SPP 70

Global Product and Component Specification

For the Environment

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1. Purpose

This document defines X-Rite's environmental requirements for substance, preparation and article usage and markings for all X-Rite produced products and associated packaging.

2. Scope

The requirements specified in this document apply to all X-Rite brand products and associated packaging and includes any substance, preparation or article incorporated into such products. Any exceptions, such as for non-X-Rite brand products and packaging (e.g., product produced or packaging used by X-Rite but containing a customer name label), will be explicitly stated by X-Rite. Such exceptions must, as a minimum, meet the applicable legal requirements in each region in which these products will be sold or marketed irrespective of any stated X-Rite or customer requirements. Unless exceptions are explicitly stated by X-Rite, the requirements of this document apply.

2.1 Applicability

The requirements of this document applies to all X-Rite design centers, X-Rite manufacturing facilities and X-Rite suppliers involved in providing designs, substances, mixtures, preparations, parts, articles, or packaging used in X-Rite produced products.

3. General Requirements

Due to the ever increasing volume and complexity of global environmental expectations and regulations, it is important that all providers of designs, substances, preparations and articles for X-Rite produced products and packaging be aware of and be able to provide evidence of compliance to these requirements.

X-Rite will identify and maintain, to the best of our knowledge, a list of those general environmental expectations and regulations that apply to X-Rite produced products and their packaging. This information represents the various expectations and regulations in existence but should by no means be considered all encompassing. In some cases, additional environmental expectations or regulations may be specified for specific products based on need.

All providers of designs, substances, preparations or articles used in X-Rite products or associated packaging are required to comply with the expectations and regulations contained in this document (and any applicable legal requirement regardless of whether it is or is not specified in this document) in effect at the time of delivery of the design, substance, preparation or article to X-Rite. In the event of a conflict between this document and applicable regulations, the applicable regulations shall have precedence unless the requirement stated in this document is stricter.

The X-Rite Compliance, Environment and Quality (CEQ) group maintains sole responsibility for this document, its contents, and its maintenance. The CEQ group serves as a limited-resource to assist providers of designs, substances, preparations and articles for X-Rite produced product and associated

packaging to meet these requirements, however the ultimate responsibility resides with the provider themselves.

3.1 General Regulations

The following table lists representative major regulations, initiatives and guides from around the world. These are to be adhered to for the designs, substances, preparations or articles used in X-Rite products and associated packaging.

Region	Common Name or Topic	Legislation[1]	Regulates
EU	RoHS	Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.	Content and restriction of specified substances in products placed on the EU (and associated) markets
EU	REACH	Regulation EC 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). [Note: Supersedes Directive 76/769/EEC as of June 1, 2009]	Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles. Content and disclosure of Substances of Very High Concern (SVHC) placed on the market.
EU	WEEE	Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE).	The creation of collection schemes where consumers return their used e-waste free of charge for recycling so as to avoid placing it in landfills.
EU	Packaging	Directive 94/62/EC of 20 December 1994 on packaging and packaging waste	Addresses packaging reduction, recycling, content and markings for product placed on the EU (and associated) markets
EU	Batteries	Directive 2006/66/ of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators	Addresses battery markings, disposal, collection, recycling, and content
EU	ErP	Directive 2009/125/EC on the eco-design of Energy-related Products (ErP). [Note: Supersedes Directive 2005/32/EC (EuP) as of October 31, 2009]	Addresses energy related products and requirements for efficiency.
China	China RoHS	Management Methods for Controlling Pollution by Electronic Information Products (Ministry of Information Industry Order #39) February 28, 2006	Disclosure and documentation of specified substances in products placed on the China markets
NE Atlantic	OSPAR	OSPAR Commission	Addresses maritime pollution in the North-East Atlantic region in collaboration with various agencies such as the EC and EEA
USA	ODS	Clean Air Act	Addresses restrictions on ozone depleting substances
USA	Prop 65	California Proposition 65	Addresses the obligation to notify the user about certain hazardous substances they may be exposed to from the environment or products they come into contact with
Norway	PoHS	Prohibition on Certain Hazardous Substances in Consumer Products (Pending legislation)	Proposed legislation similar to EU RoHS legislation although stricter requirements on some substances and includes other substances
Global	JIG	Joint Industry Guide (JIG-101) Material Composition Declaration for Electronic Products	Industry-wide guide that addresses banned and restricted substances and thresholds for disclosure – similar to EU RoHS and REACH
Japan	Hazardous Substances	Industrial Safety and Health Law	Addresses restrictions of substances
Japan	Hazardous Substances	Law Concerning the Examination and Regulation of Manufacture etc. of Chemical Substances	Addresses restrictions of substances

1. All amendments to the various documents also apply.

3.2 Substance Regulations

The following table list major substances (listed alphabetically) that are subject to various regulatory controls and/or are of environmental concern. These regulations and controls, existing and pending, are to be adhered to for all designs, substances, preparations or articles used in X-Rite products and associated packaging. ("Pending" in the following tables refers to proposed regulations that are in addition to other existing regulations or requirements. These pending requirements are to be adhered to when stricter than existing requirements.)

Substance[1]	**2,4,6-tri-tert-butylphenol, CAS No. 732-26-3**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**2-naphylamine / Beta naphthylamine and its chlorides, CAS No. 91-59-8**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**4-aminodiphenyl / 4-aminodiphenyl and its chlorides, CAS No. 92-67**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**4-nitrodiphenyl and its chlorides, CAS No. 92-93-3**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**Aldrin, CAS No. 309-00-2**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Antimony and Antimony Compounds, CAS No. 7440-36-0 and others**
Requirement(s)[2]	Use to be avoided. Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	General industry concern

Substance[1]	**Arsenic and Arsenic Compounds, CAS No. 7440-38-2 and others**
Requirement(s)[2]	Use to be avoided. Pending PoHS Legislation: No more than 0.1% (1000 ppm) allowed in electrical and electronic equipment, 0.01% (100 ppm) in other – per homogeneous material. Not to be used in wood products and paint. Note: Several arsenic compounds are already on the REACH SVHC Candidate List and it is probable that more arsenic compounds will be added – thus a default reporting threshold of >0.1% (1000 ppm) by weight in articles
Reference(s)[3]	Norway – PoHS EU – Regulation EC 1907/2006 and its amendments Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem)

Substance[1]	**Asbestos and Asbestos Materials, CAS No. 1332-21-4 and others**
Requirement(s)[2]	The manufacture, placing on the market and use of these fibers and of articles containing these fibers added intentionally is prohibited. Report any content.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Japan – Industrial Safety and Health Law Germany – Chemicals Prohibition Ordinance (ChemVerbotsV) Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) USA- Toxic Substance Control Act, Occupational Safety and Health Act (29 CFR 1910.1001-1051) Industry Guide – JIG-101

