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**Littelfuse, Inc. -
Supplier Environmental, Health and
Safety (EHS) Specification
P571-7.4.0-022**

REVISION	DESCRIPTION OF CHANGE	ORIGINATOR	RELEASE DATE
A	Final Version	D. Untiedt	5/19/06
B	Updated to include recent changes in the RoHS Directive. Added REACH requirements.	A. Cesista	7/5/13

Table of Contents

	Page(s)
1 Introduction	
Purpose	3
Scope	3
Supplier Responsibilities	3
Definitions	3
2 Specifications	
Compliance with Regulatory Requirements and EHS Management Systems	4
Equipment Safety Requirements	4
Restricted/Prohibited Materials	4
Packaging Requirements	4
Reporting Requirements for Restricted/Prohibited Materials	4
Health & Safety Reporting Requirements	5
Verification of Compliance	5
Corrective Action Process for Non-compliances	5
3 Appendices	
Appendix A – LF Environmental, Health & Safety Policy	6
Appendix B – List of Banned and Restricted Substances	7
Appendix C - IPC Form 1752-2 Material Composition Declaration	44-47

1 Introduction

Purpose

This specification provides general requirements to suppliers regarding Littelfuse Inc's EHS specification with regard to regulatory compliance, EHS management systems, banned and restricted substances, packaging, and product environmental content reporting.

1.2 Scope

This standard applies to all equipment, materials, parts, components, packaging, or products supplied to Littelfuse, Inc.

1.3 Supplier Responsibilities

It is the responsibility of all suppliers to comply with the requirements listed in this standard.

1.4 Definitions

Homogeneous material -

A material that is of uniform composition throughout and that cannot be mechanically disjointed into different materials. Examples of "homogeneous materials" would be individual types of plastics, ceramics, glass, metals, alloys, paper, board, resins and coatings. The term "mechanically disjointed" means that the materials can be, in principle, separated by a mechanical action such as unscrewing, cutting, crushing, grinding and abrasive processes.

Materials

Chemical compounds and formulated substances that are supplied for the production of parts. Examples of materials are: plastics/ resins, metals, coatings, paint, adhesives, etc.

Parts

Mechanical parts, electrical devices, or assemblies.

Substance

Chemical elements and their compounds. A Substance is either a material or a constituent of a material. A Substance is not a constituent of a component or product. Each Substance will have a unique CAS (Chemical Abstractive Service) identifier assigned to it.

Supplier Material Declaration

A material declaration is a declaration that discloses all (100%) of the homogeneous materials that are found in the supplied material/ parts and all (100%) of the substances that are contained in those materials. All materials or substances that are intentionally added, or not intentionally added must be disclosed on the material declaration.

Material Safety Data Sheet (MSDS)

Material Safety Data Sheet (MSDS) is a document that contains information on the potential hazards (health, fire, reactivity and environmental) of the chemical and how to work safely with the chemical.

2 Specifications

Regulatory Compliance and EHS Management Systems

All Littelfuse Inc. suppliers shall comply with all applicable EHS laws and regulations in the countries in which they operate, and provide services and products. At a minimum, All Littelfuse Inc. suppliers shall implement an EHS management system that is compliant with the ISO 14001 and OHSAS 18001 standards.

Equipment Specifications

All new, refurbished or leased equipment supplied to Littelfuse, Inc., shall comply with section 3 of Littelfuse New Equipment Specifications.

Banned and Restricted Substances

Any substance identified in Appendix B that is used in any materials, parts, components and products supplied to Littelfuse, Inc. shall not exceed the specified threshold limits except where exemptions are noted and declared.

Packaging Requirements

The specifications in this section pertain to all packaging materials purchased by or on the behalf of Littelfuse, Inc.

TABLE 1 – List of Banned and Restricted Packaging Materials

Substance	Threshold Limit	Exemptions
Ozone depleting substances (Class I & Class II CFC's and HCFC's)	Not Present	None
Heavy Metals - Cadmium, Chromium VI, Lead and Mercury Compounds	100 ppm (sum of incidental concentrations)	None
Polyvinyl Chloride and other Halogenated plastics or polymers	Not Present	None
Expanded polystyrene (EPS) foam	Not Present	None

Reporting Requirements for Banned and Restricted Substances

All Littelfuse, Inc. suppliers shall complete a Supplier Material Declaration for all materials, parts, components, packaging and products supplied to Littelfuse, Inc. This level of disclosure is required for Littelfuse, Inc. to meet the requirements of

Directive 2011/65/EU, WEEE, as well as our customer requirements. The Supplier Material Declaration shall be submitted at the Homogeneous Material Level using Form IPC-1752-2, Distribute, Class 6 as identified in Appendix C. This form shall be completed upon initial delivery of products or materials. Suppliers shall be required to resubmit the Supplier Material Declaration if any information previously reported has changed or if new information becomes available to make the declaration more accurate.

Based on industry requirements, additional reporting, such as a 3rd party test report conducted according to ISO/IEC 62321 or a material declaration such those specified by IMDS – International Material Data System, may be required.

Health & Safety Reporting Requirements

All Littelfuse, Inc. suppliers shall submit a Material Safety Data Sheet (MSDS) for all materials, parts, components, packaging and products supplied to Littelfuse, Inc. MSDS's shall be submitted upon initial delivery of products or materials and when any revisions have occurred to the MSDS.

Supplier Verification of Compliance

Upon request by Littelfuse, Inc. the supplier shall provide documentation verifying compliance of materials, parts, components, packaging or products using analytical testing or other suitable means approved by Littelfuse, Inc. (Example: 3rd party test report conducted according to ISO/IEC 62321)

Corrective Action Process for Non-compliances

Once a non-compliance has been found, follow P571-7.4.0-014 Supplier Rejects and Corrective Action Resolution procedure to initiate a supplier corrective action request.

Appendix A – Littelfuse Environmental, Health & Safety Policy



ENVIRONMENTAL, HEALTH & SAFETY POLICY

LITTELFUSE is committed to conducting its worldwide operations in a responsible manner that protects the environment and ensures the safety and welfare of our associates, customers and neighbors. It is the policy of **LITTELFUSE** to:

Meet or exceed compliance with applicable Environmental, Health & Safety laws, regulations and company policies.

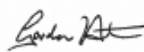
Strive to identify and reduce hazards to prevent illnesses and injuries.

Design products that are safe in their intended use and minimize the use of hazardous materials in manufacturing processes.

Prevent pollution by minimizing waste at the point of generation or finding ways to reuse or recycle materials.

Implement and maintain an effective Environmental, Health & Safety Management System that establishes objectives, targets and programs to achieve continual improvement.

Communicate company environmental, health & safety policies and procedures to all associates, and persons working for, or on behalf of Littelfuse. Training and tools will be provided to all appropriate individuals in order to maintain a safe and healthful work environment.



