl_6
29		Benzene	
	71-43-2	Benzene	C_6H_6
30		Mirex	
	2385-85-5	Mirex	$C_{10}Cl_{12}$
31		Carcinogenic substances (Group1 and group2: evaluated by IARC)	
32		2-benzotriazol-2-yl-4,6-ditert-butyl-phenol	
	3846-71-7	2-benzotriazol-2-yl-4,6-ditert-butyl-phenol	$C_{20}H_{25}N_3O$
33		Polyvinylchloride(PVC)	
	9002-86-2	Polyvinyl chloride	$(CH_2CHCl)_n$
34		Tetrabromo-bisphenol A(TBBPA,TBBA)	
	79-94-7	Tetrabromo-bisphenol A	$C_{15}H_{12}Br_4O_2$
	30496-13-0	TBBA, unspecified	-
	40039-93-8	TBBA-epichlorhydrin oligomer	$(C_{15}H_{12}Br_4O_2.C_3H_5ClO)_x$
	70682-74-5	TBBA-TBBA-diglycidyl-ether oligomer	-
	28906-13-0	TBBA carbonate oligomer	$(C_{15}H_{12}Br_4O_2.CCl_2O)_x$
	94334-64-2	TBBA carbonate oligomer,phenoxy end capped	$(C_7H_5O_2)(C_{16}H_{10}Br_4O_3)_x(C_6H_5O)$
	71342-77-3	TBBA carbonate oligomer,2,4,6-tribromo-phenolterminated	$(C_7H_2Br_3O_3)(C_{16}H_{10}Br_4O_3)_n(C_6H_2Br_3)$
	32844-27-2	TBBA-bisphenol A-phosgene polymer	$(C_{15}H_{16}O_2.C_{15}H_{12}Br_4O_2.CCl_2O)_x$
	21850-44-2	TBBA-(2,3-dibromo-propyl-ether)	$C_{21}H_{20}Br_8O_2$
	4162-45-2	TBBA bis-(2-hydroxy-ethyl-ether)	$C_{19}H_{20}Br_4O_4$
	25327-89-3	TBBA-bis-(allyl-ether)	$C_{21}H_{20}Br_4O_2$
37853-61-5	TBBA-dimethyl-ether	$C_{17}H_{16}Br_4O_2$	
35		Brominated flame retardant (except TBBPA)	
		Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	ISO code 1043-4
		Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	ISO code 1043-4
		Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds(excluding brominated diphenyl ether and biphenyls)]	ISO code 1043-4
		Brominated flame retardant which 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]	ISO code 1043-4
		Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	ISO code 1043-4
		Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	ISO code 1043-4
	69882-11-7	Poly(2,6-dibromo-phenylene oxide)	$(C_6H_2Br_2O)_x$
	58965-66-5	Tetra-decabromo-diphenoxy-benzene	$C_{18}Br_{14}O_2$
	37853-59-1	1,2-Bis(2,4,6-tribromo-phenoxy)ethane	$C_{14}H_8Br_6O_2$
	139638-58-7	Brominated epoxy resin end-capped with tribromophenol	-
	135229-48-0	Brominated epoxy resin end-capped with tribromophenol	-
	39635-79-5	Tetrabromo-bisphenol S	$C_{12}H_6Br_4O_4S$
	42757-55-1	TBBS-bis-(2,3-dibromo-propyl-ether)	$C_{18}H_{14}Br_8O_4S$
	615-58-7	2,4-Dibromo-phenol	$C_6H_4Br_2O$
	118-79-6	2,4,6-tribromo-phenol	$C_6H_3Br_3O$
	608-71-9	Pentabromo-phenol	C_6HBr_5O
	3278-89-5	2,4,6-Tribromo-phenyl-alltl-ether	$C_9H_7Br_3O$
	26762-91-4	Tribromo-phenyl-allyl-ether, unspecified	$C_9H_7Br_3O$
3194-55-6	Hexabromo-cyclo-dodecane (HBCD), unspecified	$C_{12}H_{18}Br_6$	
