

# Barco Regulated Substances List

## Barco Substances List

### 1 Revision history

Date	Version	What has changed
08/07/2014	1.0	First release
10/06/2015	1.1	Added four phthalates to the RoHS restricted substances Added DiNP and DnHP to the 'other restricted substances'
23/01/2018	2.0	- Updated according to current interpretation of an article (REACH) - Reviewed the complete substances list
22/08/2018	2.1	- Removed 2,3-dibromopropan-1-ol from the list - Changed DiNP and DiDP from restricted to declarable - Removed DnHP since it's also a SVHC substance
16/07/2021	3.0	- Updated Maximum Concentration Level PFOA - Updated Maximum Concentration Level Short Chain Chlorinated Paraffins - Updated Maximum Concentration Level Tris(2-chlorethyl) phosphate - Added Biocides to 'other restricted substances' - Added BPA in medical devices to 'other restricted substances' - Added Latex in medical devices to 'other restricted substances' - Added Perchlorates in batteries to 'batteries' - Added Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP) to 'other restricted substances' - Added Tris(2,3-dibromopropyl) phosphate to 'other restricted substances' - Added Tetrabromobisphenol A to 'other restricted substances' - Added Bisphenol S in thermal paper to 'other restricted substances' - Added Phenol, Isopropylated Phosphate (3:1) (PIP 3:1) to 'other restricted substances' - Changed POPs from declarable to restricted
22/08/2022	4.0	- complete renewal and updating of the list

### 2 Introduction

The Barco regulated substances list (RSL) is part of the Barco environmental requirements and Barco chemicals management strategy. The list contains minimum requirements related to international regulations and to Barco's own requirements, in order to fulfill requirements of our own customers and to anticipate future substance restrictions. Barco works on pro-actively phasing out the used hazardous substances – regulated or not yet been

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covered by official regulations. Decisions to search for alternatives is based on the commercial availability and technical feasibility of the alternative solutions. All Barco suppliers are required to ensure the compliance of their products with this list.

- The Barco Regulated Substances List is aligned with the [BOMcheck List of Restricted and Declarable Substances](#). Compliance with the BOMcheck list is considered as equal to compliance with the Barco Substances List.

## 3 Purpose

The RSL contains product substances requirements related to:

- Regulations, laws, etc. at a different level – municipal, country, state or federal.
- Barco own requirements

## 4 Scope

The Barco substances list specifies the substance requirements for all Barco products, including subassemblies, parts, materials, components, batteries and packaging that are incorporated into Barco products, as well as some manufacturing processes. The Barco substances list contains two types of substances:

- Restricted substances: cannot be present in the product or its manufacturing above a certain threshold and in specific applications.
- Declarable substances: they can be present in the product but they need to be declared to Barco if they are above a specific threshold concentration.

## 5 Deviations

If the supplier supplies or intends to supply products to Barco which are not in compliance with the Barco RSL, the supplier needs to contact Barco Procurement immediately to resolve the issue and together to agree on corrective actions.

## Recycled Content

Barco promotes the use of recycled materials, mainly but not limited to the use of recycled plastics only. Barco acknowledges the use of recycled materials may pose challenges in terms of safeguarding compliance to all substances as referred to in the RSL. In case of issues related to the Barco RSL and the compliance of recycled materials, please get in touch with Barco Procurement for assistance. In certain specific cases and only when no legal obligation is defined, it may be possible to obtain a waiver for the presence of certain substances in recycled materials. However, this is to be decided on a case-by case basis.

## 6 Reporting/declaring substances

Suppliers are requested to respond to questions regarding the presence of any substances listed in the tables of this document. These requests can be sent by Barco or by a third party (GreenSoft).

More and more regulations require Barco to share information with its customers about the materials contained in its products. In order to report compliance with regulations and to

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demonstrate due diligence, Barco relies on information provided by its suppliers and expects its suppliers to collect information from their suppliers accordingly.

## 7 Restricted and declarable substances

This section includes the lists of restricted and declarable substances.

- The column 'Substances': contains the official name of the substance.
- The column 'Maximum Concentration Level': indicates the threshold above which the substance needs to be restricted or reported.
- The column 'Application': shows the scope of the restriction/declaration.
- The column 'Restricted/Declarable': Restricted means the substance is prohibited above the maximum concentration level. Suppliers also need to declare their compliance to these restrictions to Barco. Declarable indicates that the supplier needs to actively declare the presence of the substance in the case it is present above the maximum concentration level.

