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Environment

Dell and the Environment

Dell's Position on Brominated Flame Retardants

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Flame-retarded plastics are occasionally needed to meet strict fire safety codes. Dell is committed to reducing the use of brominated flame retardants, and other environmentally-sensitive materials, in our products.

We have already prohibited the use of brominated flame retardants (PBB, and PBDE) listed in the European Restriction of Hazardous Substances (RoHS) Directive in all our products, worldwide, well in advance of the July 2006 RoHS deadline. In fact, **our publicly-stated goal is to eliminate (all other) brominated flame retardants in desktop, notebook, and server chassis plastic parts by year-end 2004.**

We avoid brominated flame retardants by using plastics that can be flame-rated with phosphorus-based flame retardants and by using design strategies that reduce the need to use flame-rated plastics at all.

Some plastic types cannot be flame-rated with anything other than bromine because reliable alternative technology does not currently exist. As such, we try to avoid these types of plastics when we need flame retardancy. **Dell does not permit the use of any flame retardant that is restricted by law.**

Dell will continue to strive to meet our public goals to eliminate and/or reduce the use of brominated flame retardants in our products, as well as continue to evaluate the technical and environmental, health and safety impacts of bromine-free electronic materials. Please click here for additional information on flame retardants.

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EXHIBIT NO. **2**

Kevin

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KEMISKA ÄMNEN SOM INTE FÅR ANVÄNDAS INOM VOLVOKONCERNEN

Volvos svarta lista

ORIENTERING

Internationell motsvarighet till denna standard saknas.

Ett liknande dokument är "VDA-Liste für deklarationspflichtige Stoffe - Inhaltsstoffe in Bauteilen und Werkstoffen".

Två angränsande standarder är STD 1009,11 Kemiska ämnen vars användning skall begränsas inom Volvo-koncernen - Volvos grå lista och STD 1009,2 Utbyte av farliga kemiska ämnen - Volvos vita lista.

Denna utgåva skiljer sig från utgåva 2 genom att information om var hänvisningar till denna standard kan göras liksom information om STD 1009,2 har tillkommit. Avsnitt 3 Hänvisning i dokumentation har också tillkommit.

1 OMFATTNING OCH TILLÄMPNING

Enligt beslut i Volvokoncernens Miljöråd har begränsningar införts för användandet av vissa kemiska ämnen. De kemiska ämnen som inte får användas i Volvos produktionsprocesser eller återfinnas i oförändrad form i Volvos produkter redovisas i denna standard. Uppdateringen av standarden initieras av Volvokoncernens Miljöråd.

Nya produkter innehållande ett eller flera av de kemiska ämnen som redovisas i denna standard får ej tas i bruk. För kemiska ämnen som redovisas i standarden och som inte är helt avvecklade, skall avvecklingsplaner med slutdatum finnas.

Förbudet avser varje medveten användning av de i standarden redovisade kemiska ämnena. Däremot gäller inte förbudet i de fall ett kemiskt ämne utgör en förorening i en viss produkt, d.v.s. oönskad förekomst i mycket låga halter eller då det hanteras i små mängder av utbildad personal på laboratorium.

Undantag kan även göras för kemiska ämnen ingående i processer styrda av lagkrav eller säkerhetsbestämmelser och där Volvo därför inte ensidigt kan förbjuda användningen. I den händelse att undantag måste göras skall särskilda skyddsåtgärder vidtagas för att förhindra skada på människa och miljö. Beslut om undantag fattas av de enskilda Volvobolagen.

CHEMICAL SUBSTANCES WHICH MUST NOT BE USED WITHIN THE VOLVO GROUP

Volvo's black list

ORIENTATION

There is no international equivalent to this standard.

A similar document is "VDA-Liste für deklarationspflichtige Stoffe - Inhaltsstoffe in Bauteilen und werkstoffen".

Two associated standards are STD 1009,11 "Chemical substances whose use within the Volvo Group shall be limited - Volvo's grey list" and STD 1009,2 "Substitutes for hazardous chemical substances - Volvo's white list".

This issue differs from issue 2 in that information on where reference to this standard can be made has been added together with information on STD 1009,2. Section 3 "Reference in documentation" has also been added.

1 SCOPE AND FIELD OF APPLICATION

According to a decision by the Volvo Group's Environmental Council, restrictions have been introduced with respect to the use of certain chemical substances. This standard lists those chemical substances, which must not be used in Volvo's production processes, nor must they be included in Volvo's products in unreacted form. The Volvo Group's Environmental Council initiates the updating of the standard.

New products containing one or more of the chemical substances listed in this standard must not be put into use. Phase-out plans with final date of use are required for those listed chemical substances, which have not been fully phased out.