Substance[1]	**Azo Compounds, CAS No. see references**
Requirement(s)[2]	Specified azo colorants must not be present in products (made from textiles or leather) where they may release the aromatic amines listed in appendix 8 of Regulation EC 1907/2006) in concentrations greater than or equal to 0.003% (30 ppm) by weight in any homogeneous material, where the substance may come in prolonged direct contact with exposed skin.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments, Directive 2006/61/EC and its amendments Industry Guide – JIG-101

Substance[1]	**Benzidine, CAS No. 92-87-5 and its chlorides**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Japan – Industrial Safety and Health Law

Substance[1]	**Benzotriazole CAS No. 3846-71-7**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Beryllium Oxide, CAS No. 1304-56-9**
Requirement(s)[2]	Use to be avoided. Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	Industry Guide – JIG-101

Substance[1]	**Bis (chloromethyl) ether, CAS No. 542-88-1**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**Bismuth and Bismuth Compounds, CAS No. 7440-69-9 and others**
Requirement(s)[2]	Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	General industry concern

Substance[1]	**Bisphenol-A, CAS No. 80-05-7**
Requirement(s)[2]	Pending PoHS Legislation: No more than 0.005% (50 ppm) for homogeneous material. Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material. (Note: Restricted in children's products in several USA States)
Reference(s)[3]	Norway – PoHS USA – Some states (e.g. Connecticut, Illinois, Minnesota) for children's products

Substance[1]	**Brominated Fire Retardants:** **Polybrominated Biphenyls (PBBs), CAS No. see references** **Polybrominated Diphenylethers (PBDEs), CAS No. see references** **Decabromodiphenylether (DecaBDE), CAS No. 1163-19-5**
Requirement(s)[2]	Parts, components, materials, and products must not contain flame retardants that are PBBs or PBDEs or DecaBDE in concentrations greater than or equal to 0.1% (1000 ppm) by weight in any homogeneous material. See Halogens.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments, Directive 2002/95/EC and its amendments Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) USA – Ten states ban PentaBDE and OctaBDE, DecaBDE bans under consideration German law on Dioxin China – Management Measures on EIP Pollution Control Industry Guide – JIG-101

Substance[1]	**Brominated Fire Retardants other than PBBs, PBDEs and DecaBDE, CAS No. see references**
Requirement(s)[2]	Default reporting threshold of 0.1% (1000 ppm) by weight of the product in plastic parts greater than 25 grams other than in printed circuit assemblies. See Halogens.
Reference(s)[3]	EU – EERA, AeA, CECED Industry Guide – JIG-101

Substance[1]	**Cadmium and Cadmium Compounds, CAS No. 7440-43-9 and others**
Requirement(s)[2]	Cadmium and its compounds must not be present in parts, components, materials, or products in concentrations greater than 0.01% (100 ppm) by weight in any homogeneous material. This requirement includes cadmium and its compounds in pigments, dyes, stabilizers, plating, and paints, but does not apply to cadmium in the following applications (listed and ordered by EU RoHS Exemption No.): 8. Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations. Note: This exemption is likely to end in the next EU RoHS revision except for spare parts. 13. Cadmium in optical and filter glass 21. Cadmium in printing inks for the application of enamels on borosilicate and soda glass. 38. Cadmium and cadmium oxide in thick film pastes used on aluminum bonded beryllium oxide
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments, Directive 2000/53/EEC and its amendments, Directive 2002/95/EC and its amendments Denmark – Statutory Order 1199 and its amendments China – Management Measures on EIP Pollution Control USA – California Electronic Waste Recycling Act SB20, California Health and Safety Code sections 25214.9-25214.10.2 Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) Netherlands - Decree 1999 NE Atlantic Region – OSPAR Norway – PoHS Industry Guide – JIG-101

Substance[1]	**Cadmium in batteries, CAS No. 7440-43-9**
Requirement(s)[2]	In general, batteries and battery packs cadmium content must be less than 0.002% (20 ppm) by weight. See references and specific country requirements for exact content and marking requirements based on battery type.
Reference(s)[3]	EU – Directive 2006/66/EC and its amendments Brazil – CONAMA Resolution 401/2008 Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) Industry Guide – JIG-101

Substance[1]	**Chlordane (or Heptachlor), CAS No. 57-74-9**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Chromium and Chromium Compounds, CAS No. 7440-47-3 and others**
Requirement(s)[2]	Metallic applications: Hexavalent chromium and its compounds must not be present in any concentration in metallic applications (such as corrosion preventative coatings and conversion coatings). Non-metallic applications: Hexavalent chromium and its compounds must not be present in concentrations greater than 0.1% (1000 ppm) by weight in any homogeneous material. Must not be intentionally added in paints and plastic resins or homogeneous material.
Reference(s)[3]	EU – Directive 2000/53/EC and its amendments, Directive 2002/95/EC and its amendments Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) China – Management Measures on EIP Pollution Control USA – California Electronic Waste Recycling Act SB20, California Health and Safety Code sections 25214.9-25214.10.2 Industry Guide – JIG-101

Substance[1]	**Cobalt Dichloride, CAS No. 7646-79-9**
Requirement(s)[2]	Use to be avoided (normally used for silica gel indicator). Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material as REACH SVHC.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Industry Guide – JIG-101

Substance[1]	**Dichlorodiphenyltrichloroethane (DDT), CAS No. 50-29-3**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Dieldrin, CAS No. 60-57-1**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Dimethyl fumarate, CAS No. 624-49-7**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	EU - Directive EC 98/8/EC and its amendments, Decision 2009/251 and its amendments

Substance[1]	**Di-µ-oxo-di-n-butylin hydroxyborane (DBB), CAS No. 75113-37-0**
Requirement(s)[2]	Must not be used in preparations at > 0.1% (1000 ppm).
Reference(s)[3]	EU - Regulation EC 1907/2006 and its amendments

Substance[1]	**Endrin, CAS No. 72-20-8**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Fluorinated Greenhouse Gases (PFCs, SF6, HFCs), CAS No. see references**
Requirement(s)[2]	Specified fluorinated gases not to be used (intentionally added).
Reference(s)[3]	EU – Regulation EC 842/2006 and its amendments Denmark – Statutory Order No. 552 Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem)

Substance[1]	**Formaldehyde, CAS No. 50-00-0**
Requirement(s)[2]	Not to be used in wood products, minimal use in textiles - less than 0.075% (75 ppm). Not to be used if greater than 0.00001% (0.1 ppm) concentration release into the air under reasonable circumstances.
Reference(s)[3]	Germany – Chemicals Prohibition Ordinance (ChemVerbotsV) Denmark – Statutory Order No. 289 and its amendments Netherlands – Decision of March 22, 2001, laying down the Commodities Decision Formaldehyde in Textiles Austria – BGB I 1990/94; Formaldehydeverordnung, 2, 12/2/1990