Gordon Hunter
Chairman, President and
Chief Executive Officer

Appendix B – List of Banned and Restricted Substances

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
1,2,3 Trichlorobenzene	87-61-6	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
1,2,4 Trichlorobenzene	120-82-1	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
1,3,5 Trichlorobenzene	108-70-3	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
2-Ethoxyethanol	110-80-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
2-Methoxyethanol	109-86-4	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
2,4-Dinitrotoluene	204-450-0	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
4,4'-Diaminodiphenylmethane (MDA)	202-974-4	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Acrylamide	201-173-7	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Ammonium dichromate	232-143-1	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
Anthracene	204-371-1	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Anthracene oil	292-602-7	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Anthracene oil, anthracene paste	292-603-2	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Anthracene oil, anthracene paste, anthracene fraction	295-275-9	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Anthracene oil, anthracene paste, distn. lights	295-278-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Anthracene oil, anthracene-low	292-604-8	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Aliphatic CHCs	See Annex A	0.1% (Total)/ Intentionally added		EU 76/769/EEC ChemRRV
Antimony trioxide	1309-64-4	0.1% by weight		Joint Industry Guide (JIG) 101A
Asbestos	See Annex A	0.1 (Total) Intentionally added		ANNEX XVII of REACH Regulation (EC) No 1907/2006; 76/769/EEC, Marketing and Use of Dangerous Substances and amendments: (83/478/EEC; 85/610/EEC; 87/217/EEC; 91/659/EEC; 99/77/EEC). United States: Toxic Substances Control Act (restricts new uses); Occupational Safety and Health Act (29 CFR 1910.1001-1051). ChemRRV

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
Azocolorants	See Annex A	Intentionally added		76/769/EEC, Marketing and Use of Dangerous Substances and amendments: (2002/61/EC; 2003/03/EEC).
Beryllium oxide	1304-56-9	0.1% by weight (1000 ppm) of the product		DIGITALEUROPE 3/CECED/ AeA 4/ EERA guidance
Benzyl butyl phthalate (BBP)	CAS# 85-68-7 EC# 201-622-7	0.1% by weight (1000 ppm) of the product	≤ 800 ppm or 0.08%	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Bis (2-ethylhexyl) phthalate	CAS# 117-81-7	0.1% by weight		Article 33 and 7.2 of REACH
Boric acid	CAS# 10043-35-3 & 11113-50-1 EC# 233-139-2 & 234-343-4	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)
Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)	See Annex A	0.1% by weight (1000 ppm) of plastic material		DIGITALEUROPE 3/CECED/ AeA 4/ EERA guidance IPC-4101 and IEC 61249-2-21
Bromine	7726-95-6	≤ 900 ppm or 0.09%	≤ 800 ppm or 0.08%	5.4 The International Electrochemical Commission's (IEC) Definition of Halogen-Free (IEC 61249-2-21:2003)
Cadmium/cadmium compounds	See Annex A	0.01% by weight (100 ppm) of homogeneous materials 0.0005% by weight (5 ppm) of battery	≤ 80 ppm or 0.08%	ANNEX XVII of REACH Regulation (EC) No 1907/2006; 2002/95/EC and 2005/618/EC China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50 Swiss Ordinance on Reduction of Risk from Chemical Products; EU Directive 2006/66/EC
Chlorine	7782-50-5	≤ 900 ppm or 0.09%	≤ 800 ppm or 0.08%	5.4 The International Electrochemical Commission's (IEC) Definition of Halogen-Free

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
				(IEC 61249-2-21:2003)
Chromic acid	7738-94-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Chromium VI compounds	See Annex A	0.1% by weight (1000 ppm) of homogeneous materials	≤ 800 ppm or 0.08%	EU Directive 2002/95/EC and 2005/618/EC; ANNEX XVII of REACH Regulation (EC) No 1907/2006; China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50
Cobalt(II) carbonate	513-79-1	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Cobalt(II) diacetate	71-48-7	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Cobalt dichloride	CAS# 7646-79-9 EC# 231-589-4	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Cobalt(II) dinitrate	10141-05-6	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Cobalt(II) sulphate	10124-43-3	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Diarsenic pentoxide	CAS# 1303-28-2 EC# 215-116-9	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Diarsenic trioxide	CAS# 1327-53-3 EC# 215-481-4	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Dichromic acid	13530-68-2	0.1% (1000ppm) of		Article 57 of REACH Regulation (EC) No.

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
		homogeneous materials		1907/2006
Dibutyl phthalate (DBP)	CAS# 84-74-2 EC# 201-557-4	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Bis (2-ethylhexyl)phthalate (DEHP)	204-211-0	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Di-isobutyl phthalate (DIBP)	CAS# 84-69-5 EC# 201-553-2	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Di-isodecyl phthalate (DIDP)	CAS# 26761-40-0 & 68515-49-1 EC # 247-977-1 & 71-091-4	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Diisononyl phthalate (DINP)	CAS# 28553-12-0 & 68515-48-0 EC# 249-079-5 & 271-090-9	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Di-n-octyl phthalate (DNOP)	CAS # 117-84-0 EC# 204-214-7	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Dibutyltin (DBT) compounds	See Annex A	0.1% by weight (1000 ppm) of tin in a material		COMMISSION DECISION 2009/425/EC
Diocetyl tin (DOT) compounds	See Annex A	0.1% by weight (1000 ppm) of tin in a material		COMMISSION DECISION 2009/425/EC
Dimethyl fumarate	624-49-7	0.00001% by weight (0.1 ppm) in a material		COMMISSION DECISION 2009/251/EC

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
Disodium tetraborate, anhydrous	215-540-4	0.1% by weight (1000 ppm) of the product		Article 57 of REACH Regulation (EC) No. 1907/2006
Fluorinated greenhouse gases (PFC, SF6, HFC)	See Annex A	Intentionally added		EU Reg. No. 842/2006
Formaldehyde	50-00-0	Intentionally added		US/CA CARB Rule
Hexabromocyclododecane (HBCDD) and all major diastereoisomers	See Annex A	0.1% by weight (1000 ppm) of the product	≤ 800 ppm or 0.08%	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)
Lead/lead compounds	See Annex A	0.1% by weight (1000 ppm) of homogeneous materials	≤ 800 ppm or 0.08%	EU Directive 2002/95/EC and 2005/618/EC; ANNEX XVII of REACH Regulation (EC) No 1907/2006; China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50
Lead chromate	CAS# 7758-97-6 EC# 231-846-0	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	CAS# 12656-85-8 EC# 235-759-9	0.1% by weight of the product		Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	CAS# 1344-37-2 EC# 215-693-7	0.1% by weight		Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)
Mercury/mercury compounds	See Annex A	Intentionally added or 0.1% (1 000 ppm) at homogeneous material	≤ 800 ppm or 0.08%	ANNEX XVII of REACH Regulation (EC) No 1907/2006; EU Directives 2002/95/EC and 2005/618/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

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
				Reduction Act
Nickel	7440-02-0	Intentionally added; where prolonged skin contact is expected		ANNEX XVII of REACH Regulation (EC) No 1907/2006
Ozone Depleting Substances	See Annex A	Intentionally added		Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and others (Japanese law), Montreal Protocol, 1990 revision of Article 611 of the Clean Air Act (US law), 76/769/EEC, marketing and Use of Dangerous Substances and amendments: (94/60/EEC; 97/64/EEC)
Perchlorates	See Annex A	0.000006% by weight (0.006 ppm) of the product		US/CA DTSC Rulemaking
Perfluorooctane sulfonate (PFOS)	See Annex A	Intentionally added		ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EC) No 552/2009; 5.3 Declaration of EU Directive 2006/122/EC Compliance (PFOS Restriction); Canadian Environmental Protection Act SOR/SOR/2008-178
Pitch, coal tar, high temp.	266-028-2	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) 1	3846-71-7	Intentionally added		Japan Law concerning the evaluation of chemical substances
Polybrominated biphenyls (PBBs)	See Annex A	0.1% by weight (1 000 ppm) in homogeneous material	≤ 800 ppm or 0.08%	EU Directive 2002/95/EC and 2005/618/EC; China MII Methods; Korea RoHS; Japan J-MOSS