The prohibition refers to each deliberate use of the chemical substances specified in the standard. However, the prohibition does not apply in those cases a chemical substance occurs in the form of impurities in a specific product, that is, non-desired occurrence in very low concentrations, or when it is handled in small quantities by trained staff at laboratories.

Exceptions may also be made for chemical substances used in processes controlled by legal requirements or safety regulations where it is not possible for Volvo exclusively to prohibit the use of the substance in question. In situations where exceptions have to be made, special precautionary measures shall be taken to prevent injurious effects on humans or the environment. Any exceptions shall be decided upon by the respective Volvo company.



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Material use

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Society uses a significant amount of raw materials and resources, and many experts believe such consumption levels are unsustainable. As part of our Design for Environment program, HP is committed to using materials more efficiently, reducing the amount of materials used in our products, finding alternatives for hazardous materials, and developing materials that have less environmental impact and more value at end-of-life.

- » Materials reduction
 - » Reducing hazardous materials
 - Restriction of Hazardous Substances (RoHS) European
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Materials Reduction

Materials reduction is fundamental to HP's product environmental strategy. Reducing materials use can decrease costs for our customers and HP, meet customer demand for smaller and more efficient products such as handheld devices, laptops and digital cameras, and reduce the cost of recycling and disposal.

The amount of computing power drawn from each unit of material in our products has progressively improved. For example, HP NonStop servers have become significantly more materials efficient since 1989. Similar trends apply to PCs, laptops, printers and other devices.

Recycled materials

Some of our products and packaging contain recycled materials. We plan to increase the amount of recycled material used where it does not compromise quality.

- » Case study: Challenges in procuring high quality recycled plastic
- » Recycled plastic in HP scanners
- » HP recycled paper products

Reducing hazardous materials

HP prohibits or restricts the use of many materials in products through an environmental specification called the General Specification for Environment (GSE) (PDF file). The GSE establishes requirements for prohibiting or restricting certain chemical compounds used in products or the manufacture of products. The specification is integrated into our product development process and used by our designers and suppliers. Following are examples of materials prohibited or restricted by the GSE.

Prohibited Materials

Asbestos
Chlorinated Hydrocarbons
Halogenated Diphenyl Methanes
Mercuric Oxide Batteries
Ozone Depleting Substances

Related information

- » RoHS Position Statement (PDF file)
- » MSDS's
- » Product environmental profiles
- » Return and recycling



To view PDF files, you need to have Adobe Acrobat Reader installed on your computer. Acrobat Reader is a free plug-in. You can download the latest version or download a version with accessibility features.

Environmental thinking at every stage

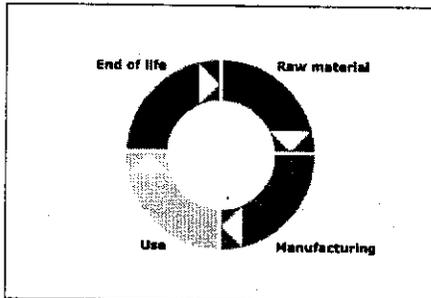
The maximum benefit from the minimum of resources. This maxim is at the heart of IKEA product development. Economising on resources makes an important contribution to the work of keeping IKEA prices low, at the same time as it reduces the environmental impact of products.

IKEA of Sweden develops the IKEA products

The product development is done by IKEA of Sweden in Älmhult, Sweden. Each business area (for example, Kitchen & Dining or Textiles) has an environmental co-ordinator and the business area is responsible for ensuring that its products fulfill requirements relating to the environment, health and safety.

The eWheel method

When IKEA develops new products, the spotlight is placed on the environmental consequences of those new products throughout their entire life cycle. This is done with the help of the "eWheel" - an analytical tool providing a systematic approach for compiling the relevant environmental information for the product.



Raw material

Around 70 percent of IKEA's 10,000 products are made from wood or wood fibres. Wood is an excellent material from an environmental perspective. It can be recycled and is a renewable resource. Other important raw materials are metal, plastic, rattan and textiles.

- As little raw material as possible should be used and IKEA strives to increase the proportion of renewable and recycled raw materials.
- Smart solutions minimise the use of materials without affecting the function or appearance of a product. Some examples are hollow legs, particleboard cores instead of solid wood, and multi-functional furniture.

Manufacturing

- Waste should be avoided. When possible, production waste is used in the manufacture of other products.
- Suppliers must follow the IKEA code of conduct, "The IKEA Way on Purchasing Home Furnishing Products" (IWAY). This includes, among other things, rules governing factory emissions to air and water, and instructions about how to handle waste and chemicals.

