



## Governing the Chemical Content of Xerox Products

As part of a long-standing commitment to environmental sustainability, Xerox has been working over the long-term to eliminate the use of persistent, bioaccumulative and toxic materials throughout the supply chain. Protection of human health and the environment is integral to sustainability, and for Xerox, it is our way of doing business.

### **Xerox internal standards:**

We apply strict internal standards and have deployed requirements to our suppliers governing the use of chemicals in Xerox products, parts and supplies. The standard, *EHS 1001: Xerox Environment, Health and Safety Supplier Requirements: Chemical Bans/Restrictions and Part Marking*, establishes requirements for regulatory compliance, chemical bans and restrictions and parts marking for parts and materials intended for use in electronic products. We also strictly control the chemical content of Xerox consumable items such as toner and paper through other Xerox standards. Tables 1, 2 and 3 list the materials controlled through these processes and standards. Table 4 includes substances currently subject to specific reporting and notification requirements under the European Union's ("EU") Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation. All suppliers must meet these requirements as a condition of doing business with Xerox.

### **Xerox compliance with the EU REACH regulation**

Many countries around the world have enacted or are considering comprehensive chemical toxics reform legislation. Of particular note is the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation. This regulation calls for comprehensive chemical risk assessment and control, and will be implemented in stages over several years. We have completed all necessary pre-registrations and are registering substances as required. We are also working with our suppliers and customers to ensure REACH obligations are met throughout the value chain. Xerox expects to be fully compliant with all aspects of the REACH regulation as its provisions become effective and applicable.

### **Xerox compliance with the Restrictions on the Use of Hazardous Substances**

The EU's Restriction of Hazardous Substances in Electrical and Electronic Equipment directive (RoHS) now requires new electronic products sold in Europe to be nearly free of lead, mercury, cadmium, hexavalent chromium and certain brominated flame retardants, unless feasible alternatives are unavailable. Xerox products subject to RoHS meet these requirements. While not required by law, our newly launched products are designed to meet EU-RoHS specifications in all markets. However, where regulations allow, some products may contain some RoHS substance content to avoid premature disposal of existing useful parts and equipment.

### **Supply Items Such as Toner, Solid Inks and Paper**

The EU ROHS directive does not apply to toner, paper and other media, which are classified as consumables and are outside the definition of electrical and electronic equipment. However, Xerox understands that customers may still be interested in the levels of ROHS-targeted substances in these items.



### *Toners and Solid Inks*

None of the EU ROHS-targeted substances are intentionally added to Xerox toners or solid inks but as restricted metals are naturally occurring, trace levels are possible. Representative toners have been analyzed for lead, mercury, cadmium, chromium and bromine. As expected, results confirm that these substances are not present in Xerox toners above the EU ROHS-specified threshold levels.

Additionally, based on information gathered to date throughout our supply chain, Xerox toners and solid inks do not contain any of the EU REACH Annex XIV candidate substances, as published by the European Chemicals Agency (ECHA) in October of 2008, in concentrations exceeding 0.1 % by weight. Xerox continues to update and refine its information gathering activities to assess all elements of its supply chain as the scope of worldwide chemical regulation continues to expand.

### *Paper and other media*

Based on Xerox's paper supplier standards and information developed to date, Xerox believes that no EU-ROHS targeted substances are intentionally added to Xerox commodity papers in the manufacturing process, but as the restricted metals are naturally occurring, trace levels are possible. Actions have been taken to confirm with our paper suppliers that these substances are not present above EU ROHS-specified threshold levels.

In addition, based on Xerox's manufacturing process knowledge, Xerox believes that papers supplied to Xerox are unlikely to contain any of the EU-REACH Annex XIV substances, as published by the European Chemicals Agency (ECHA) in October of 2008. Supplier due diligence efforts are underway, however, to further verify conformance throughout the supply chain.

For more information on Xerox's commitment to environmental sustainability, see the Company's annual Global Citizenship report at [www.xerox.com/environment](http://www.xerox.com/environment).

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**Table 1. Prohibited Substances in Xerox Products, Parts, Materials and Packaging**