31454-48-5	Tetrabromo-chyclo-octane	$C_8H_{12}Br_4$	

	3322-93-8	1,2-Dibromo-4-(1,2dibromo-methyl)-cyclo-hexane	C ₈ H ₁₂ Br ₄
	25357-79-3	TBPA Na salt	C ₈ Br ₄ O ₄ Na ₂
	632-79-1	Tetrabromo phthalic anhydride	C ₈ Br ₄ O ₃
	55481-60-2	Bis(methyl)tetrabromo-phthalate	C ₁₀ H ₆ Br ₄ O ₄
	26040-51-7	Bis(2-ethylhexyl)tetrabromo-phthalate	C ₂₄ H ₃₄ Br ₄ O ₄
	20566-35-2	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	C ₁₃ H ₁₆ Br ₄ O ₇
	75790-69-1	TBPA, glycol-and propylene-oxide esters	-
	32588-76-4	N,N'-Ethylene-bis (tetrabromo-phthalimide)	C ₁₈ H ₄ Br ₈ N ₂ O ₄
	52907-07-0	Ethylene-bis85,6-dibromo-norbornane-2,3-dicarboximide	C ₂₀ H ₂₀ Br ₄ N ₂ O ₄
	3234-02-4	2,3-Dibromo-2-butene-1,4-diol	C ₄ H ₆ Br ₂ O ₂
	3296-90-0	Dibromo-neopentyl-glycol	C ₅ H ₁₀ Br ₂ O ₂
	96-13-9	Dibromo-propanol	C ₃ H ₆ Br ₂ O
	36483-57-5	Tribromo-neopentyl-alcohol	C ₅ H ₉ Br ₃ O
	57137-10-7	Poly tribromo-styrene	-
	61368-34-1	Tribromo-styrene	C ₈ H ₅ Br ₃
	171091-06-8	Dibromo-styrene grafted PP	-
	31780-26-4	Poly-dibromo-styrene	C ₈ H ₆ Br ₂
	68955-41-9	Bromo-/Chloro-paraffins	-
	82600-56-4	Bromo-/Chloro-alpha-olefin	-
	593-60-2	Vinylbromide	C ₂ H ₃ Br
	52434-90-9	Tris-(2,3-dibromo-propyl)-isocyanurate	C ₁₂ H ₁₅ Br ₆ N ₃ O ₃
	49690-63-3	Tris(2,4-Dibromo-phenyl) phosphate	C ₁₈ H ₉ Br ₆ O ₄ P
	19186-97-1	Tris(tribromo-neopentyl) phosphate	C ₁₅ H ₂₄ Br ₉ O ₄ P
	125997-20-8	Chlorinated and brominated phosphate ester	-
	87-83-2	Pentabromo-toluene	C ₇ H ₃ Br ₅
	38521-51-6	Pentabromo-benzyl bromide	C ₇ H ₂ Br ₆
	68441-46-3	1,3-Butadiene homopolymer,brominated	-
	59447-55-1	Pentabromo-benzyl-acrylate, monomer	C ₁₀ H ₅ Br ₅ O ₂
	59447-57-3	Pentabromo-benzyl-acrylate, polymer	(C ₁₀ H ₅ Br ₅ O ₂) _x
	61262-53-1	Decabromo-diphenyl-ethane	C ₁₄ H ₄ Br ₁₀ O ₂
	59789-51-4	Tribromo-bisphenyl-maleinimide	C ₁₀ H ₄ Br ₃ NO ₂
	59789-51-4	Brominated trimethylphenyl-lindane	C ₁₈ H ₁₃ Br _n (n=7,8)
	-	Other Brominated flame retardants	-
		Antimony and its compounds.	
	7440-36-0	Antimony	Sb
	10025-91-9	Antimony trichloride	SbCl ₃
36	1309-64-4	Antimony trioxide	Sb ₂ O ₃
	1314-60-9	Antimony pentoxide	Sb ₂ O ₅
	15432-85-6	Sodium antimony	Na ₃ O ₄ Sb
	-	Other antimony compounds	
		Arsenic and its compounds	
	7440-38-2	Arsenic	As
	1303-00-0	Gallium arsenide	GaAs
	1303-28-2	Arsenic pentoxide	As ₂ O ₅
	1327-53-3	Arsenic trioxide	As ₂ O ₃
	-	Other arsenic compounds	-
		Beryllium and its compounds	
	7440-41-7	Beryllium	Be
	1304-56-9	Beryllium oxide	BeO
	-	Other Beryllium compounds	
		Bismuth and its compounds.	
39	7440-69-9	Bismuth	Bi
		Nickel and its compounds.	