### 7.1 RoHS Substances Restrictions

The substances below are restricted by the EU RoHS Directive (2011/65/EU) as amended by Directive 2015/863/EU of March 2015. The restrictions do not apply to the exemptions published in Annex III and IV in the RoHS Directive. Be aware that all exemptions have an expiry date.

The restrictions are applicable on the homogeneous level. The homogeneous level is defined as either:

- A material with a uniform composition throughout; or
- A material that consists of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding or abrasive processes.

Substances	Maximum Concentration Level	Application	Restricted/Declarable
Cadmium and cadmium compounds	0.01%	All	Restricted
Hexavalent Chromium compounds	0.1%	All	Restricted
Lead and lead compounds	0.1%	All	Restricted
Mercury and mercury compounds	0.1%	All	Restricted
PBDEs (Polybrominated diphenyl ethers)	0.1%	All	Restricted
PBBs (Polybrominated biphenyls)	0.1%	All	Restricted
Bis(2-ethylhexyl) phthalate (DEHP)	0.1%	All	Restricted
Benzyl butyl phthalate (BBP)	0.1%	All	Restricted
Dibutyl phthalate (DBP)	0.1%	All	Restricted
Diisobutyl phthalate (DIBP)	0.1%	All	Restricted

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## 7.2 REACH

### 7.2.1 Candidate list Substances of Very High Concern (SVHC)

Article 33 of the REACH regulation requires all suppliers to inform their customers if the product they supply contains any of the substances of the Candidate list in concentrations >0.1% w/w on article level.

The concentration threshold of 0.1% w/w applies to every article supplied. This means this threshold applies to each article of an object made up of more than one article, which were joined or assembled together (=complex object). In other words, the 0.1% w/w threshold applies to every subpart of an article.

The substances of the Candidate list are likely to be restricted in the future. Therefore suppliers of Barco are expected to declare already if SVHCs are present or not regardless of the threshold (from 0.0% w/w of the article) in order to anticipate compliance.

The candidate list is updated twice a year by the European Chemicals Agency. For the most recent list we refer to the ECHA-website: <http://echa.europa.eu/nl/candidate-list-table>

Substances	Maximum Concentration Level	Application	Restricted/Declarable
<a href="#">SVHC substances REACH (Candidate list)</a>	0.0%	All	Declarable

### 7.2.2 Restricted substances

The substances listed in Annex XVII of REACH are restricted or banned for specific applications.

The most recent list of restricted substances: <https://echa.europa.eu/substances-restricted-under-reach>

Substances	Maximum Concentration Level	Application	Restricted/Declarable
<a href="#">Restricted REACH substances (Annex XVII)</a>	Not intentionally added	All	Restricted

### 7.2.3 Authorized substances

The substances listed in Annex XIV of REACH shall not be placed on the market after their respective sunset date unless they are specifically authorized by ECHA. All suppliers of Barco have to make sure the products they supply to Barco do not contain any of the substances under authorization (unless authorized by ECHA).

Since all these substances are on the SVHC list, they are already declarable in 7.2.1.

The most recent list of authorized substances:

<https://echa.europa.eu/authorisation-list>

## 7.3 Substances Legislative Restrictions in Batteries

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The substances in the table below are restricted in batteries by different legislations – EU Battery Directive 2006/66/EU(1), Chinese Standard GB 24427-2021 “Content Limitation of mercury, cadmium and lead for zinc anode primary battery”(2), Taiwan Restrictions on the Manufacture, Import, and Sale of Dry Cell Batteries(3), Korea “Law on quality management and control of safety of industrial products Battery regulation”(4), New York Environmental Law “27-0719 Battery Management and Disposal”(5), California Department of Toxic Substances Control (DTSC) perchlorate regulations – labelling requirement(6).

Substances	Maximum Concentration Level	Application	Legislation
Cadmium	0.001%	Batteries	(1)(4)
Mercury	0.0001%	Batteries	(1)(2)(3)(4)(5)
Lead	0.004%	Batteries	(1)(2)
Perchlorates	0.0000006%	Batteries	(6)

## 7.4 Packaging

The following restriction arises from the EU Packaging Directive.

Substances	Maximum Concentration Level	Application	Restricted/Declarable
Sum of all heavy metals (Cd, Hg, Cr(VI) and Pb)	0.01%	Packaging	Restricted

Next to the above restriction, all wood used for pallets, crating, blocking, or bracing must be in compliance with the International Standards for Phytosanitary Measures Guidelines for Regulating Wood Packaging Material in International Trade (ISPM15).