Substance	Qualification
Asbestos and asbestos materials	Shall not be ingredients.
Azo Colorants	Shall not be an ingredient if chemical breakdown results in release of aromatic amines listed in Directive 2002/61/EC.
Benzene	Shall not be an ingredient, or present as an impurity in concentrations $\geq 0.1\%$ by weight.
Cadmium and its compounds	In <b>electronic products</b> : prohibited unless its application is exempted per EU ROHS. The substances shall not be present in concentrations exceeding 0.01 % (100 ppm) by weight per homogeneous material used in parts or products <sup>2</sup> . In <b>non-electronic products and accessories</b> : banned from use as pigment, dye, or stabilizer in concentrations greater than 0.01 % (100 ppm) by weight. In <b>packaging</b> : the sum of the concentration levels of incidentally introduced lead, cadmium, mercury and hexavalent chromium must be less than 100 parts per million. In <b>batteries</b> : banned in concentrations $\geq 0.002\%$ by weight
Formaldehyde	Shall not exceed specified emission limits for composite wood products, excludes packaging. .
Hexachlorobenzene	Shall not be an ingredient.
Hexavalent Chromium and its compounds	In <b>electronic products</b> : prohibited unless its application is exempted per ROHS. The substances shall not be present in concentrations exceeding 0.1 % by weight per homogeneous material used in parts or products. In <b>packaging</b> : the sum of the concentration levels of incidentally introduced lead, cadmium, mercury and hexavalent chromium must be less than 100 parts per million.
Inorganic Cyanide Compounds	Inorganic cyanide compounds shall not be ingredients.
Lead and its compounds	In <b>electronic products</b> : Prohibited unless its application is exempted per ROHS. The substances shall not be present in concentrations exceeding 0.1 % by weight per homogeneous material used in parts or products. In <b>non-electronic products and accessories</b> : Banned from use in paints or as a stabilizer in concentrations greater than 0.01 % by weight. In <b>packaging</b> : the sum of the concentration levels of incidentally introduced lead, cadmium, mercury and hexavalent chromium must be less than 100 parts per million.
Mercury and its compounds	In <b>electronic products</b> : Prohibited unless its application is exempted per ROHS. The substances shall not be present in concentrations exceeding 0.1 % by weight per homogeneous material used in parts or products. In <b>packaging</b> : the sum of the concentration levels of incidentally introduced lead, cadmium, mercury and hexavalent chromium must be less than 100 parts per million. In <b>batteries</b> : banned in concentrations $\geq 0.0005\%$ by weight In <b>button batteries</b> : banned in concentrations $> 2\%$ weight
Nonylphenol (NP) and Nonylphenol ethoxylate (NPE)	Shall not be an ingredient in concentrations equal to or greater than 0.1 % by weight in industrial and institutional cleaning products and manufacturing of pulp and paper.
Ozone Depleting Substances (ODS)	Shall not be ingredients.
Pentachlorophenol	Shall not be an ingredient. Prohibited in the treatment of wood.

Substance	Qualification
Perfluorooctane sulfonate (PFOS) and its salts, Perfluorooctanoic acid (PFOA) and its salts	<p><u>Canada</u>            Shall not be an intentionally added ingredient.</p> <p><u>EU</u>            Shall not be an intentionally added ingredient in preparations in concentrations of <math>\geq 0.005\%</math> by weight.</p> <p>Shall not be an intentionally added ingredient in semi-finished products or articles, or parts at concentrations <math>\geq 0.1\%</math> by weight calculated with reference to the mass of structurally or micro structurally distinct parts.</p>
Polybrominated biphenyls (PBBs)	The substances shall not be present in concentrations exceeding 0.1 % by weight per homogeneous material used in parts or products.
Polybrominated diphenylethers (PBDEs) including deca-BDE	The substances shall not be present in concentrations exceeding 0.1 % by weight per homogeneous material used in parts or products.
Polychlorinated Biphenyls (PCBs)	Shall not be ingredients.
Polychlorinated Naphthalenes (more than three chlorine atoms)	Shall not be ingredients.
Polychlorinated terphenyl (PCTs)	Shall not be ingredients.
Halogen-Containing Polymers	Shall not be used for packaging of Xerox products (includes PVC)
Radioactive Substances	Shall not be ingredients.
Short Chain Chlorinated Paraffins (alkanes, C10-13 chloro)	Shall not be ingredients.
Tributyl Tin (TBT), Triphenyl Tin (TPT), and Tributyl Tin Oxide (TBTO)	Shall not be ingredients.

Substance
Antimony and its compounds
Arsenic and its compounds
Beryllium and its compounds
Bismuth and compounds
Bisphenol-A (BPA)
Indium
Nickel and its compounds
Phthalates including DINP, DIDP, DNOP
Tris (2-chloroethyl) phosphate (TCEP) (CAS# 115-96-8)
PVC (PVC in Xerox product packaging is prohibited)
Selenium and its compounds

Substance
Barium and its compounds
Biocides
Cobalt and its compounds
Copper and its compounds
Ethylene dichloride
Manganese dioxide
Molybdenum & its compounds
2-Naphthylamine salts
4-Nitrobiphenyl and its salts
Silver and its compounds
Tellurium and its compounds
Tetrachloroethylene
Thallium and its compounds
Zinc and its compounds

**Table 4. Candidate List Substances of Very High Concern – May be subject to authorization under the EU REACH regulation – Must be Reported to Xerox**

Substance	CAS #
Anthracene	120-12-7
4,4'- Diaminodiphenylmethane	101-77-9
Dibutyl phthalate	84-74-2
Cobalt dichloride	7646-79-9
Diarsenic pentaoxide	1303-28-2
Diarsenic trioxide	1327-53-3
Sodium dichromate	7789-12-0, 10588-01-9
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ – HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8
Bis(tributyltin)oxide	56-35-9
Lead hydrogen arsenate	7784-40-9
Benzyl butyl phthalate	85-68-7
Triethyl arsenate	15606-95-8