	1313-99-1	Nickel(II) oxide	NiO
	3333-67-3	Nickel(II) carbonate	NiCO ₃
	7786-81-4	Nickel(II) sulfate	NiSO ₄
	7440-02-0	Nickel	Ni
	-	Other nickel compounds	
		Some Phthalic Esters	
41	117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)	C ₂₄ H ₃₈ O ₄
	84-74-2	Dibutylphthalate	C ₁₆ H ₂₂ O ₄

	117-82-8	bis(2-ethylhexyl) phthalate (DEP)	C ₁₄ H ₁₈ O ₆
42		Selenium and its compounds	
	7782-49-2	Selenium	Se
	7783-00-8	Selenous acid	H ₂ SeO ₃
	-	Other selenium compounds	
43		Zinc and its compounds	
	10025-64-6	Zinc perchlorate hexahydrate	Zn(ClO ₄) ₂ ·6H ₂ O
	10139-47-6	Zinc Iodide	ZnI ₂
	10196-18-6	Zinc nitrate hexahydrate	Zn(NO ₃) ₂ ·6H ₂ O
	10361-95-2	Zinc chlorate	Zn(ClO ₃) ₂
	1313-49-1	Zinc nitride	Zn ₃ N ₂
	1314-13-2	Zinc oxide	ZnO
	1314-84-7	Zinc phosphide	Zn ₃ P ₂
	1314-98-3	Zinc sulfide	ZnS
	1315-11-3	Zinc telluride	ZnTe
	13530-65-9	Zinc chromate	CrO ₄ Zn
	13637-61-1	Zinc perchlorate	Zn(ClO ₄) ₂
	13814-87-4	Ammonium zinc sulfate	(NH ₄) ₂ Zn(SO ₄) ₂
	13932-17-7	Potassium zinc sulfate	K ₂ Zn(SO ₄) ₂
	14485-28-0	Zinc phosphate,monobasic	Zn(H ₂ PO ₄) ₂
	14639-97-5	Zinc ammonium chloride	(NH ₄) ₂ [ZnCl ₄]
	15060-64-7	Zinc hypophoshite	Zn(PH ₂ O ₂) ₂
	16871-71-9	Zinc fluorosilicate	Zn[SiF ₆]
	544-97-8	Dimethyl zinc	Zn(CH ₃) ₂
	557-20-0	Diethyl zinc	Zn(C ₂ H ₅) ₂
	557-21-1	Zinc cyanide	Zn(CN) ₂
	557-34-6	Zinc acetate	Zn(CH ₃ COO) ₂
	557-42-6	Zinc thiocyanate	Zn(SCN) ₂
	5970-45-6	Zinc acetate dihydrate	Zn(CH ₃ COO) ₂ ·2H ₂ O
	73640-07-0	Zinc fluoride tetrahydrate	ZnF ₂ ·4H ₂ O
	7446-20-0	Sulfuric acid, zinc salt(1:1), Heptahydrate	ZnSO ₄ ·7H ₂ O
	7646-85-7	Zinc chloride	ZnCl ₂
	7699-45-8	Zinc bromide	ZnBr ₂
	7733-02-0	Zinc sulfate	ZnSO ₄
	7779-86-4	Zinc hydrosulfite	ZnS ₂ O ₄
	7779-88-6	Zinc nitrate	Zn(NO ₃) ₂
	7783-49-5	Zinc fluoride	ZnF ₂
	77998-33-5	Ammonium zinc sulfate hydrateE	(NH ₄) ₂ Zn(SO ₄) ₂ ·6H ₂ O
44		Chlorinated paraffine (except short chain chlorinated paraffins (No.10))	
		Medium chain chlorinated paraffins (C14-17)	C _n H _{2n+2-x} Cl _x (n:14-17)
		Long chain chlorinated paraffins (C18-30)	C _n H _{2n+2-x} Cl _x (n:18-30)