Read about the IKEA code of conduct on page 15

- Products must not include or exceed substances that are prohibited by law or forbidden or restricted in the IKEA list of "Chemical Compounds and Substances".

Examples of substances which should not be used in IKEA products:

- Wood preservatives as PCP, Lindan and GCA
- Tinorganics
- Lead and its compounds
- Azodyes capable of releasing carcinogenic arylamines
- Following flame retardants:
 - Organic brominated compounds
 - Antimony compounds
 - Chlorinated paraffins (alkanes)
- Organic solvents in printing paste
- Nonylphenol ethoxylates
- Cadmium and its compounds
- PVC (exception: electric cables)
- CFC and HCFCs
- In general carcinogenic substances (Category I & II in EU)

Examples of restricted substances in IKEA products:

- Formaldehyde shall be below E1 level in wood based products, and even stricter concerning textiles.
- Isocyanates
- Arylamines
- Chemicals at surface treatment have separate specifications
- Special chemical restrictions exist for latex materials. Flexible PUR foam, products in contact with foodstuff
- Restrictions exist regarding the use of Chrome in IKEA products. Especially regards Chrome VI
- Strict limits for use of mercury exists.
- Special restrictions exist for products that might come into contact with children as pistoleers, etc.

Transportation

Smart packaging is the most effective weapon IKEA has to reduce the environmental impact of transport. Clever design and flatter packaging help IKEA to squeeze more products into every load-carrying unit. This reduces both emissions and transport costs.



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ISPA Statement on PBDEs

Mattress manufacturers use a variety of alternatives to meet federal, state and local flammability requirements - thereby improving the safety of their products and saving hundreds of lives each year. One category of alternatives used in a limited number of mattresses is polybrominated diphenyl ethers, or PBDEs. PBDEs are also used to make many other products - including electronic equipment, TV set cabinets and computer monitor cabinets - comply with applicable fire standards.

The mattress industry is aware of reports citing the presence of certain PBDEs in the breast milk of nursing mothers. We share consumer concerns about these chemicals and are committed to providing safe and healthful products.

Three recent developments are important in this regard. First, the use of PBDEs in mattresses - which is already limited today - will likely be voluntarily phased out entirely in the near future. The only U.S. supplier of the "penta" PBDE variety used in mattress foam has announced that it will stop making that product at the end of 2004. To replace penta PBDE, the U.S. Environmental Protection Agency has recently given preliminary approval to an alternative material for use in mattress foam. Suppliers are actively testing alternatives that will allow them to make mattress foam that provides comparable or greater fire safety capabilities and offers the degree of comfort that consumers expect from their mattresses, without using PBDEs.

Second, the EPA has evaluated available scientific information on PBDEs and issued a statement in November 2003 summarizing its conclusions. EPA recognized that penta and other PBDEs provide important benefits to consumers in slowing fires, and "therefore increase available escape time in the event of a fire." EPA stated that it will continue to assess PBDE research and that it "has not concluded that PBDEs pose an unreasonable risk to human health or the environment." EPA also announced that it "does not believe that there is a need to remove or replace products that may contain these chemicals."

Finally, the state of California has recently set new mattress flammability standards that will increase a manufacturer's options for making its products safer. The mattress industry is working closely with the U.S. Consumer Product Safety Commission to establish a national mattress flammability standard that is based on the same test method and pass/fail criteria developed by California. While no state or federal flammability standard will make a mattress fireproof, the mattress industry supports these efforts because they will demonstrably improve the safety of our products in a manner that is both comfortable for the consumer and practical.

Revised 11-19-2003

PRINT PAGE

Polychlorinated Biphenyl (PCB) and Polychlorinated Terphenyls (PCT)

Restricted Use Material

Cadmium – and its compounds are subject to quantity limits in batteries – must not be used as a stabilizer, coloring agent or as a surface coating treatment in parts, components, materials or products.

Chlorinated Paraffins – must not be used in paints, coatings and sealants, oils, or flame-retardants in rubber, plastic and textiles.

Heavy Metals Restrictions in Packaging Materials – Severe restrictions on the use of lead, mercury, cadmium, or hexavalent chromium.

Lead Acid Batteries – subject to testing and marking requirements.

Lead carbonates and sulfates – must not be used in any paint applied to parts, components, materials or products.

Lithium and Li-Ion Batteries – subject to testing and quantity limitations. Must be certified as non-dangerous for transportation purposes.

Mercury – except for small amounts in certain displays, lamps and batteries, must not be contained in any part, material, component or product.