Substance[1]	**Fragrances; Musk Xylene, CAS No. 81-15-2 and Musk Ketone, CAS No. 81-14-1**
Requirement(s)[2]	Pending PoHS Legislation: No more than 0.05% (500 ppm) total by weight in any homogeneous material Default reporting threshold of 0.1% (1000 ppm) by weight in any article for Musk Xylene as REACH SVHC.
Reference(s)[3]	Norway – PoHS EU – Regulation 1907/2006 and its amendments NE Atlantic Region – OSPAR

Substance[1]	**Halogens (Bromine, CAS No. 7726-95-6 / Chlorine, CAS No. 7782-50-5 / Fluorine, CAS No. 7782-41-4 / Iodine, CAS No. 7553-56-2 / Astatine, CAS No. 7440-68-8**
Requirement(s)[2]	Use to be avoided in parts, components and materials wherever reasonable alternatives exist. Typical product halogens of major concern are bromine and chlorine: No more than 0.09% (900 ppm) of Bromine or Chlorine, or 0.15% (1500 ppm) combined [and each still no more than 0.09% (900 ppm)], allowed in homogenous materials for printed boards or substrates. No more than 0.1% (1000 ppm) Bromine (from BFRs) or 0.1% (1000 ppm) Chlorine (from CFRs or PVC compounds) allowed in homogenous material in other components to be considered “low-halogen (BFR/CFR/PVC-free)”. See Brominated Fire Retardants.
Reference(s)[3]	Industry Guide - iNEMA Industry Guide – IPC-4101B Industry Guide –IPC-J-709 Industry Guide –IEC61249-2-21

Substance[1]	**Halogenated aromatic substances, CAS No. see references**
Requirement(s)[2]	Prohibited from use in capacitors and transformers above 0.05% (500 ppm) for monohalogenated or 0.005% (50ppm) for polyhalogenated aromatic substances in materials of the component. Note: Specified halogenated organic compounds are also banned – refer to ORRChem.
Reference(s)[3]	Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem)

Substance[1]	**Heavy Metals (lead, cadmium, mercury and hexavalent chromium) in packaging, CAS No. see references**
Requirement(s)[2]	Packaging materials must not contain lead, mercury, cadmium, or hexavalent chromium where the sum concentration of incidental lead, mercury, cadmium, and hexavalent chromium is greater than 0.01% (100 PPM) by weight in packaging.
Reference(s)[3]	EU – Directive 94/62/EC and its amendments USA (17 states) – Regulations on Heavy Metals in Packaging Materials

Substance[1]	**Hexachlorobenzene ,CAS No. 118-74-1**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Hexachlorobutadiene, CAS No. 87-68-3**
Requirement(s)[2]	Prohibited. (Unlikely association with electrical or electronic equipment and its manufacture.)
Reference(s)[3]	Canada – Canada Environmental Protection Act, 1999. Prohibition of Certain Toxic Substances Regulation, 2005. Updated 2007-09-08

Substance[1]	**Hexachlorocyclohexane (Lindane), CAS No. 58-89-9**
Requirement(s)[2]	Avoid use of Hexacholocyclohexane and isomers in all products and parts. (Unlikely association with electrical or electronic equipment and its manufacture.)
Reference(s)[3]	NE Atlantic Region – OSPAR

Substance[1]	**Hexachloroethane, CAS No. 67-72-1**
Requirement(s)[2]	Prohibited in manufacturing or processing of nonferrous metals
Reference(s)[3]	EU – Directive 2001/91/EC and its amendments, Regulation EC 1907/2006 and its amendments Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) Norway – Norway Product Control Regulation Chapter 2. Restricted Substances and Preparations.

Substance[1]	**Hexachlorobuta-1,3-diene, CAS No. 87-68-3**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Kelthane or Dicolfol (2,2,2-Trichloro-1,1-bis(4-chlorophenyl)ethanol), CAS No. 115-32-2**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Lead and Lead Compounds, CAS No. 7439-92-1 and others**
Requirement(s)[2]	Lead and its compounds must not be present in parts, components, materials, or products in concentrations greater than 0.1% (1000 ppm) by weight in any homogeneous material (0.03% (300 ppm) by weight in children's products or 0.009% (90ppm) in surface coatings of children's products). This requirement does not apply to lead in the following applications (listed and ordered by EU RoHS Exemption No.): 5. Lead in glass of cathode ray tubes, electronic components~~ and fluorescent tubes~~ 6a. Lead as an alloying element in steel and galvanized steel containing up to 0.35% lead by weight 6b. Lead as an alloying element in aluminum containing up to 0.4% lead by weight 6c. Lead as an alloying element in copper containing up to 4% lead by weight 7a. Lead in high melting temperature type solders (such as lead-based solder alloys containing 85% or more lead by weight) 7b. Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications 7c. Lead in electronic ceramic parts (for example, piezoelectronic devices) ~~9b. Lead in lead-bronze bearing shells and bushes~~ ~~11. Lead used in compliant pin connector systems~~ ~~12. Lead as a coating material for the thermal conduction module c-ring~~ 13. Lead in optical and filter glass ~~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~~ 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.~~ 17. Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications. ~~18. Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as specialty lamps for diszo-printing reprography and lithography.~~ ~~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.~~ ~~20. Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)~~ 21. Lead in printing inks for the application of enamels on borosilicate glass. ~~23. Lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm 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.~~ 24. Lead in solder for the soldering to machined through-hole discoidal and planar ceramic multilayer capacitors. 25. Lead oxide in ~~plasma display panels and~~ surface conduction electron emitter displays 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~~, and in print pastes~~. ~~26. Lead oxide in the glass envelope of Black Light Blue lamps.~~ 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 35. Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body **Lead in Paint -** Lead carbonates and sulfates must not be used in any paint applied to parts, components, materials, or products in concentrations greater than 0.01% (100 ppm) by weight in the paint. **Lead in Polyvinyl Chloride (PVC) Coating for External Cables, Wires and Cords** - The concentration of lead (Pb) in the PVC coating (outer jacket) of external PVC coated cables, wires or cords must not exceed 0.03% (300 ppm) by weight in any homogeneous material. This requirement applies to all PVC coating (outer jacket) of external PVC coated cables, wires or cords, including connectors and plugs, in any part, component, and products. **Note I:** Pending PoHS Legislation would limit lead to 0.01% by weight in homogeneous materials in some products not covered by EU RoHS, some exemptions for glass and other items. **Note II:** Exemptions which are lined-out are expected to be eliminated or further restricted in the next EU RoHS revision.
Reference(s)[3]	EU – Directive 2002/95/EC and its amendments, Regulation EC 1907/2006 and its amendments Denmark – Statutory Order No. 1012 and its amendments USA – California Proposition 65, California Electronic Waste Recycling Act SB20, 16 CFR 1303, California Health and Safety Code sections 25214.9-25214.10.2, US Consumer Product Safety Act China – Management Measures on EIP Pollution Control Switzerland – Ordinance on Risk Reduction related to Chemical Products (ORRChem) NE Atlantic Region – OSPAR Norway – PoHS Industry Guide – JIG-101