45		Chromium(III) compounds.	
	10022-47-6	Ammonium chromium(III) sulfate dodecahydrate	Cr(NH ₄)(SO ₄) ₂ ·2H ₂ O
	10025-73-7	Chromic chloride	CrCl ₃
	10031-25-1	Chromium(III) bromide	CrBr ₃
	10060-12-5	Chromium Trichloride Hexahydrate	CrCl ₃ ·6H ₂ O
	10101-53-8	Chromic Sulfate	Cr ₂ (SO ₄) ₃
	10141-00-1	Chromium Potassium Sulfate	CrK(SO ₄) ₂
	1066-30-4	Chromic Acetate	Cr(CH ₃ COO) ₃
	12018-22-3	Chromium(III) sulfide	Cr ₂ S ₃
	1308-38-9	Chromium oxide	Cr ₂ O ₃
	13475-98-4	Chromium(III) phosphate hexahydrate	CrPO ₄ ·6H ₂ O
	13478-06-3	Chromium(III) bromide hexahydrate	CrBr ₃ ·6H ₂ O
	13537-21-8	Chromic perchlorate	Cr(ClO ₄) ₃
	13548-38-4	Chromium nitrate	Cr(NO ₃) ₃
	13548-43-1	Ammonium chromic sulfate	Cr(NH ₄)(SO ₄) ₂
	13569-75-0	Chromium(III) iodide	CrI ₃
	13573-16-5	Chromate(1-),Diamine tetrakis(Thiocyanate-N)-, Ammonium,(OC-6-11)	trans-NH ₄ [Cr(NCS) ₄ (NH ₃) ₂]
	13573-17-6	Reinecke salt monohydrate;Ammonium Tetra thiocyanate diammine chromate	trans-NH ₄ [Cr(NCS) ₄ (NH ₃) ₂]·H ₂ O
	13601-11-1	Potassium hexacyano chromate(III)	K ₃ [Cr(CN) ₆]

	15244-38-9	Chromium(III) sulfate N-hydrate	$\text{Cr}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$
	16165-32-5	Tris(ethylene diamine)chromium(III) Chloride hydrate	$[\text{Cr}(\text{C}_2\text{H}_8\text{N}_2)_3]\text{Cl}_3 \cdot 3\text{H}_2\text{O}$
	21679-31-2	Chromium(III) acetyl acetonate	$\text{Cr}(\text{C}_5\text{H}_7\text{O}_2)_3$
	24094-93-7	Chromium(III) nitride	CrN
	25013-82-5	Chromium(III) acetate monohydrate	$\text{Cr}(\text{CH}_3\text{COO})_3 \cdot \text{H}_2\text{O}$
	26342-61-0	Chromium phosphide	CrP
	30737-19-0	Chromium(III) oxalate	$\text{Cr}_2(\text{C}_2\text{O}_4)_3$
	55147-94-9	Chromium(III) perchlorate hexahydrate	$\text{Cr}(\text{ClO}_4)_3 \cdot 6\text{H}_2\text{O}$
	64093-79-4	Neochromium	$\text{Cr}(\text{OH})\text{SO}_4 \cdot \text{Na}_2\text{SO}_4 \cdot \text{H}_2\text{O}$
	7440-47-3	Chromium	Cr
	7788-97-8	Chromium(III) fluoride	CrF_3
	7788-99-0	Chromium potassium sulfate dodeca hydrate	$\text{CrK}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$
	7789-02-8	Chromium nitrate, Nona hydrate	$\text{Cr}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$
	7789-04-0	Chromium(III) phosphate	CrPO_4
		Cyanogen compounds.	
	100-47-0	Benzonitrile	$\text{C}_7\text{H}_5\text{N}$
	107-13-1	Acrylonitrile	$\text{C}_3\text{H}_3\text{N}$
	109-78-4	Ethylene cyanohydrin	$\text{C}_2\text{H}_5\text{NO}$
	1194-65-6	2,6-Dicloro benzonitrile	$\text{C}_7\text{H}_3\text{Cl}_2\text{N}$
	13453-34-4	Thallium(I) cyanide	TlCN
	140-29-4	Phenyl acetonitrile	$\text{C}_8\text{H}_7\text{N}$
	143-33-9	Sodium cyanide	NaCN
	14763-77-0	Copper cyanide	$\text{Cu}(\text{CN})_2$