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
Polybrominated diphenylethers (PBDEs)	See Annex A	0.1% by weight (1 000 ppm) in homogeneous material	≤ 800 ppm or 0.08%	EU Directive 2002/95/EC and 2005/618/EC; China MII Methods; Korea RoHS; Japan J-MOSS
Polychlorinated biphenyls (PCBs) and specific substitutes	See Annex A	Intentionally added		Japan Law concerning the evaluation of chemical substances; ANNEX XVII of REACH Regulation (EC) No 1907/2006; US TSCA.
Polychlorinated terphenyls (PCTs)	See Annex A	Intentionally added		Japan Law concerning the evaluation of chemical substances; ANNEX XVII of REACH Regulation (EC) No 1907/2006; US TSCA.
Polychlorinated naphthalenes (more than 3 chlorine atoms)	See Annex A	Intentionally added		Japan Law concerning the evaluation of chemical substances
Polyvinyl chloride (PVC)	See Annex A	0.1% by weight (1 000 ppm) of the product		IEEE1680 (EPEAT: Electronic Product Environmental Assessment Tool)
Potassium chromate	232-140-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Potassium dichromate	231-906-6	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Radioactive substances	See Annex A	Intentionally added		EU-D 96/29/Euratom; Japan Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986; US NRC
Refractory Ceramic Fibres, Aluminosilicate	See Annex A	0.1% by weight (1 000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010),
Refractory Ceramic Fibres, Zirconia Aluminosilicate	See Annex A	0.1% by weight (1 000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010),

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
Shortchain chlorinated paraffins (C10 – C13)	See Annex A	0.1% by weight (1 000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008), Norway Product Regulations FOR-2004-06-01-922; Swiss Ordinance on Reduction of Risk from Chemical Products
Sodium chromate	231-889-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Sodium dichromate	234-190-3 (7789-12-0 and 10588-01-9)	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Tetraboron disodium heptaoxide, hydrate	235-541-3	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Trichloroethylene	201-167-4	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Tris(2-chloroethyl)phosphate TCEP	CAS# 115-96-8 EC# 204-118-5	0.1% (1000ppm) of homogeneous materials		Article 57 of REACH Regulation (EC) No. 1907/2006
Tetraboron disodium heptaoxide, hydrate 1	CAS# 12267-73-1 EC# 235-541-3	0.1% by weight (1000 ppm) of the product		Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)
Tri-substituted organostannic compounds	See Annex A	0.1% by weight (1000 ppm) of tin in a material 7		Commission Decision 2009/425/EC; Japan Law concerning the evaluation of chemical substances
Tributyl tin oxide (TBTO)	CAS# 56-35-9 EC# 200-268-0	Intentionally added or 0.1% by weight (1000 ppm) of the product		Article 57 of REACH Regulation (EC) No. 1907/2006; Japan Law concerning the evaluation of chemical substances Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006



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Supplier Environmental, Health & Safety Specification

P571-7.4.0-022 Rev. B

Substance/ Category	CAS # EC #	Threshold Level (Reporting level)	LF Internal Limit	Reference Regulation/ Standard or Customer Requirement
				(Candidate list of SVHC for authorization 28.10.2008)

Annex A: Detailed Substance Lists with CAS Numbers and/or EC Numbers
TABLE 2 — Aliphatic CHCs

Aliphatic CHCs	CAS Numbers
Tetrachloromethane	56-23-5
1,1,2,2-Tetrachloroethane	79-34-5
1,1,1,2-Tetrachloroethane	630-20-6
Pentachloroethane	76-01-7
Trichloromethane (Chloroform)	67-66-3
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
1,1-Dichloroethylene	75-35-4

TABLE 3 — Asbestos

Asbestos	CAS Numbers
Asbestos	1332-21-4
Actinolite	77536-66-4
Amosite (Grunerite)	12172-73-5
Anthophyllite	77536-67-5
Chrysotile	12001-29-5
Crocidolite	12001-28-4
Tremolite	77536-68-6

TABLE 4 — Azocolorants

Azocolorants	CAS Numbers
biphenyl-4-ylamine	92-67-1
Benzidine	92-87-5
4-chloro-o-toluidine	95-69-2
2-naphthylamine	91-59-8
o-aminoazotoluene	97-56-3
5-nitro-o-toluidine	99-55-8
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4,4'-methylenedianiline	101-77-9
3,3'-dichlorobenzidine	91-94-1
3,3'-dimethoxybenzidine	119-90-4
3,3'-dimethylbenzidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
6-methoxy-m-toluidine	120-71-8
4,4'-methylene-bis(2-chloroaniline)	101-14-4
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
o-toluidine	95-53-4
4-methyl-m-phenylenediamine	95-80-7
2,4,5-trimethylaniline	137-17-7
o-anisidine	90-04-0

Azocolorants	CAS Numbers
4-amino azobenzene	60-09-03

TABLE 5 — Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)

Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)	CAS Numbers
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]	-
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]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-
Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Tetra-decabromo-diphenoxy-benzene	58965-66-5
1,2-Bis(2,4,6-tribromo-phenoxy) ethane	37853-59-1
3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
TBBA, unspecified	30496-13-0
TBBA-epichlorhydrin oligomer	40039-93-8
TBBA-TBBA-diglycidyl-ether oligomer	70682-74-5
TBBA carbonate oligomer	28906-13-0
TBBA carbonate oligomer, phenoxy end capped	94334-64-2
TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated	71342-77-3
TBBA-bisphenol A-phosgene polymer	32844-27-2
Brominated epoxy resin end-capped with tribromophenol	139638-58-7
Brominated epoxy resin end-capped with tribromophenol	135229-48-0
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
TBBA bis-(2-hydroxy-ethyl-ether)	4162-45-2
TBBA-bis-(allyl-ether)	25327-89-3
TBBA-dimethyl-ether	37853-61-5
Tetrabromo-bisphenol S	39635-79-5
TBBS-bis-(2,3-dibromo-propyl-ether)	42757-55-1
2,4-Dibromo-phenol	615-58-7
2,4,6-tribromo-phenol	118-79-6
Pentabromo-phenol	608-71-9
2,4,6-Tribromo-phenyl-allyl-ether	3278-89-5
Tribromo-phenyl-allyl-ether, unspecified	26762-91-4
Bis(methyl)tetrabromo-phthalate	55481-60-2
Bis(2-ethylhexyl)tetrabromo-phthalate	26040-51-7

Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)	CAS Numbers
2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	20566-35-2
TBPA, glycol-and propylene-oxide esters	75790-69-1
N,N'-Ethylene -bis-(tetrabromo-phthalimide)	32588-76-4
Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)	52907-07-0
2,3-Dibromo-2-butene-1,4-diol	3234-02-4
Dibromo-neopentyl-glycol	3296-90-0
Dibromo-propanol	96-13-9
Tribromo-neopentyl-alcohol	36483-57-5
Poly tribromo-styrene	57137-10-7

TABLE 6 — Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)

Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD)	CAS Numbers
Tribromo-styrene	61368-34-1
Dibromo-styrene grafted PP	171091-06-8
Poly-dibromo-styrene	31780-26-4
Bromo-/Chloro-paraffins	68955-41-9
Bromo-/Chloro-alpha-olefin	82600-56-4
Vinylbromide	593-60-2
Tris-(2,3-dibromo-propyl)-isocyanurate	52434-90-9
Tris(2,4-Dibromo-phenyl) phosphate	49690-63-3
Tris(tribromo-neopentyl) phosphate	19186-97-1
Chlorinated and brominated phosphate ester	125997-20-8
Pentabromo-toluene	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	59447-57-3
Decabromo-diphenyl-ethane	84852-53-9
Tribromo-bisphenyl-maleinimide	59789-51-4
Tetrabromo-cyclo-octane	31454-48-5
1,2-Dibromo-4-(1,2 dibromo-methyl)-cyclo-hexane	3322-93-8
Tetrabromophthalic acid Na salt	25357-79-3
Tetrabromo phthalic anhydride	632-79-1
Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	155613-93-7
Other Brominated Flame Retardants	-

TABLE 7 — Cadmium/Cadmium Compounds

Cadmium/Cadmium Compounds	CAS Numbers
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 8 — Chromium VI Compounds