Substance[1]	**Lead in batteries, CAS No. 7439-92-1**
Requirement(s)[2]	See references and specific country requirements for exact content and marking requirements based on battery type.
Reference(s)[3]	EU – Directive 2006/66/EC and its amendments Argentina – The Law No. 26.184 Portable Power and Resolution 14/2007 Brazil – CONAMA Resolution 401/2008 Industry Guide – JIG-101

Substance[1]	**Medium Chain Chlorinated Paraffins (MCCP), CAS No. see references**
Requirement(s)[2]	Pending PoHS Legislation: Medium chain Chlorinated Paraffins (MCCPs) – no more than 0.1% (1000 ppm) by weight in homogeneous materials – some exemptions.
Reference(s)[3]	Norway – PoHS

Substance[1]	**Mercury and Mercury Compounds, CAS No. 7439-97-6 and others**
Requirement(s)[2]	Mercury and its compounds must not be present in parts, components, materials, or products (including switches, relays or electrical contacts) in concentrations greater than 0.1% (1000 ppm) by weight in any homogeneous material. This requirement does not apply to mercury in certain lamp applications (listed and ordered by EU RoHS Exemption No.): ~~1. Mercury in compact fluorescent lamps not exceeding 5 mg per lamp~~ ~~2. Mercury in straight fluorescent lamps for general purposes not exceeding: 10 mg halophosphate, 5 mg triphosphate with normal lifetime, 8 mg triphosphate with long lifetime~~ ~~3. Mercury in straight fluorescent lamps for special purposes (such as scanner bulbs and backlit displays)~~ ~~4. Mercury in other lamps not specifically mentioned in this list (such as projector lamps and digital projector TVs)~~ 36. Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display until July 1, 2010 **Note I**: Exemptions which are lined-out are expected to be eliminated or further restricted in the next EU RoHS revision as follows: 1. Compact fluorescent lamp exemption will continue with maximum Hg content: 3.5mg for <50W, 5mg for 50 – 150W, (plus other limits) 2a. Linear tri-band phosphor lamp exemption will continue with maximum Hg content: 4mg in T2, 3mg in T5, 3.5 mg in ≥T8, 4mg in "long-life" 2b. Halophosphate lamps will be phased out due to regulation 245/2009 2c. Non-linear tri-band phosphor lamp exemption will continue with maximum Hg content: 15mg 3. Lamps for LCD displays – exemption to continue with specified maximum Hg content (3.5mg for <500mm, 5mg for 500 – 1500 mm and 15mg for >1500 mm) until deleted by to-be-determined date 4. Mercury limits defined for certain other types of lamps with no limits for other lamps not otherwise specified
Reference(s)[3]	EU –Directive 2002/95/EC and its amendments USA – New England Mercury Containing Product Legislation, California Electronic Waste Recycling Act SB20 China – Management Measures on EIP Pollution Control NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Mercury in batteries, CAS No. 7439-97-6**
Requirement(s)[2]	In general, batteries and battery packs mercury content must be less than 0.0005% (5 ppm) by total weight (2.0% for button cells). See references and specific country requirements for exact content and marking requirements based on battery type.
Reference(s)[3]	EU – Directive 2006/66/EC China – 1997 Regulation on Mercury Content Limitation for Batteries, Inspection and Management Method for the Import and Export of Battery Products Containing Mercury Brazil – CONAMA Resolution 401/2008 USA – Various state regulations Industry Guide – JIG-101

Substance[1]	**Mirex, CAS No. 2385-85-5**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Monomethyl-tetrachloro-diphenyl methane (Ugilec 141, CAS No. 76253-60-6), Mononmethyl-dichloro-diphenyl methane (Ugilec 121 / 21, CAS No. 81161-70-8), Monomethyl-dibromo-dipheyl methane (DBBT, CAS No. 99688-47-8)**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	EU - Regulation EC 1907/2006 and its amendments

Substance[1]	**Nickel and Nickel Compounds, CAS No. 7440-02-0 and others**
Requirement(s)[2]	Nickel finishes that release greater than 0.5 µg/cm^2/week must not be used on the external surface of any product designed to be frequently handled or carried by the user (or intended to be in direct and prolonged skin contact).
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Industry Guide – JIG-101

Substance[1]	**N,N'-ditolyl-p-phenylenediamine, CAS No. 620-91-7**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Nonylphenol (NP) and Nonylphenol ethoxylates (NPEs), CAS No. 25154-52-3 and others**
Requirement(s)[2]	NPs and NPEs shall not be placed on the market, or used, as substances or in mixtures in concentrations equal to or greater than 0.1 % (1000 ppm) by weight. See references for the exact restricted purposes. Use of Octylphenols (OPs) and Octylphenol ethoxylates (OPEs) as substitutes should be minimized.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Canada – CEPA 1999 Schedule 1 List (2002) NE Atlantic Region – OSPAR

Substance[1]	**Organostannic Compounds (Tributyltin - TBT, Triphenyltin – TPT, Dibutyltin – DBT, Dioctyltin - DOT), CAS No. see references**
Requirement(s)[2]	Not to be used where the concentration in the material is greater than the equivalent of 0.1% (1000 ppm) of tin. See references for details of restrictions and affected articles and mixtures. Exemptions due to phase-in dates are voided.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class II NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Ozone Depleting Substances/Hydrochlorofluorocarbons/Isomers, CAS No. see references**
Requirement(s)[2]	Specified substances must not be present in any parts, components, materials, or products or used in the manufacturing process of any parts, components, materials or products. This requirement does not apply to use of these substances in refrigeration units used in manufacturing facilities or in data center facilities. Substances must not be used in plastic foam packaging materials; for example, as foaming agents. Methyl bromide sterilization must not be used on wood packaging. HCFCs must not be used for solvent cleaning, as blowing agents for foams or as refrigerants.
Reference(s)[3]	EU - Regulation (EC) No. 2037/2000 and its amendments, Regulation EC 1907/2006 and its amendments Japan – Law Concerning the Protection of the Ozone Layer Through the Control of Specified Substance and Other Measures USA – Clean Air Act Amendments of 1990 – Article 611, Montreal Protocol Republic of Indonesia – Regulation of the Minister of Industry of the Republic of Indonesia No. 33/M-IND/PER/4/2007 dated April 17, 2007 Industry Guide – JIG-101

Substance[1]	**Pentachlorphenol, CAS No. 87-86-5**
Requirement(s)[2]	Must not be used in preparations at > 0.1% (1000 ppm) concentration. Pending PoHS Legislation: No more than 0.1% (1000 ppm) for homogeneous material. To be avoided as treatment in wood.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments NE Atlantic Region – OSPAR Norway - PoHS