## 7.5 California Proposition 65

Officially known also as the California Safe Drinking Water and Toxic Enforcement Act, applies only to exposures to listed chemicals. It does not ban or restrict the use of any given chemical by setting a concentration limit for the chemical present in the product. Safe Harbor Levels (levels of exposure that trigger the warning requirement) are adopted for many listed chemicals. Exposures below those levels do not require a warning.

## 7.6 Other restricted and declarable substances

Besides the substances in the scope of current restrictions, this section provides the list of substances which are restricted or declarable in worldwide regulations and substances that need to be avoided in products/packaging provided to Barco due to upcoming restrictions in future regulations. Barco requires its suppliers to declare those substances.

If there is indicated in the last column ‘Declarable on the homogeneous level’, Barco expects its suppliers to provide information about the presence of that particular substance in the product on the homogeneous level.

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Substances	Maximum Concentration Level (% w/w)	Application	Restricted/Declarable
<b>Arsenic compounds</b>	Not intentionally added	Packaging	Restricted
<b>Bisphenol S in thermal paper</b>	0.02% by weight (200 ppm)	Thermal Paper	Restricted
<b>Bisphenol A in thermal paper</b>	0.02% by weight (200 ppm)	Thermal Paper	Restricted
<b>4,4'-isopropylidenediphenol (Bisphenol A) as well as other bisphenols and bisphenol derivatives with endocrine disrupting properties for the environment</b>	0.02% by weight (200 ppm)	All	Restricted
<b>1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("DechloranePlus"™) [covering any of its individual anti-and syn-isomers or any combination thereof]</b>	< 0.1%	All	Restricted
<b>Dimethyl Fumarate</b>	0.00001%	Silica gel bags in Packaging	Restricted
<b>Fluorinated Greenhouse Gases (PFC, SF6, HFC)</b>	No content permitted	All	Restricted
<b>Formaldehyde</b>	Not intentionally added	Composite wood products or components (plywood, particle board and MDF) and textiles	Restricted
<b>HBCDD (Hexabromocyclododecane) and its main diastereoisomers</b>	0.01%	All	Restricted
<b>Latex</b>	No Intentionally added	Medical Devices	Restricted
<b>Lead/lead compounds in cables/cords with thermoset or thermoplastic coatings</b>	0.03%	Surface coating of cable	Restricted
<b>Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings</b>	0.1%	Ink	Restricted
<b>Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms</b>	0.1%	Ink	Restricted

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<b>Oxo-degradable plastic</b>	No content permitted	All	Restricted
<b>Ozone depleting substances</b>	Not intentionally added	All	Restricted
<b>Pentachlorophenol (PCP)</b>	Not intentionally added	All	Restricted
<b>Perfluorooctanoic acid (PFOA) and individual salts</b>	0.0000025% by weight (25 ppb) of any article	All	Restricted
<b>Sum of Perfluorocarboxylic Acids and their salts containing 9 to 14 carbon atoms</b>	0.0000025% by weight (25 ppb) of any article	All	Restricted
<b>Sum of Perfluorocarboxylic Acids-related substances containing 9 to 14 carbon atoms</b>	0.000026% by weight (260 ppb) of any article	All	Restricted
<b>PFHxS its salts and PFHxS related substances</b>	0.025 ( $\leq 1$ ppm for PFHxS-related substances (sum))	All	Restricted
<b>PFOS(Perfluorooctane sulfonate)</b>	0.1%	All	Restricted
<b>Phenol,Isopropylated Phosphate (3:1) (PIP 3:1)</b>	No intentionally added	All	Restricted
<b>Polychlorinated and poly-brominated dioxins and furans</b>	Not intentionally added	All	Restricted
<b>Polybrominated diphenyl ethers (PBDEs)</b>	0.05%	Exemption for materials/parts used exclusively in EEE (under scope of RoHS 2011/65/EU). Threshold applies to the sum of the concentration of those substances.	Restricted
<b>Polychlorinated biphenyls (PCBs) and specific substitutes</b>	Not intentionally added	All	Restricted
<b>Polychlorinated naphthalenes</b>	Not intentionally added	All	Restricted
<b>Polyvinyl chloride (PVC)</b>	0.1%	Packaging	Restricted
<b>Short chained chlorinated paraffins (C10-C13)</b>	0.15% (1500 ppm) by weight in a material	All	Restricted
<b>Radioactive substances</b>	Not intentionally added	All	Restricted
<b>Antimony compounds</b>	0.1%	Glass in lamps	Declarable
<b>Antimony trioxide</b>	0.1%	All	Declarable on the homogeneous level
<b>Arsenic compounds</b>	0.1%	Glass in lamps	Declarable
<b>Azo Colourants</b>	0.003%	parts coming into contact with skin	Restricted