Chromium VI Compounds	EC Numbers	CAS Numbers
Chromium (VI) oxide		1333-82-0
Barium chromate		10294-40-3
Calcium chromate		13765-19-0
Chromium trioxide		1333-82-0
Lead (II) chromate	231-846-0	7758-97-6
Lead chromate molybdate sulphate red	235-759-9	12656-85-8
Lead sulfochromate yellow	215-693-7	1344-37-2
Sodium chromate		2146108
Sodium dichromate		10588-01-9
Strontium chromate		2151068
Potassium dichromate		7778-50-9
Potassium chromate		7789-00-6
Zinc chromate		13530-65-9
Other chromium VI compounds		-

TABLE 9 — Dibutyltin Compounds (DBT)

Dibutyltin Compounds	CAS Numbers
Dibutyltin oxide	818-08-6
Dibutyltin diacetate	1067-33-0
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6
Other dibutyltin compounds	-

TABLE 10 — Dioctyltin Compounds (DOT)

Dioctyltin Compounds	CAS Numbers
Dioctyl Tin Oxide	870-08-6
Dioctyltin dilaurate	3648-18-8
Other Dioctyltin compounds	-

**TABLE 11 – Fluorinated Greenhouse Gases
Perfluorocarbons (PFC), Sulfur hexafluoride (SF6) & Hydrofluorocarbons (HFC)**

Fluorinated Greenhouse Gases	CAS Numbers
Tetrafluoromethane (Carbon tetrafluoride, PFC-14)	75-73-0

Fluorinated Greenhouse Gases	CAS Numbers
Hexafluoroethane (PFC-116)	76-16-4
Octafluoropropane (PFC-218)	76-19-7
Decafluorobutane (PFC-31-10)	355-25-9
Dodecafluoropentane (PFC-41-12)	678-26-2
Tetradecafluorohexane (PFC-51-14)	355-42-0
Octafluorocyclobutane (PFC-c318)	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 12 – Hexabromocyclododecane (HBCDD)

HBCDD and all Major Diastereoisomers	EC Numbers	CAS Numbers
Hexabromocyclododecane (HBCDD)	247-148-4 and 221-695-9	25637-99-4 and 3194-55-6
Alpha-hexabromocyclododecane	NA	134237-50-6
Beta-hexabromocyclododecane	NA	134237-51-7
Gamma-hexabromocyclododecane	NA	134237-52-8

TABLE 13 — Lead/lead Compounds

Lead/Lead Compounds	EC Numbers	CAS Numbers
Lead		7439-92-1
Lead (II) sulfate		7446-14-2
Lead (II) carbonate		598-63-0
Lead (II) chromate	231-846-0	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8

Lead/Lead Compounds	EC Numbers	CAS Numbers
Lead hydrocarbonate		1319-46-6
Lead hydrogen arsenate		232-064-2
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 sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2
Lead/Lead Compounds	EC Numbers	CAS Numbers
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 14 — Mercury /Mercury Compounds

Mercury /Mercury Compounds	CAS Numbers
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 15 — Ozone Depleting Substances
Chlorofluorocarbons (CFC), Halons, Hydrobromofluorocarbons (HBFC),
Hydrochlorofluorocarbons (HCFC) and others

Ozone Depleting Substances	CAS Numbers
Trichlorofluoromethane (CFC-11)	75-69-4
Dichlorodifluoromethane (CFC-12)	75-71-8
Chlorotrifluoromethane (CFC-13)	75-72-9
Pentachlorofluoroethane (CFC-111)	354-56-3
Tetrachlorodifluoroethane (CFC-112)	76-12-0
1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112)	76-12-0
1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)	76-11-9
Trichlorotrifluoroethane (CFC-113)	76-13-1,
1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113)	76-13-1
1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)	354-58-5
Dichlorotetrafluoroethane (CFC-114)	76-14-2
Monochloropentafluoroethane (CFC-115)	76-15-3
Heptachlorofluoropropane (CFC-211)	422-78-6 135401-87-5
1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa)	422-78-6
1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)	422-81-1
Hexachlorodifluoropropane (CFC-212)	3182-26-1
Pentachlorotrifluoropropane (CFC-213)	2354-06-5 134237-31-3
Tetrachlorotetrafluoropropane (CFC-214) 1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa)	29255-31-0
1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)	2268-46-4
Trichloropentafluoropropane (CFC-215)	-
1,2,2-Trichloropentafluoropropane (CFC-215aa)	1599-41-3
1,2,3-Trichloropentafluoropropane (CFC-215ba)	76-17-5
1,1,2-Trichloropentafluoropropane (CFC-215bb)	-
1,1,3-Trichloropentafluoropropane (CFC-215ca)	-
1,1,1-Trichloropentafluoropropane (CFC-215cb)	4259-43-2
Dichlorohexafluoropropane (CFC-216)	661-97-2
Chloroheptafluoropropane (CFC-217)	422-86-6
Bromochloromethane (Halon-1011)	74-97-5
Dibromodifluoromethane (Halon-1202)	75-61-6
Bromochlorodifluoromethane (Halon-1211)	353-59-3
Bromotrifluoromethane (Halon-1301)	75-63-8

Ozone Depleting Substances	CAS Numbers
Dibromotetrafluoroethane (Halon-2402)	124-73-2
Tetrachloromethane (carbon tetrachloride)	56-23-5
1,1,1-Trichloroethane (methylchloroform)	71-55-6
Bromomethane (methyl bromide)	74-83-9
Bromoethane (ethyl bromide)	74-96-4
1-Bromopropane (n-propyl bromide)	106-94-5
Trifluoriodomethane (trifluoromethyl iodide)	2314-97-8
Chloromethane (methyl chloride)	74-87-5
Dibromofluoromethane (HBFC-21 B2)	1868-53-7
Bromodifluoromethane (HBFC-22 B1)	1511-62-2
Bromofluoromethane (HBFC-31 B1)	373-52-4
Tetrabromofluoroethane (HBFC-121 B4)	306-80-9
Tribromodifluoroethane (HBFC-122 B3)	-
Dibromotrifluoroethane (HBFC-123 B2)	354-04-1
Bromotetrafluoroethane (HBFC-124 B1)	124-72-1
Tribromofluoroethane (HBFC-131 B3)	-
Dibromodifluoroethane (HBFC-132 B2)	75-82-1
Bromotrifluoroethane (HBFC-133 B1)	421-06-7
Dibromofluoroethane (HBFC-141 B2)	358-97-4
Bromodifluoroethane (HBFC-142 B1)	420-47-3
Bromofluoroethane (HBFC-151 B1)	762-49-2
Hexabromofluoropropane (HBFC-221 B6)	-
Pentabromodifluoropropane (HBFC-222 B5)	-
Tetrabromotrifluoropropane (HBFC-223 B4)	-
Tribromotetrafluoropropane (HBFC-224 B3)	-
Dibromopentafluoropropane (HBFC-225 B2)	431-78-7
Bromohexafluoropropane (HBFC-226 B1)	2252-78-0
Pentabromofluoropropane (HBFC-231 B5)	-
Tetrabromodifluoropropane (HBFC-232 B4)	-
Tribromotrifluoropropane (HBFC-233 B3)	-
Dibromotetrafluoropropane (HBFC-234 B2)	-
Bromopentafluoropropane (HBFC-235 B1)	460-88-8
Tetrabromofluoropropane (HBFC-241 B4)	-
Tribromodifluoropropane (HBFC-242 B3)	70192-80-2
Dibromotrifluoropropane (HBFC-243 B2)	431-21-0
Bromotetrafluoropropane (HBFC-244 B1)	679-84-5
Tribromofluoropropane (HBFC-251 B3)	75372-14-4