Substance[1]	**Perchlorates, specifically Lithium Perchlorate, CAS No. 7791-03-9**
Requirement(s)[2]	Default reporting threshold of greater than 0.0000006% (.006 ppm) by weight of the product. Typically used in coin cell batteries. Notice is required to be with product if content above threshold.
Reference(s)[3]	USA - California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials

Substance[1]	**Perfluorooctane Sulfonates (PFOS), CAS No. see references**
Requirement(s)[2]	Perfluorooctane sulfonates (PFOS) C8F17SO2X (X = OH, Metal salt (O-M+), halide, amide, and other derivatives including polymers): Must not be used in concentrations equal to or greater than 0.1% (1000 ppm) by weight in parts, components, or products. Must not be placed on the market or used in substance or mixtures in concentrations equal to or greater than 0.005% (50 ppm) by weight. Some exemptions apply – refer to references. PFOA restrictions are being investigated, use should be minimized
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments NE Atlantic Region - OSPAR

Substance[1]	**Phosphorous, CAS No. 7723-14-0**
Requirement(s)[2]	Use of White / Yellow Phosphorus (in matches) is banned.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**Phthalates (DEHP, DBP, BBP, DINP, DIDP, DNOP), CAS No. see references**
Requirement(s)[2]	Use of phthalates (especially DEHP, DBP and BBP which are reportable REACH SVHC substances) to be avoided where possible as future restrictions are likely. All specified phthalates have < 0.1% (1000 ppm) restrictions by mass of the plasticized material in children's products – see references.
Reference(s)[3]	USA - Consumer Product Safety Commission Reform Act (and various State regulations) EU – Regulation EC 1907/2006 and its amendments, Directive 2005/84/EC NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Polychlorinated Biphenyls (PCB), Polychlorinated Naphthalenes (PCN) – more than 3 chlorine atoms and Polychlorinated Terphenyls (PCT), CAS No. see references**
Requirement(s)[2]	Not to be intentionally added and must be below detection limits: PCBs and PCTs must not be detected in concentrations greater than 0.005% (50 ppm) by weight in preparations. PCNs must not be detected in concentrations greater than 0.0005% (5 ppm) by weight in any homogeneous material.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments, Regulation EC 850/2004 and its amendments Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Polycyclic Aromatic Hydrocarbon (PAH) Compounds (creosote, coal tar, etc), CAS No. see references**
Requirement(s)[2]	PAHs must not be used in the external surfaces of the products listed in concentrations greater than the limits defined by weight in any homogeneous material. Portable equipment and cables (group 2) PAH limits: • Benzo[a]pyren: 1 mg/kg • Sum 16 PAH (EPA): 10 mg/kg Stationary equipment and cables (group 3) PAH limits: • Benzo[a]pyren: 20 mg/kg • Sum 16 PAH (EPA): 200 mg/kg The limits apply to material with foreseeable contact to skin up to 30 seconds (short-term skin contact) or without skin contact.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments USA - Air Contaminants (Occupational and Safety Health Act), Hazardous Substances (Superfund) and Toxic Release Inventory Chemicals Germany - German Committee for Commercial Equipment and Consumer Products – mandatory limits for application of GS mark ("Geprufte Sicherheit") NE Atlantic Region – OSPAR

Substance[1]	**Polyvinyl Chloride (PVC) and blends, CAS No. 9002-86-2 and others**
Requirement(s)[2]	Use to be avoided, when reasonable alternatives exist, for external components and coverings which are in contact with the skin under normal use. Use for internal components (cables, connectors, electronic components, etc.) is allowed but should be avoided when reasonable alternatives exist. No more than 0.1% (1000 ppm) Chlorine (from CFRs or PVC compounds) allowed in homogenous material in order to be considered "PVC-free". Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	Industry Guide - iNEMA Industry Guide – JIG-101

Substance[1]	**Radioactive Substances, CAS No. see references**
Requirement(s)[2]	Radioactive substances must not be present in parts, components, materials or products beyond those impurity amounts that may naturally exist. If present, exposure limits not to exceed 1 µSv/h at a distance of 0.1 meters. Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	EU – Directive 96/29/EURATOM and its amendments USA- Nuclear Regulatory Commission Title 10 CFR Part 20 Japan – Laws for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986 Industry Guide – JIG-101

Substance[1]	**Rubber cement containing benzene, where the benzene accounts for more than 5% of the rubber cement solvent (including diluting agent), CAS No. 71-43-2**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Industrial Safety and Health Law

Substance[1]	**Selenium and Selenium Compounds, CAS No. 7782-49-2 and others**
Requirement(s)[2]	Default reporting threshold of 0.1% (1000 ppm) by weight in any homogeneous material.
Reference(s)[3]	General industry concern

Substance[1]	**Short Chain Chlorinated Paraffins (SCCP), CAS No. 85535-84-8**
Requirement(s)[2]	Short Chain Chlorinated Paraffins (SCCPs) must not be used or contained in softeners in paints, coatings and sealants; in oils; or in flame-retardants in rubber, plastic and textiles, in concentrations greater than or equal to 0.1% (1000 ppm) by weight in any homogeneous material. Default reporting threshold of 0.1% (1000 ppm) by weight in any article as REACH SVHC.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments USA – 49 CFR 172.101 NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Surfactants (DTDMAC, CAS No. 68783-78-8 / DODMAC, CAS No. 107-64-2 /DSDMAC, CAS No. 107-64-2 / DHTDMAC, CAS No. 61789-80-8)**
Requirement(s)[2]	Pending PoHS Legislation: No more than 0.1% (1000 ppm) total by weight in any homogeneous material
Reference(s)[3]	Norway – PoHS

Substance[1]	**Toluene, CAS No. 108-83-3**
Requirement(s)[2]	Not to be used as a substance or constituent of preparations in concentrations equal to or greater than 0.1% (1000 ppm) by mass in adhesives and spray paints.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments

Substance[1]	**Toxaphene, CAS No. 8001-35-2**
Requirement(s)[2]	Not to be used.
Reference(s)[3]	Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I

Substance[1]	**Tributyl Tin Oxide - TBTO, CAS No. 56-35-9**
Requirement(s)[2]	Not to be intentionally added in parts, components, materials or products. Default reporting threshold of 0.1% (1000 ppm) by weight in any article for as REACH SVHC.
Reference(s)[3]	EU – Regulation EC 1907/2006 and its amendments Japan – Law Concerning the Examination and Regulation of Manufacture of Chemical Substances, Class I NE Atlantic Region – OSPAR Industry Guide – JIG-101

Substance[1]	**Triclosan, CAS No. 3380-34-5**
Requirement(s)[2]	Pending PoHS Legislation: No more than 0.001% (10 ppm) for homogeneous material. Default reporting threshold of 0.001% (10 ppm) by weight in any homogeneous material.
Reference(s)[3]	Norway – PoHS General industry concern

Substance[1]	**Tris (2,3 dibromopropyl) phosphate, CAS No. 126-72-7 and Tris-(aziridinyl)-phosphineoxide, CAS No. 545-55-1**
Requirement(s)[2]	Not to be used in textile articles intended to come into contact with skin, e.g. wrist straps and headphones.
Reference(s)[3]	EU – Regulation 1907/2006 and its amendments Norway – PoHS

1. Refer to references for complete lists of substance names and chemical identification numbers.
2. This is only a summary of the basic requirement for this substance. Refer to references for details, exemptions and application.
3. Reference(s) may consist of legal regulations, standards, or industry guides. Some substances listed are not currently restricted, but regulations are pending, thus reporting and adhering to the stated guidance is expected and important for future use considerations. These are representative reference sources for the listed substance. Other references may also apply. All references are subject to changes and updates at any time.