Polybrominated Biphenyls (PBBs) and Polybrominated Biphenyl Ethers (PBDEs)/ Polybrominated Biphenyl Oxides (PBBOs) – may not be used in flame retardants for plastic parts.

Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.

Materials Subject To Future Restrictions

Lead, mercury, cadmium, hexavalent chromium, and certain halide-containing flame retardants – will be eliminated or severely restricted by the European RoHS Directive, effective July 1, 2006. RoHS Position Statement (PDF file - download pdf reader)

Restriction of Hazardous Substances (RoHS) European Directive

The European Union Restriction of Hazardous Substances (RoHS) Directive will restrict the presence of certain substances, including lead (Pb), in electrical and electronic products. The Directive applies to all electrical and electronic products, and their component parts, offered for sale into the European Union after July 1, 2006. China is expected to adopt similar legislation with a similar timeline. In addition to lead, these laws restrict the use of mercury, cadmium, hexavalent chromium and two halide-containing flame retardants: PBB (polybrominated biphenyl) and PBDE (polybrominated diphenyl ether).

From July 1, 2006, HP electronic products will be more than 99.9% free of these materials except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive). HP's General Specification for Environment (GSE) already prohibits the use of PBB, PBDE and most uses of cadmium, as well as certain uses of lead, mercury and hexavalent chromium, in HP purchased parts, materials and products.

HP's goal is to exceed compliance obligations by meeting the requirements of the EU RoHS Directive on a worldwide basis. Our RoHS Team leads our company-wide transition efforts. This team includes representatives from all of HP's product groups and all affected functional areas. The team manages an overall transition roadmap. We have trained more than 500 employees on common applications of the substances restricted by RoHS and replacement technologies.

Some of our product components already comply with the RoHS Directive and prototype products that meet its standards will be tested during 2004. Most HP products introduced in 2005 will meet the RoHS standards.

After completing extensive development work, in 2003 we began working closely with suppliers to ensure a smooth transition. An HP website assists suppliers in understanding our strategy for replacing the restricted materials and our technical requirements. Information for HP customers is available as well.

We are working as participants in several industry groups to accelerate the industry transition. In

2 LIST OF SUBSTANCES

Table 1E

Group	Substance name	CAS no. ¹⁾	Example of type or area of use	Risk ²⁾
Amines	Phenyl- β -naphthylamine	135-88-6	Antioxidant	C
	Methylenedianiline (4,4'-)	101-77-9	Hardener, in paints	C
CFC compounds	CFC 11	75-69-4	Cooling agent, "freon"	O
	CFC 113	76-13-1	Cooling agent, "freon"	O
	CFC 114	76-14-2	Cooling agent, "freon"	O
	CFC 115	76-15-3	Cooling agent, "freon"	O
	CFC 12	75-71-8	Cooling agent, "freon"	O
Fibres	Asbestos	Several	Insulating material	C
Flame retardants	Polybrominated biphenyls	Several	PBBs, in plastics, textile	E, N, C
	Polybrominated diphenyl ethers	Several	PBDEs, plastics, textile	E
Rubber chemicals	Aminobiphenyl (4-) + salts	92-67-1	Dye	C
	Benzidine (+ salts)	92-87-5	Dye	C
	Thiocarbamide	62-56-6	Rubbers and plastics	A, C
Halons	Halon 1211	353-59-3	Fire retardant	O
	Halon 1301	75-63-8	Fire retardant	O
	Halon 2402	124-73-2	Fire retardant	O
Chlorinated hydrocarbons	HCFC ³⁾	Several	Blowing agent, solvent	O
	PCB	1336-36-3	Insulators, oils, etc.	E
	Hexachlorobutadiene	87-68-3	Solvent	E, T
	Carbon tetrachloride	56-23-5	Solvent	O, C, T
	Methylene chloride	75-09-2	Solvent, in fuel	C
	1, 1, 1-Trichloroethane	71-55-6	Solvent	O
Metals	Tetrachloroethylene	127-18-4	Solvent	C
	Lead chromate	7758-97-6	Pigment	C, A, E, N
	Cadmium + Cd compounds ⁴⁾	Several	Pigment	C, E
Lubricants	Mercury + Hg compounds	Several	Electric equipment	N, E
	Chlorinated paraffins	Several	Oils, fire retardants	E
Surface-active agents	Mineral oil with PAHs ⁵⁾	Several	Base oils, lubricants, etc.	C
	4-Nonylphenol	Several	Used as ethoxylates	E
	Nonylphenoethoxylates	Several	Cleaning agent	E
	Octylphenol	Several	Used as ethoxylates	E
	Octylphenoethoxylates	Several	Cleaning agent	E

1) - 5) See next page