Ozone Depleting Substances	CAS Numbers
Dibromodifluoropropane (HBFC-252 B2)	460-25-3
Bromotrifluoropropane (HBFC-253 B1)	421-46-5
Dibromofluoropropane (HBFC-261 B2)	51584-26-0
Bromodifluoropropane (HBFC-262 B1)	-
Bromofluoropropane (HBFC-271 B1)	1871-72-3
Dichlorofluoromethane (HCFC-21)	75-43-4
Chlorodifluoromethane (HCFC-22)	75-45-6
Chlorofluoromethane (HCFC-31)	593-70-4
Tetrachlorofluoroethane (HCFC-121)	134237-32-4
1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121)	354-14-3
1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a)	354-11-0
Trichlorodifluoroethane (HCFC-122)	41834-16-6
1,2,2-Trichloro-1,1-difluoroethane (HCFC-122)	354-21-2
1,1,2-Trichloro-1,2-difluoroethane (HCFC-122a)	354-15-4
1,1,1-Trichloro-2,2-difluoroethane (HCFC-122b)	354-12-1
Dichlorotrifluoroethane (HCFC-123)	34077-87-7
1,1-Dichloro-2,2,2-trifluoroethane (HCFC-123)	306-83-2
	354-23-4
1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	90454-18-5
1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	812-04-4
Chlorotetrafluoroethane (HCFC-124)	63938-10
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	3 2837-89-0
1-chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	354-25-6
	27154-33-2
Trichlorofluoroethane (HCFC-131)	(134237-34-6)
1,1,2-Trichloro-2-fluoroethane (HCFC-131)	359-28-4
1,1,2-Trichloro-1-fluoroethane (HCFC-131a)	811-95-0
1,1,1-Trichloro-2-fluoroethane (HCFC-131b)	2366-36-1
Dichlorodifluoroethane (HCFC-132)	25915-78-0
1,2-Dichloro-1,2-difluoroethane (HCFC-132)	431-06-1
1,1-Dichloro-2,2-difluoroethane (HCFC-132a)	471-43-2
1,2-Dichloro-1,1-difluoroethane (HCFC-132b)	1649-08-7
1,1-Dichloro-1,2-difluoroethane (HCFC-132c)	1842-05-3

Ozone Depleting Substances	CAS Numbers
Chlorotrifluoroethane (HCFC-133)	1330-45-6 431-07-2
1-Chloro-1,2,2-trifluoroethane (HCFC-133)	1330-45-6
2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	75-88-7
1-Chloro-1,1,2-trifluoroethane (HCFC-133b)	421-04-5
Dichlorofluoroethane(HCFC-141)	1717-00-6 (25167-88-8)
1,2-Dichloro-1-fluoroethane (HCFC-141)	430-57-9
1,1-Dichloro-2-fluoroethane (HCFC-141a)	430-53-5
1,1-Dichloro-1-fluoroethane (HCFC-141b)	1717-00-6
Chlorodifluoroethane (HCFC-142)	25497-29-4
2-Chloro-1,1-Difluoroethane (HCFC-142)	338-65-8
1-Chloro-1,1-difluoroethane (HCFC-142b)	75-68-3
1-Chloro-1,2-difluoroethane (HCFC-142a)	338-64-7
Chlorofluoroethane (HCFC-151)	110587-14-9
1-Chloro-2-fluoroethane (HCFC-151)	762-50-5
1-Chloro-1-fluoroethane (HCFC-151a)	1615-75-4
Hexachlorofluoropropane (HCFC-221)	134237-35-7 29470-94-8
1,1,1,2,2,3-Hexachloro-3-fluoropropane (HCFC-221ab)	422-26-4
Pentachlorodifluoropropane (HCFC-222)	134237-36-8
1,1,1,3,3-pentachloro-2,2-difluoropropane (HCFC-222ca))	422-49-1
1,2,2,3,3-pentachloro-1,1-difluoropropane (HCFC-222aa)	422-30-0
Tetrachlorotrifluoropropane (HCFC-223)	134237-37-9
1,1,3,3-Tetrachloro-1,2,2-trifluoropropane (HCFC-223ca)	422-52-6
1,1,1,3-Tetrachloro-2,2,3-trifluoropropane (HCFC-223cb)	422-50-4
Trichlorotetrafluoropropane (HCFC-224)	134237-38-0
1,3,3-Trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca)	422-54-8
1,1,3-Trichloro-1,2,2,3-tetrafluoropropane (HCFC-224cb)	422-53-7
1,1,1-Trichloro-2,2,3,3-tetrafluoropropane (HCFC-224cc)	422-51-7

Ozone Depleting Substances	CAS Numbers
Dichloropentafluoropropane (HCFC-225)	127564-92-5
2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC-225aa)	128903-21-9
2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	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)	134308-72-8
2-Chloro-1,1,1,3,3,3-hexafluoro-propane (HCFC-226da)	431-87-8
Pentachlorofluoropropane (HCFC-231)	134190-48-0
1,1,1,2,3-pentachloro-2-fluoro-propane (HCFC-231bb)	421-94-3
Tetrachlorodifluoropropane (HCFC-232)	134237-39-1
1,1,1,3-Tetrachloro-3,3-difluoropropane (HCFC-232fc)	460-89-9
Trichlorotrifluoropropane (HCFC-233)	134237-40-4
1,1,1-Trichloro-3,3,3-trifluoropropane (HCFC-233fb)	7125-83-9
Dichlorotetrafluoropropane (HCFC-234)	127564-83-4
1,2-Dichloro-1,2,3,3-tetrafluoropropane (HCFC-234db)	425-94-5
Chloropentafluoropropane (HCFC-235)	134237-41-5
1-Chloro-1,1,3,3,3-pentafluoropropane (HCFC-235fa)	460-92-4
Tetrachlorofluoropropane (HCFC-241)	134190-49-1
1,1,2,3-Tetrachloro-1-fluoropropane (HCFC-241db)	666-27-3
Trichlorodifluoropropane (HCFC-242)	134237-42-6
1,3,3,Trichloro-1,1-difluoropropane (HCFC-242fa)	460-63-9
Dichlorotrifluoropropane (HCFC-243)	134237-43-7
1,1-Dichloro-1,2,2-trifluoropropane (HCFC-243cc)	7125-99-7
2,3-Dichloro-1,1,1-trifluoropropane (HCFC-243db)	338-75-0
3,3-Dichloro-1,1,1-trifluoropropane (HCFC-243fa)	460-69-5
Chlorotetrafluoropropane (HCFC-244)	134190-50-4
3-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244ca)	679-85-6
1-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244cc)	421-75-0
Trichlorofluoropropane (HCFC-251)	134190-51-5
1,1,3-Trichloro-1-fluoropropane (HCFC-251fb)	818-99-5
1,1,2-Trichloro-1-fluoropropane (HCFC-251dc)	421-41-0
Dichlorodifluoropropane (HCFC-252)	134190-52-6
1,3-Dichloro-1,1-difluoropropane (HCFC-252fb)	819-00-1
Chlorotrifluoropropane (HCFC-253)	134237-44-8
3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	460-35-5

Ozone Depleting Substances	CAS Numbers
Dichlorofluoropropane (HCFC-261)	134237-45-9
1,1-Dichloro-1-fluoropropane (HCFC-261fc)	7799-56-6
1,2-Dichloro-2-fluoro-propane (HCFC-261ba)	420-97-3
Chlorodifluoropropane (HCFC-262)	134190-53-7
1-Chloro-2,2-difluoropropane (HCFC-262ca)	420-99-5
2-Chloro-1,3-difluoropropane (HCFC-262da)	102738-79-4
1-Chloro-1,1-difluoropropane (HCFC-262fc)	421-02-03
Chlorofluoropropane (HCFC-271)	134190-54-8
2-Chloro-2-fluoropropane (HCFC-271ba)	420-44-0
1-Chloro-1-fluoropropane (HCFC-271fb)	30-55-7