3.3 REACH Regulations

EU Regulation EC 1907/2006 (REACH) requires the reporting of Candidate Substances of Very High Concern (SVHC) that exceed specified thresholds at the Article level and to provide information regarding the safe use of the article. To help fulfill this reporting requirement, all designs, substances, preparations or articles used in X-Rite products and associated packaging must disclose the presence of Candidate SVHCs as indicated in the following table. Information regarding the safe use of the Candidate SVHC may also be required from the provider.

Item	CAS No.	EC No.	Candidate Substance (SVHC)	Reporting Threshold:
1	101-77-9	202-974-4 4,4	4,4'- Diaminodiphenyl-methane	> 0.1% w/w
2	81-15-2	201-329-4	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	> 0.1% w/w
3	85535-84-8	287-476-5	Alkanes, C10-13 chloro (short chain chlorinated paraffins)	> 0.1% w/w
4	120-12-7	204-371-1	Anthracene	> 0.1% w/w
5	1303-28-2	215-116-9	Diarsenic pentaoxide	> 0.1% w/w
6	1327-53-3	215-481-4	Diarsenic trioxide	> 0.1% w/w
7	117-81-7	204-211-0	Bis(2-ethylhexyl)phthalate (DEHP)	> 0.1% w/w
8	56-35-9	200-268-0	Bis(tributyltin)oxide (TBTO)	> 0.1% w/w
9	85-68-7	201-622-7	Butyl benzyl phthalate (BBP)	> 0.1% w/w
10	7646-79-9	231-589-4	Cobalt dichloride	> 0.1% w/w
11	84-74-2	201-557-4	Dibutyl phthalate (DBP)	> 0.1% w/w
12	25637-99-4 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4 221-695-9	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (-HBCDD, -HBCDD, -HBCDD)	> 0.1% w/w
13	7784-40-9	232-064-2	Lead hydrogen arsenate	> 0.1% w/w
14	7789-12-0 10588-01-9	234-190-3	Sodium dichromate	> 0.1% w/w
15	15606-95-8	427-700-2	Triethyl arsenate	> 0.1% w/w
16	90640-80-5	292-602-7	Anthracene oil	> 0.1% w/w
17	91995-17-4	295-278-5	Anthracene oil, paste, distallation lights (fractions)	> 0.1% w/w
18	91995-15-2	295-275-9	Anthracene oil, paste, fraction	> 0.1% w/w
19	90640-82-7	292-604-8	Anthracene oil, -low	> 0.1% w/w
20	90640-81-6	292-603-2	Anthracene oil, paste	> 0.1% w/w
21	65996-93-2	266-028-2	Pitch, coal, tar, high temp	> 0.1% w/w
22	79-06-1	201-173-7	Acrylamide	> 0.1% w/w
23	-	-	Aluminosilicate refractory ceramic fibers[1]	> 0.1% w/w
24	-	-	Zirconia aluminosilicate refractory ceramic fibers[2]	> 0.1% w/w
25	121-14-2	204-450-0	2,4-Dinitrotoluene	> 0.1% w/w
26	84-69-5	201-553-2	Diisobutyl phthalate	> 0.1% w/w
27	7758-97-6	231-846-0	Lead chromate	> 0.1% w/w
28	12656-85-8	235-759-9	Lead chcromate molybdate sulphate red (CI Pigment Red 104)	> 0.1% w/w
29	1344-37-2	215-693-7	Lead sulfochromate yellow (CI Pigment Yellow 34)	> 0.1% w/w
30	115-96-8	204-118-5	Tris(2-chloroethyl)phosphate (TCEP)	> 0.1% w/w
31	79-01-6	201-167-4	Trichoroethylene	> 0.1% w/w
32	10043-35-3 11113-50-1	233-139-2 234-343-4	Boric acid	> 0.1% w/w
33	1303-96-4 1330-43-4 12179-04-3	215-540-4	Disodium tetraborate, anhydrous	> 0.1% w/w

Item	CAS No.	EC No.	Candidate Substance (SVHC)	Reporting Threshold:
34	12267-73-1	235-541-3	Tetraboron disodium heptaoxide, hydrate	> 0.1% w/w
35	7775-11-3	231-889-5	Sodium chromate	> 0.1% w/w
36	7789-00-6	232-140-5	Potassium chromate	> 0.1% w/w
37	7789-09-5	232-143-1	Ammonium dichromate	> 0.1% w/w
38	7778-50-9	231-906-6	Potassium dichromate	> 0.1% w/w

1. Certain length fibers covered by Regulation (EC) No 1272/2008 containing Al2O3 and SiO2 in certain ranges
2. Certain length fibers covered by Regulation (EC) No 1272/2008 containing Al2O3, SiO2 and ZrO2 in certain ranges

3.4 Other Requirements and Recommendations

The following tables list "other" requirements and recommendations for X-Rite branded products not covered elsewhere in this document. These subjects are also covered in further detail in the referenced X-Rite SPP documents. Unless specifically modified by X-Rite or OEM requirements (where allowed), X-Rite manufactured OEM branded products must also comply.