	151-50-8	Potassium cyanide	KCN
	156-62-7	Calcium cyanamide	CCaN_2
	2035-66-7	Palladium(II) cyanide	$\text{Pd}(\text{CN})_2$
	21159-32-0	Cesium cyanide	CsCN
	21725-46-2	Cyanazine	$\text{C}_9\text{H}_{13}\text{ClN}_6$
	420-04-2	Cyanamide	NCNH_2
	460-19-5	Cyanogen	$(\text{CN})_2$
	506-64-9	Silvber cyanide	AgCN
	506-65-0	Gold(I) cyanide	AuCN
46	506-68-3	Cyanogen bromide	CNBr
	506-77-4	Cyanogen chloride	CNCl
	506-78-5	Cyanogen iodide	CNI
	535-37-5	Gold(I)cyanide trihydrate	$\text{Au}(\text{CN})_3 \cdot 3\text{H}_2\text{O}$
	535-37-5	Gold(I) cyanide	$\text{Au}(\text{CN})_3$
	542-62-1	Barium cyanide	$\text{Ba}(\text{CN})_2$
	542-83-6	Cadmium cyanide	$\text{Cd}(\text{CN})_2$
	542-84-7	Cobalt(II) cyanide	$\text{Co}(\text{CN})_2$
	544-92-3	Cuprous cyanide	CuCN
	557-19-7	Nickel cyanide	$\text{Ni}(\text{CN})_2$
	557-21-1	Zinc cyanide	$\text{Zn}(\text{CN})_2$
	592-01-8	Calcium cyanide	$\text{Ca}(\text{CN})_2$
	592-04-1	Mercuric cyanide	$\text{Hg}(\text{CN})_2$
	592-05-2	Lead cyanide	$\text{Pb}(\text{CN})_2$
	592-06-3	Platinam(II) cyanide	$\text{Pt}(\text{CN})_2$
	74-90-8	Hydrogen cyanide	HCN
	7677-24-9	Trimethylsilyl cyanide	$\text{Si}(\text{CN})(\text{CH}_3)_3$
	917-61-3	Sodium cyanide	CNNaO
		Perfluorocarbon (PFC)	
	115-25-3	Octafluorocyclobutane	C_4F_8
	307-34-6	Octadecafluorooctane, Perfluorooctane	C_8F_{18}
	335-57-9	PFC72,PFC-51-14	C_7F_{16}
	355-25-9	PFC218	C_4F_{10}
47	355-42-0	Tetradecafluorohexane, Perfluorohexane	C_6F_{14}
	678-26-2	PFC410	C_5F_{12}
	75-73-0	Tetrafluoromethane	CF_4
	76-16-4	PFC14	C_2F_6
	76-19-7	PFC116	C_3F_8

		Hydrogenerated fluorocarbon (HFC)	
	811-97-2	HFC-134a	CH ₂ FCF ₃
	138495-42-8	HFC-43-10mee	C ₅ H ₂ F ₁₀
	354-33-6	HFC-125	CHF ₂ CF ₃ , C ₂ HF ₅
	407-59-0	HFC-356mff, HFC-356ffa	C ₄ H ₄ F ₆
	420-46-2	HFC-143a	CH ₃ CF ₃
	430-66-0	HFC-143	CHF ₂ CH ₂ F
	431-89-0	HFC-227ea	CF ₃ CHFCF ₃ , C ₃ HF ₇
	679-86-7	HFC-245ca	C ₃ H ₃ F ₅
	690-39-1	HFC-236fa	C ₃ H ₂ F ₆
	75-10-5	HFC-32	CH ₂ F ₂
48	75-37-6	HFC-152a	CH ₃ CHF ₂
	75-46-7	HFC-23	CHF ₃
	593-53-3	HFC-41	CH ₃ F
	359-35-3	HFC-134	CHF ₂ CHF ₂
	-	HFC-245fa	-
	-	HFC-125/143a/134a=44/52/4	-
	-	HFC-32/125/134a=20/40/40	-
	-	HFC-32/125/134a=23/25/52	-
	-	HFC-32/125=50/50	-
	-	HFC-32/125=45/55	-
	-	HFC-32/143a=50/50	-
	-	HFC-23/FC-116=39/61	-
	-	HFC-23/FC-116=46/54	-
		Brominated flame retardant	
	115-96-8	Tris (2-chloroethyl)phosphate	C ₆ H ₁₂ Cl ₃ PO ₄
	21850-44-2	TBBA-(2,3-dibromo-propyl-ether)	C ₂₁ H ₂₀ Br ₂ O ₂
	3194-55-6	1,2,5,6,9,10-Hexabromocyclodecane	C ₁₂ H ₁₈ Br ₆
	79-27-6	1,1,2,2-Tetrabromoethane	C ₂ H ₂ Br ₄
49	79-94-7	Tetrabromo-bisphenol A(TBBA)	C ₁₅ H ₁₂ Br ₄ O ₂
	87-82-1	Hexabromobenzene	C ₆ Br ₆
	9002-84-0	Polytetrafluoroethylene	(C ₂ F ₄) _n