TABLE 16 – Perchlorate Compounds

Perchlorate Compounds	CAS Numbers
Lithium perchlorate	7791-03-9
Other perchlorate compounds	-

TABLE 17 – PFOS Compounds

PFOS Compounds	CAS Numbers
Perfluorooctane Sulfonates (PFOS) C ₈ F ₁₇ SO ₂ X, where X = OR, NR or other derivative	-

TABLE 18 — Polybrominated Biphenyls (PBBs)

Polybrominated Biphenyls (PBBs)	CAS Numbers
Polybrominated Biphenyls	59536-65-1
Dibromobiphenyl	92-86-4
2-Bromobiphenyl	2052-07-5
3-Bromobiphenyl	2113-57-7
4-Bromobiphenyl	92-66-0
Tribromobiphenyl	59080-34-1
Tetrabromobiphenyl	40088-45-7
Pentabromobiphenyl	56307-79-0
Hexabromobiphenyl	59080-40-9
Hexabromo-1,1-biphenyl	36355-01-8
Firemaster FF-1	67774-32-7
Heptabromobiphenyl	35194-78-6
Octabromobiphenyl	61288-13-9
Nonabromobiphenyl	27753-52-2

Polybrominated Biphenyls (PBBs)	CAS Numbers
Decabromobiphenyl	13654-09-6

TABLE 19 — Polybrominated Diphenyl Ethers (PBDEs)

Diphenyl Ethers (PBDEs) Polybrominated Diphenyl Ethers (PBDEs)	CAS Numbers
Bromodiphenyl ether	101-55-3
Dibromodiphenyl ether	2050-47-7
Tribromodiphenyl ether	49690-94-0
Tetrabromodiphenyl ether	40088-47-9
Pentabromodiphenyl ether (note: Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.	32534-81-9 (CAS number used for commercial grades of PeBDPO)
Hexabromodiphenyl ether	36483-60-0
Heptabromodiphenyl ether	68928-80-3
Octabromodiphenyl ether	32536-52-0
Nonabromodiphenyl ether	63936-56-1
Decabromodiphenyl ether	1163-19-5

TABLE 20 — Polychlorinated Biphenyls (PCBs) and specific substitutes

Polychlorinated Biphenyls (PCBs)	CAS Numbers
Polychlorinated Biphenyls (all isomers and congeners)	1336-36-3
Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	76253-60-6
Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	81161-70-8
Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8

TABLE 21 — Polychlorinated Terphenyls (PCTs)

Polychlorinated Terphenyls (PCTs)	CAS Numbers
Polychlorinated Terphenyls (all isomers and congeners)	61788-33-8

TABLE 22 — Polychlorinated Naphthalenes

Polychlorinated Naphthalenes	CAS Numbers
Polychlorinated Naphthalenes	70776-03-3
Other polychlorinated Naphthalenes	-

TABLE 23 — (PVC) Polyvinyl Chloride

Polyvinyl Chloride	CAS Numbers
Polyvinyl chloride (PVC)	9002-86-2
Other Polyvinyl chlorides	-

TABLE 24 — Radioactive Substances (Radioactive Isotope)

Radioactive Substances	CAS Numbers
Uranium-238	7440-61-1
Radon	10043-92-2
Americium-241	14596-10-2
Thorium-232	7440-29-1
Cesium-137	10045-97-3
Strontium-90	10098-97-2
Other radioactive substances	-

TABLE 25 — Refractory Ceramic Fibers, Aluminosilicate

Refractory Ceramic Fibers, Aluminosilicate	Index Numbers
<p>are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 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 fulfill the two following conditions:</p> <p>a) Al₂O₃ and SiO₂ are present within the following concentration ranges:</p> <ul style="list-style-type: none"> •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 – 	650-017-00-8

Refractory Ceramic Fibers, Aluminosilicate	Index Numbers
<p>54 % w/w,</p> <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)</p>	

TABLE 26 — Refractory Ceramic Fibers, Zirconia Aluminosilicate

Refractory Ceramic Fibers, Zirconia Aluminosilicate	Index Numbers
<p>are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 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 fulfill the two following conditions:</p> <p>a) Al₂O₃, SiO₂ and ZrO₂ are present within the following concentration ranges:</p> <ul style="list-style-type: none"> •Al₂O₃: 35 – 36 % w/w, and •SiO₂: 47.5 – 50 % w/w, and •ZrO₂: 15 - 17 % w/w, <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)</p>	<p>650-017-00-8</p>

TABLE 27 — Short Chain Chlorinated Paraffins (SCCPs)

Short Chain Chlorinated Paraffins (C10-C13)	EC Numbers	CAS Numbers
Alkanes, C10-13, chloro	287-476-5	85535-84-8
Alkanes, C10-12, chloro		108171-26-2
Alkanes, C12-13, chloro		71011-12-6

Alkanes, chloro		61788-76-9
Chlorinated polyethylene		64754-90-1
Other Short Chain Chlorinated Paraffins		-

TABLE 28 — Short Chain Chlorinated Paraffins (SCCPs)

Tri-substituted Organostannic Compounds	CAS Numbers
Triphenyltin-N, N-dimethyldithiocarbamate	1803-12-9
Triphenyltinfluoride	379-52-2
Triphenyltinacetate	900-95-8
Triphenyltinchloride	639-58-7
Triphenyltinhydroxide	76-87-9
Triphenyltin fattyacid((9-11)salt)	18380-71-7 18380-72-8 47672-31-1 94850-90-5
Triphenyltinchloroacetate	7094-94-2
Tributyltinmethacrylate	2155-70-6
Bis(tributyltin)fumalate	6454-35-9
Tributyltinfluoride	1983-10-4
Bis(tributyltin)2,3-dibromosuccinate	31732-71-5
Tributyltinacetate	56-36-0
Tributyltinlaurate	3090-36-6
Bis(tributyltin)phthalate	4782-29-0
Copolymer of alkyl(c=8) acrylate,methyl methacrylate and tributyltin methacrylate	67772-01-4
Tributyltinsulfamate	6517-25-5
Bis(tributyltin)maleate	14275-57-1
Tributyltinchloride	1461-22-9 7342-38-3
Tributyltin cyclopentane carbonate = mixture	85409-17-2
Tributyltin-1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylatemix	26239-64-5
Other tri-substituted organostannic compounds	-

TABLE 29 — Candidate List for Substances of Very High Concern

#	Substance Name	CAS #	SVHC Published Date
1	Anthracene	120-12-7	2008-10-28
2	4,4'- Diaminodiphenylmethane	101-77-9	2008-10-28
3	Dibutyl phthalate	84-74-2	2008-10-28
4	Cobalt dichloride	7646-79-9	2008-10-28
5	Diarsenic pentaoxide	1303-28-2	2008-10-28
6	Diarsenic trioxide	1327-53-3	2008-10-28
7	Sodium dichromate, dihydrate	10588-01-9	2008-10-28
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	2008-10-28
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	2008-10-28
10	Hexabromocyclododecane (HBCDD)	3194-55-6	2008-10-28
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	2008-10-28
12	Bis(tributyltin) oxide,hexabutyldistannoxane	56-35-9	2008-10-28
13	Lead hydrogen arsenate	7784-40-9	2008-10-28
14	Triethyl arsenate	15606-95-8	2008-10-28
15	Benzyl butyl phthalate	85-68-7	2008-10-28
16	2,4-Dinitrotoluene	121-14-2	2010-1-13
17	Anthracene oil	90640-80-5	2010-1-13
18	Anthracene oil, anthracene paste	90640-81-6	2010-1-13
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	2010-1-13
20	Anthracene oil, anthracene paste, distn. lights	91995-17-4	2010-1-13
21	Anthracene oil, anthracene-low	90640-82-7	2010-1-13