Subject[1]	**Batteries and Energy Using Products**
Requirement(s)[2]	Battery Markings: • All batteries and battery packs must be appropriately marked as required by applicable regulations. Battery Transport Classification: • All batteries must meet all applicable design, manufacture, marking, testing, and other battery specific requirements necessary to be classified as —Not Restricted for purposes of transport for all modes of transportation, as defined in the listed regulations and test documents. (Note: Non-rechargeable alkaline and carbon-zinc batteries must be hermetically sealed.) Energy Usage and Efficiency (External Power Supplies): • EU ErP requirements • USA Energy Independence and Security Act of 2007 • All external Class A power supplies of 250 watts and under must comply with International Efficiency Marking Protocol of IV as a minimum, V preferred in order to comply with EU ErP Stage 2 requirements.
Reference(s)[3]	X-Rite – SPP 73 Batteries and Energy-Using Products Requirements Battery Marking: • USA – Code of Federal Regulations (49 CFR 173.21(c)) • EU – Directive 2006/66/EC, Directive 98/101/EC, Directive 91/157/EEC, Directive 93/86/EEC and their amendments • Other – Many country specific requirements for China, Taiwan, Canada, Brazil, etc. Battery Transport Classification: • USA - "Hazardous Materials Regulations," Title 49, Code of Federal Regulations, US Department of Transportation (DOT) • International Civil Aviation Organization (ICAO), "Technical Instructions for the Safe Transport of Dangerous Goods by Air" • International Air Transport Association (IATA), "Dangerous Goods Regulations" • UN ST/SG/AC.10/aa/Rev. 4 Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria Energy Usage and Efficiency (External Power Supplies): • EU – Directive 2009/125/EC, Regulation EC 278/2009, Regulation EC 1275/2008, Regulation EC 244/2009, Regulation EC 245/2009, and their amendments • USA - Energy Independence and Security Act of 2007 • USA - www.energystar.gov

Subject[1]	**Packaging Material and Markings**
Requirement(s)[2]	Individual and over-pack packaging materials and markings: • All materials used in the packaging systems must be recyclable. Choose materials in which recycling systems are readily available. Do not use permanent glue or adhesives to attach dissimilar materials such as foam cushions to corrugate. • All packaging must be properly marked. • Expanded Polystyrene is restricted for packaging materials of some products to South Korea. • Wood packaging materials have country specific restrictions
Reference(s)[3]	X-Rite – SPP 72 Packaging Material and Marking Requirements EU – Directive 94/62/EC and its amendments South Koreas – EPS Packaging Restrictions Other – Country specific wood packaging material restrictions

Subject[1]	**Plastics Parts Marking**
Requirement(s)[2]	Mark plastic parts of 25 grams or greater (if feasible) with, as a minimum, the following to aid in recycling of the part: • Polymer / blends / laminates used • Flame retardant used • Filler / reinforcement / plasticizer used • Adhesive labels should not be used for marking purposes
Reference(s)[3]	X-Rite – SPP 71 Plastic Parts Marking Requirements Industry Guide - ISO/DIS 11469 - Plastics - Generic Identification and Marking of Plastic Products, ASTM D1972 - Standard Practice for Generic Marking of Plastic Products, ISO 1043-1, 2, 3, 4 - Plastics - Symbols… (Part 1 through 4.)

Subject[1]	**Product and Documentation Marking**
Requirement(s)[2]	All materials used in the packed systems must be properly marked to meet the applicable requirements of the region(s) the product will be shipped to.
Reference(s)[3]	X-Rite – SPP 74 Product and Documentation Marking Requirements EU - Directive 94/62/EC and its amendments EU - Directive 2002/96/EC and its amendments EU - Directive 2006/66/EC and its amendments China - Management Methods for Controlling Pollution by Electronic Information Products (Ministry of Information Industry Order #39) February 28, 2006 (China RoHS) USA - California Perchlorate Material Notice, Rechargeable Battery Notice USA – Mercury Content Notice

1. Refer to references for further details on the subject.
2. This is only a summary of the basic requirement for this subject. Refer to references for details, exemptions and application.
3. Reference(s) may consist of legal regulations, standards, industry guides or X-Rite requirements. These are representative reference sources for the listed subject. Other references may also apply. All references are subject to changes and updates at any time.

GPCSE Revision History

Revision	Change
A. December 2004	Initial release as PCSE
B. August 28 2007	Changed name from PCSE to GPCSE, Added signature page, Included battery and packaging sections
C. September 28 2007	Section 3: • Added PFOS restriction • Revised the nickel restriction to align with the regulation Section 6: • Added non-rechargeable type batteries must not contain lead exceeding 0.2% (2000 ppm) by weight, and non-rechargeable alkaline and carbon-zinc batteries must be hermetically sealed • Revised US based restrictions on mercury in alkaline-manganese and zinc-carbon batteries at 0.0001% (1 ppm) • Added non-rechargeable alkaline and carbon-zinc batteries must be labeled with the battery manufacturer's brand name, model designation, expiration data (month and year) and country of origin • Deleted the note that labeling requirements for the Netherlands must also be met Section 7 • Clarified methyl bromide sterilization must not be used • Added that all materials used in the packaging systems must be recyclable
D. April 15 2008	Revised error in sub-clause 3.16 Perfluorooctane sulfonates from "These requirements in section 3.15.1 and 3.15.2 do not apply…" to "These requirements in section 3.16.1 and 3.16.2 do not apply…"
E. May 28 2008	Added REACH Directive EC 1907/2008
F. May 12 2009	Complete update to latest regulations and industry expectations, re-write and simplification of the document, added revision letter to revision date. SVHCs added. Plastic marking requirement added. Substance Declaration Worksheet added. Following substances added: Alkylphenols, Decabromodiphenyl Ether (DecaBDE), Antimony, Arsenic, Benzotiazole, Beryllium Oxide and Copper, Bismuth, Bisphenol-A, Cobalt Dichloride, Dimethyl fumarate, Fragrances (musk), Halogen and Halogenated substances, Hexachloro- substances, Hexabromocyclododecane, MCCPs, Pentachlorphenyl (PCP), PFOA, Phthalates, PAH, PVC, Red Phosphorous, Selenium, Surfactants, Toluene, Triclosan, Tris- substances
G. January 8, 2010	ECO No. 18894: Section 3.1: Added two Japan regulations: • Labor Safety and Health Law • Law Concerning the Examination and Regulation of Manufacture etc. of Chemical Substances Section 3.2 • Corrected Benzotriazole CAS No. WAS: 3846-71-1, IS: 3846-71-7 • Added the following new restricted substances: White phosphorous, Benzidine and its chlorides, 4-aminodiphenyl/4-aminodiphenyl and its chlorides, Bis(chloromethyl) ether, 2-naphylamine / beta naphthylamine and its chlorides, Rubber cement with 5% benzene, Hexachlorobenzene, Aldrin, Dieldrin, Endrin, DDT, chlordane (or Heptachlor), bis(tri-n-butylin) oxide, N,N'-ditolyl-p-phenylenediamine, 2,4,6-tri-tert-butylphenol, Toxaphene, Mirex, Kelthane (or Dicofol), Hexachlorobuta-1,3-diene • Changed Cadmium and Cadmium Compounds table: o Added "(listed and ordered by EU RoHS Exemption No.)" o Changed bullet "•"symbol to applicable Exemption No. o Reworded (Exemption No. 8) regarding cadmium usage in electrical contacts and plating to match directive wording. Added "…in the next EU RoHS revision…" o Removed "Cadmium in photo resistors…" as this exemption (No. 35) expired 31 Dec 2009 • Changed Lead and Lead Compounds table: o Added "(listed and ordered by EU RoHS Exemption No.)" o Changed bullet "•"symbol to applicable Exemption No. o Removed "Lead as impurity in RIG…" as this exemption (No. 22) expired 31 Dec 2009 • Changed Mercury and Mercury Compounds table: o Added "(listed and ordered by EU RoHS Exemption No.)" o Changed bullet "•"symbol to applicable Exemption No. o Re-formatted "Mercury in straight fluorescent lamps for general…." Exemption (No. 2) statement o Removed bullet "•"symbol from Note I list of forthcoming exemption changes • Added table for Di-μ-oxo-di-n-butylin hydroxyborane (DBB) • Deleted Halogenated Diphenyl Methane table and replaced with Monomethyl… table