	75-25-2	Tribromomethane	CHBr ₃
	118-79-6	2,4,6-Tribromo-Phenol	C ₆ H ₃ Br ₃ O
	4162-45-2	TBBA-bis(2-Hydroxy-ethyl-ether)	C ₁₉ H ₂₀ Br ₄ O ₄
50		Manganese and its compounds	
	7439-96-5	Manganese	Mn
	10031-20-6	Manganese(II) bromide tetrahydrate	Mn Br ₂ ·4H ₂ O
	10034-96-5	Manganese(II) sulfate heptahydrate	Mn(C ₂ O ₄) · 2H ₂ O
	10043-84-2	Manganese hypophosphite	Mn(PH ₂ O ₂) ₂
	10101-50-5	Sodium permanganate	NaMnO ₄
	10124-54-6	Manganese(III) phosphate hydrate	MnPO ₄ ·H ₂ O
	10170-69-1	Dimanganese decacarbonyl	Mn ₂ (CO) ₁₀
	10377-66-9	Manganese(II) nitrate	Mn(NO ₃) ₂
	12005-95-7	Manganese arsenide	MnAs
	12032-78-9	Manganese phosphide	MnP
	12032-86-9	Manganese silicide	MnSi
	12032-88-1	Manganese telluride	MnTe
	12427-38-2	Maneb	C ₄ H ₆ MnN ₂ S ₄
	12777-96-7	Manganese carbide	Mn ₃ C
	1313-13-9	Manganese(IV) oxide	MnO ₂
	1313-22-0	Manganese monoselenide	MnSe
	1317-34-6	Manganese(III) oxide, 98%(assay); manganese trioxide	Mn ₂ O ₃
	1317-35-7	Manganomanganic oxide; manganese tetra oxide; trimanganese tetraoxide; manganese(II,III) oxide; manganese oxide(II,III)	Mn ₃ O ₄
	13224-08-3	Manganese(II) sulfate	MnSO ₄
	1344-43-0	Manganese(II) oxide	MnO
	13446-03-2	Manganese(II) bromide	MnBr ₂
	13446-34-9	Manganese(II) chloride tetrahydrate	MnCl ₂ ·4H ₂ O
	13566-22-8	Ammonium manganese sulfate	Mn(NH ₄) ₂ (SO ₄)
	13568-71-3	Manganese(II) sulfite	MnSO ₃

	14154-9-7	Manganese(II) phosphate	$Mn_3(PO_4)_2$
	14284-89-0	Acetylaceton manganese(III) salt; Tris(2,4-pentanedionate)manganese;	$Mn(C_5H_7O_2)_3$
	15364-94-0	Manganese(II) perchlorate	$Mn(ClO_4)_2$
	17141-63-8	Manganese(II) nitrate hexahydrate	$Mn(NO_3)_2 \cdot 6H_2O$
	18820-29-6	Manganese sulfide	MnS
	598-62-9	Manganese(II) carbonate	$MnCO_3$
	6156-78-1	Manganese(II) acetate tetrahydrate	$Mn(CH_3COO)_2 \cdot 4H_2O$
	638-38-0	Manganese(II) acetate	$Mn(CH_3COO)_2$
	640-67-5	Manganese oxalate	$Mn(C_2O_4)$
	6556-16-7	Manganese(II) oxalate dihydrate	$Mn(C_2O_4) \cdot 2H_2O$
	7439-96-5	Manganese	Mn
	7722-64-7	Potassium deoxy manganate	$KMnO_4$
	7773-01-5	Manganese(II) chloride; Manganesedichloride	$MnCl_2$
	7782-64-1	Manganese difluoride	MnF_2
	7782-76-5	Manganese phosphate, dibasic	$MnHPO_4$
	7783-16-6	Manganese(II) hypophosphite monohydrate	$Mn(PH_2O_2) \cdot H_2O$
	7783-53-1	Manganese(III) fluoride	MnF_3
	7790-33-2	Manganese(II) iodide	MnI_2
	993-2-2	Manganese(III) acetate	$Mn(CH_3COO)_3$
	-	Other manganese compounds	$Mn(CH_3COO)_3$
51	-	Organic Tin Compounds (except TBTO (No.7) and TBT/TPT (No.14))	-
52		Sulfur hexafluoride(SF6)	
	2551-62-4	Sulfur hexafluoride	F_6S

Guidelines for Green Procurement

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