#	Substance Name	CAS #	SVHC Published Date
22	Diisobutyl phthalate	84-69-5	2010-1-13
23	Lead chromate	7758-97-6	2010-1-13
24	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	2010-1-13
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	2010-1-13
26	Pitch, coal tar, high temp.	65996-93-2	2010-1-13
27	Tris(2-chloroethyl)phosphate	115-96-8	2010-1-13
28	Acrylamide	79-06-1	2010-3-30
29	Trichloroethylene	79-01-6	2010-6-18
30	Boric acid	10043-35-3	2010-6-18
31	Disodium tetraborate, anhydrous	1330-43-4	2010-6-18
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	2010-6-18
33	Sodium chromate	7775-11-3	2010-6-18
34	Potassium chromate	7789-00-6	2010-6-18
35	Ammonium dichromate	7789-09-5	2010-6-18
36	Potassium dichromate	7778-50-9	2010-6-18
37	2-Ethoxyethanol	110-80-5	2010-12-15
38	2-Methoxyethanol	109-86-4	2010-12-15
39	Chromic acid	7738-94-5	2010-12-15
40	Chromium trioxide	1333-82-0	2010-12-15
41	Cobalt(II) carbonate	513-79-1	2010-12-15
42	Cobalt(II) diacetate	71-48-7	2010-12-15
43	Cobalt(II) dinitrate	10141-05-6	2010-12-15
44	Cobalt(II) sulphate	10124-43-3	2010-12-15
45	1,2,3-Trichloropropane	96-18-4	2011-6-20
46	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	2011-6-20
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	2011-6-20
48	1-Methyl-2-pyrrolidone	872-50-4	2011-6-20

#	Substance Name	CAS #	SVHC Published Date
49	2-Ethoxyethyl acetate	111-15-9	2011-6-20
50	Hydrazine	302-01-2 / 7803-57-8	2011-6-20
51	Strontium chromate	7789-06-2	2011-6-20
52	Dichromium tris(chromate)	24613-89-6	2011-12-19
53	Potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9	2011-12-19
54	Pentazinc chromate octahydroxide	49663-84-5	2011-12-19
55	Aluminosilicate Refractory Ceramic Fibres (RCF)	-	2011-12-19
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	-	2011-12-19
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	2011-12-19
58	Bis(2-methoxyethyl) phthalate	117-82-8	2011-12-19
59	2-Methoxyaniline; o-Anisidine	90-04-0	2011-12-19
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	2011-12-19
61	1,2-Dichloroethane	107-06-2	2011-12-19
62	Bis(2-methoxyethyl) ether	111-96-6	2011-12-19
63	Arsenic acid	7778-39-4	2011-12-19
64	Calcium arsenate	7778-44-1	2011-12-19
65	Trilead diarsenate	3687-31-8	2011-12-19
66	N,N-dimethylacetamide (DMAC)	127-19-5	2011-12-19
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	2011-12-19
68	Phenolphthalein	77-09-8	2011-12-19
69	Lead azide Lead diazide	13424-46-9	2011-12-

#	Substance Name	CAS #	SVHC Published Date
			19
70	Lead styphnate	15245-44-0	2011-12-19
71	Lead dipicrate	6477-64-1	2011-12-19
72	α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C-I Solvent Blue 4) [<i>with ≥ 0-1% of Michler's ketone (EC No- 202-027-5) or Michler's base (EC No- 202-959-2)</i>]	6786-83-0	2012-6-18
73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	2012-6-18
74	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β -TGIC)	59653-74-6	2012-6-18
75	Diboron trioxide	1303-86-2	2012-6-18
76	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2012-6-18
77	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [<i>with ≥ 0-1% of Michler's ketone (EC No- 202-027-5) or Michler's base (EC No- 202-959-2)</i>]	561-41-1	2012-6-18
78	Lead(II) bis(methanesulfonate)	17570-76-2	2012-6-18
79	Formamide	75-12-7	2012-6-18
80	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C-I Basic Violet 3) [<i>with ≥ 0-1% of Michler's ketone (EC No- 202-027-5) or Michler's base (EC No- 202-959-2)</i>]	548-62-9	2012-6-18
81	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	2012-6-18
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C-I Basic Blue 26) [<i>with ≥ 0-1% of Michler's ketone (EC No- 202-027-5) or Michler's base (EC No- 202-959-2)</i>]	2580-56-5	2012-6-18
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	2012-6-18

#	Substance Name	CAS #	SVHC Published Date
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	2012-6-18
85	Pyrochlore, antimony lead yellow	8012-00-8	2012-12-19
86	6-methoxy-m-toluidine (p-cresidine)	120-71-8	2012-12-19
87	Henicosfluoroundecanoic acid	2058-94-8	2012-12-19
88	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	2012-12-19
89	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	2012-12-19
90	Dibutyltin dichloride (DBTC)	683-18-1	2012-12-19
91	Lead bis(tetrafluoroborate)	13814-96-5	2012-12-19
92	Lead dinitrate	10099-74-8	2012-12-19
93	Silicic acid, lead salt	11120-22-2	2012-12-19
94	4-Aminoazobenzene	60-09-3	2012-12-19
95	Lead titanium zirconium oxide	12626-81-2	2012-12-19
96	Lead monoxide (lead oxide)	1317-36-8	2012-12-19
97	o-Toluidine	95-53-4	2012-12-19
98	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	2012-12-19
99	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	2012-12-19
100	Trilead bis(carbonate)dihydroxide	1319-46-6	2012-12-19
101	Furan	110-00-9	2012-12-19

#	Substance Name	CAS #	SVHC Published Date
102	N,N-dimethylformamide	68-12-2	2012-12-19
103	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	2012-12-19
104	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	2012-12-19
105	4,4'-methylenedi-o-toluidine	838-88-0	2012-12-19
106	Diethyl sulphate	64-67-5	2012-12-19
107	Dimethyl sulphate	77-78-1	2012-12-19
108	Lead oxide sulfate	12036-76-9	2012-12-19
109	Lead titanium trioxide	12060-00-3	2012-12-19
110	Acetic acid, lead salt, basic	51404-69-4	2012-12-19
111	[Phthalato(2-)]dioxotrilead	69011-06-9	2012-12-19
112	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	2012-12-19
113	N-methylacetamide	79-16-3	2012-12-19
114	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	2012-12-19
115	1,2-Diethoxyethane	629-14-1	2012-12-19
116	Tetralead trioxide sulphate	12202-17-4	2012-12-19
117	N-pentyl-isopentylphthalate	776297-69-9	2012-12-19
118	Dioxobis(stearato)trilead	12578-12-0	2012-12-19
119	Tetraethyllead	78-00-2	2012-12-19
120	Pentalead tetraoxide sulphate	12065-90-6	2012-12-19
121	Pentacosafuorotridecanoic acid	72629-94-8	2012-12-19
122	Tricosafuorododecanoic acid	307-55-1	2012-12-19
123	Heptacosafuorotetradecanoic acid	376-06-7	2012-12-19
124	1-bromopropane (n-propyl bromide)	106-94-5	2012-12-19
125	Methoxyacetic acid	625-45-6	2012-12-19
126	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	2012-12-19
127	Methyloxirane (Propylene oxide)	75-56-9	2012-12-19
128	Trilead dioxide phosphonate	12141-20-7	2012-12-19
129	o-aminoazotoluene	97-56-3	2012-12-19