	Section 3.3 • Added SVHC Item number column to table, added new SVHC items 17 through 31 Section 3.4: Energy Usage and Efficiency table • Added (USA) Energy Independence and Security Act of 2007 references Substance Declaration Worksheet column titled "Complies with X-Rite GPCSE?": • Added text to title row asking user to "Please Select one: Yes, Yes by Exemption, or No." • Removed drop down menu from cells in the same column
H. April 28, 2010	ECO No. 19173 Section 3 – Updated responsible group name from …(EHS) to …(CEQ) Section 3.1 • Noted 76/769/EC superseded by EC 1907/2006 and 2005/32/EC superseded by 2009/125/EC • Changed Atlantic Region to NE Atlantic Region – also changed in section 3.2 references Section 3.2 • Clarified substance names and added appropriate CAS No. designation - multiple locations • Removed Level A and Level B designation from JIG-101 reference - multiple locations • Changed Labor Safety and Health Law to Industrial Safety and Health Law – multiple locations • Minor wording clarification changes – multiple locations • Alkylphenols – re-named under Nonylphenols and moved to appropriate alphabetical location - updated requirements text • Hexabromocyclododecane table entry deleted as it is covered under Section 3.3 REACH • Changed Hexavalent Chromium … to Chromium … and moved to appropriate alphabetical location • Created table entry for Brominated Flame Retardants and placed PBBs, PBDEs, and DecaBDE under this heading. Removed PBBOs reference as it is part of "other" Brominated Flame Retartands table • Added table entry for Brominated Flame Retardants other than PBBs, PBDEs, and DecaBDE • Cadmium, Mercury and Lead in Batteries tables; revised requirements text wording to general requirements and refer to references due to the various battery type and country specifics • Created table entry for Fluorinated Greenhouse Gases • Formaldehyde – updated requirements text • Halogens – updated requirements text • Created table entry for Perchlorates • Created table entry for Phosphorus – combined entries for Red Phosphorus and White Phosphorus under this one entry • Phthalates – updated requirements text • Polyvinyl Chloride – updated requirements text • Radioactive Substances – updated requirements text • Moved Tin compounds under Organostannic compounds, added DBT and DOT, separated out TBTO to its own table entry Section 3.4 • Re-formatted all table entries into four groups to match the four SPP references • Updated notes to improve format Supplier Compliance Acknowledgement form – updated text Substance Declaration Worksheet • Inserted new note 4 requesting all known information be entered • Increased height of cells in table for easier recording of readable data
I. July 22, 2010	ECO No. 19384 Section 3.3 text and substance table • Added "Candidate" 3 places to paragraph text and 1 place to substance table header row • Delete table row for item 16 (Cyclododecane) as it is not a current or pending SVHC candidate at this time; therefore renumber items 17 thru 31 to 16 thru 30; delete note 1 (was for item 16); therefore renumber notes 1 thru 3 to 1 thru 2. • Add 8 new Candidate SVHC substances: item 31 - Trichloroethylene, item 32 - Boric acid, item 33 - Disodium tetraborate anhydrous, item 34 - Tetraboron disodium heptaoxide hydrate, item 35 - Sodium chromate, item 36 - Potassium chromate, item 37 - Ammonium dichromate, item 38 - Potassium dichromate

Supplier Compliance
To the
X-Rite Global Product and Component Specification for the Environment

Company Name _____

Name and Title _____

Authorized Signature _____

Contact information (Address) _____

Telephone _____

FAX _____

Email _____

Date _____

On behalf of the aforesaid company, I hereby attest that I understand the requirements of the X-Rite Global Product and Component Specification for the Environment (GPCSE). I further attest that to the best of my knowledge, any designs, articles and substances (i.e., "items") provided by the aforesaid company comply with the requirements of the X-Rite GPCSE and any applicable legal requirements governing their use in effect at the time of delivery to X-Rite. I acknowledge any exceptions to this statement, including any changes in compliance information, will be clearly communicated to X-Rite Purchasing in a timely manner. I also acknowledge that any non-compliance may result in the items being supplied to X-Rite to be deemed unfit for use by X-Rite.

Please return this signed Supplier Compliance to GPCSE acknowledgement form (one per supplier) to X-Rite Purchasing.

Substance Declaration Worksheet - SUBMITTAL REQUIRED

Note: In order to facilitate the reporting of substances as required by various regulations (e.g., REACH), any item, or group of items with a common substance declaration, being supplied to X-Rite, **MUST** have a Substance Declaration Worksheet (or equivalent) prepared for it and submitted to X-Rite by the supplier prior to authorization for first shipment and whenever the declaration information changes. Please use the attached worksheet (or equivalent) to make the declaration. Any non-compliance to GPCSE requirements may result in the items being deemed unfit for use by X-Rite.

Instructions:

1. This Substance Declaration Worksheet refers to the X-Rite GPCSE revision as shown in the footer of the worksheet.
2. Environmental compliance information should be provided for all substances, preparations or articles being supplied.
3. User to enter requested information in the table. Please use exact and concise language. Expand rows or use additional sheets as needed.
4. Enter all known substance content/amount information for the part – even if it is fully compliant. This helps when compiling the final product substance content/amount information for substances that may be of concern of exceeding a threshold when all the sub-assemblies and parts are added together.
5. User to fill in company name, date, and an authorized signature attesting that the information is complete and accurate to the best of your knowledge.
6. Alternate declaration worksheets or other documents may be used as long as all information requested on this form and any other pertinent information is clearly provided.
7. Return the completed information to X-Rite Purchasing prior to shipment authorization.

Supplier / Company Name	Signature of Authorized Supplier Representative	Date

X-Rite Part Number	Supplier Part Number	Part Description	Complies with X-Rite GPCSE? Please select one: • Yes • Yes by Exemption • No	If "Yes by Exemption" or "No", please list exact Exemption(s) or Reason(s) and, if applicable, actual (or maximum) substance content. REACH-SVHCs above allowed thresholds must be listed along with actual (or maximum) content. Enter all known substance concentration information.	
				Exemption(s) / Reason(s) / SVHC(s) / Substance	% or ppm