#	Substance Name	CAS #	SVHC Published Date
130	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	2012-12-19
131	4,4'-oxydianiline and its salts	101-80-4	2012-12-19
132	Orange lead (lead tetroxide)	1314-41-6	2012-12-19
133	Biphenyl-4-ylamine	92-67-1	2012-12-19
134	Diisopentylphthalate	605-50-5	2012-12-19
135	Fatty acids, C16-18, lead salts	91031-62-8	2012-12-19
136	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	2012-12-19
137	Sulfurous acid, lead salt, dibasic	62229-08-7	2012-12-19
138	Lead cyanamidate	20837-86-9	2012-12-19
139	Cadmium	7440-43-9	2013-06-20
140	Cadmium oxide	1306-19-0	2013-06-20
141	Dipentyl phthalate (DPP)	131-18-0	2013-06-20
142	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	2013-06-20
143	Ammoniumpentadecafluorooctanoate (APFO)	3825-26-1	2013-06-20
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	2013-06-20

Table 30 Exemptions (As stated in Directive 2011/65/EU unless otherwise noted)

Exemption Number	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; 3,5 mg may be used per burner after 31 December 2011 until 31 December 2012; 2,5 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; 3,5 mg may be used per burner after 31 December 2011
1(c)	For general lighting purposes ≥ 50 W and ≤ 150 W: 5 mg	
1(d)	For general lighting purposes ≥ 150 W: 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 ($\geq 25\,000$ h): 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 > 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

Exemption Number	Exemption	Scope and dates of applicability
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 (> 500 mm 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 31 December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 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 $R_a > 60$:	
4(b)-I	$P < 155$ W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011
4(b)-II	155 W $< P < 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(b)-III	$P > 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 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 31 December 2011; 25 mg may be used per burner after 31 December 2011
4(c)-II	155 W $< P < 405$ W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011
4(c)-III	$P > 405$ W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 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	

Exemption Number	Exemption	Scope and dates of applicability
5(a)	Lead in glass of cathode ray tubes	
5(b)	Lead in 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. piezoelectric 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 the 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 24 September 2010
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-ringH	May be used in spare parts for EEE placed on the market before 24 September 2010
13(a)	Lead in white glasses used for optical applications	

Exemption Number	Exemption	Scope and dates of applicability
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) ₂ MgSi ₂ O ₇ :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 ₂ O 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 24 September 2010
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
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 24 September 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (1)	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice	

Exemption Number	Exemption	Scope and dates of applicability
	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	Expired 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-V 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

Appendix C – IPC Form 1752-2 Material Composition Declaration (page 1)


IPC-1752-2_v1.1a.pdf - Adobe Acrobat Pro

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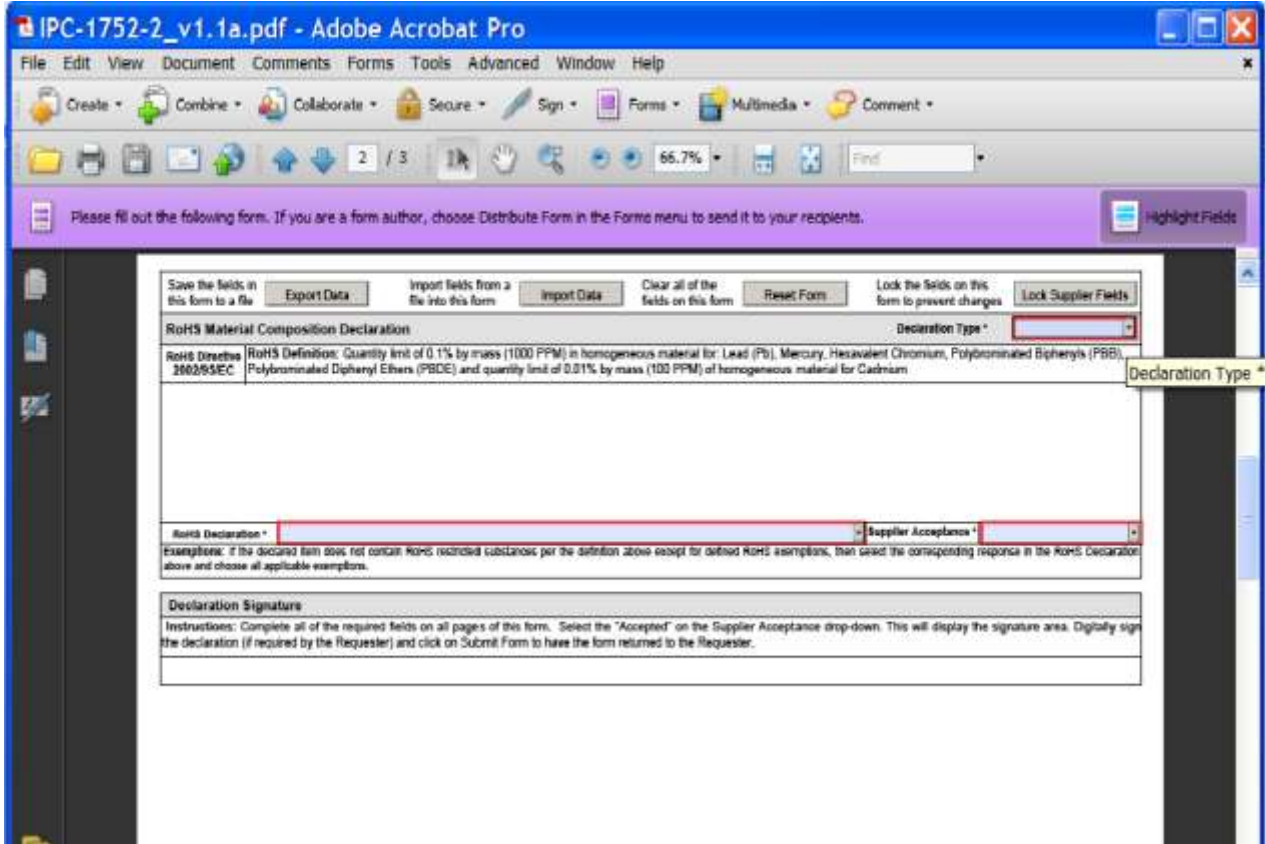
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 Material Composition Declaration <small>© Copyright 2005, IPC, Bannockburn, Illinois. All rights reserved under both International and Pan-American copyright conventions.</small>		<small>This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.</small> Adobe Reader version 7.0.5 is required to complete this declaration.					
1752-2 1.1	IPC Web Site for information on IPC-1752 Standard http://www.ipc.org/IPC-175x			Form Type *	Declaration Class *		
				Distribute	Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Inform		
Supplier Information							
Company Name *	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID			
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *	Duplicate Contact -> Authorized Representative			
Authorized Representative *	Title - Representative	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information			
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM
						mg	Each
Alternate Recommendation		Alternate Item Comments					
Manufacturing Process Information							
Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles		
			C	seconds			
Comments							

Appendix D – IPC Form 1752-2 Material Composition Declaration (page 2)



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Save the fields in this form to a file Export Data Import fields from a file into this form Import Data Clear all of the fields on this form Reset Form Lock the fields on this form to prevent changes Lock Supplier Fields

RoHS Material Composition Declaration Declaration Type *

RoHS Directives 2002/95/EC RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium Declaration Type *

RoHS Declaration * Supplier Acceptance *

Example: If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.

Declaration Signature

Instructions: Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.

Appendix E – IPC Form 1752-2 Material Composition Declaration (page 3)

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Please fill out the following form if you are a manufacturer or distributor. Use the Form in the Forms menu to send it to your recipients.

Highlight Fields

Homogeneous Material Composition Declaration for Electronic Products

SubItem Instructions: The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

Substance Instructions: [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier), [C] select the substance (JIG) or enter the substance and CAS (Other), [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

Line Functions: +I Inserts a New Item/SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Tolerance		PPM
										+	-	
+I	M			-C	G							