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<b>Benzoapyrene</b>	0.002% if short duration skin contact 0.0001% if long duration skin contact	parts coming into contact with skin	Declarable
<b>Beryllium metal and Beryllium oxide (BeO)</b>	0.1%	All	Declarable on the homogeneous level
<b>Biocides</b>	No intentionally added	All (medical devices are exempted)	Restricted
<b>2,2-bis(bromomethyl) propane-1,3-diol</b>	0.1%	All	Declarable on the homogeneous level
<b>BPA (Bisphenol A) in medical devices</b>	If manufactured from raw materials using BPA and if used in medical devices and part comes into contact with patient or patient fluids	Medical Devices	Declarable
<b>Brominated flame retardants (other than PBBs, PBDEs or HBCDD)</b>	Declare if > 0.1% w/w total bromine content from BFRs	All	Declarable
<b>Brominated flame retardants (other than PBBs, PBDEs or HBCDD)</b>	Declare if > 0.09% total bromine content from BFRs in printed circuit boards	Printed circuit boards	Declarable
<b>Chlorinated flame retardants</b>	Declare if > 0.1% w/w total chlorine content from CFRs	All	Declarable
<b>Chlorinated flame retardants</b>	Declare if > 0.09% total chlorine content from CFRs in printed circuit boards	Printed circuit boards	Declarable
<b>Cobalt metal</b>	0.1%	All	Declarable on the homogeneous level
<b>1-ethylpyrrolidin-2-one (NEP)</b>	0.3%	All	Restricted
<b>2,4-dinitrotoluene</b>	0.1%	All	Restricted
<b>Diethyl phthalate (DEP)</b>	0.1%	All	Declarable on the homogeneous level
<b>Di-isodecyl phthalate (DiDP)</b>	Not intentionally added	All	Declarable
<b>Di-isononyl phthalate (DiNP)</b>	Not intentionally added	All	Declarable
EPS material	Not intentionally added	Packaging	Restricted



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<b>Indium phosphide</b>	0.1%	All	Declarable on the homogeneous level
<b>Lead compounds (used as PVC stabilizers) in polyvinyl chloride (PVC)</b>	0.1%	All	Restricted
<b>Medium-chain chlorinated paraffins (MCCP)</b>	0.1%	All	Restricted
<b>Nickel sulfamate</b>	0.1%	All	Declarable on the homogeneous level
<b>Nickel sulphate</b>	0.1%	All	Declarable on the homogeneous level
<b>Nonylphenol and nonylphenol ethoxylates</b>	0.1%	All	Restricted
<b><u>PAHs (Polycyclic Aromatic Hydrocarbons)</u></b>	0.005%	Potting material in electronic or magnetic ballast for lamps	Declarable
<b><u>PAHs (Polycyclic Aromatic Hydrocarbons)</u></b>	0.0001%	All	Declarable
<b>Phthalates</b>	0.1%	All	Declarable
<b><u>POPs (Persistent organic pollutants)</u></b>	Substances listed in EU POP Regulation 2019/1021: Annex I Annex II Annex III Annex IV	All	Annex I – prohibited (with specific exemptions) Annex II – restricted Annex III – subject to release reduction provisions Annex IV – subject to waste management provisions
<b>PVC and PVC copolymers</b>	0.1%	All	Declarable on the homogeneous level
<b>Sum of all PAHs</b>	0.02% if short duration skin contact, 0.001% if long duration skin contact	All	Declarable
<b>Terphenyl, hydrogenated</b>	0.1%	All	Restricted
<b>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBPA)</b>	0.1%	All	Declarable on the homogeneous level
<b>Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP)</b>	No content permitted	All	Restricted
<b>Tris(2-chlorethyl) phosphate</b>	No content permitted	All	Restricted
<b>Tris(2,3-dibromopropyl)phosphate</b>	No content permitted	All	Restricted

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## 7.7 References

- [DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment \(RoHS Directive\)](#)
- [COMMISSION DELEGATED DIRECTIVE \(EU\) 2015/ 863 - of 31 March 2015 - amending Annex II to Directive 2011/ 65/ EU of the European Parliament and of the Council as regards the list of restricted substances-adding 4 phthalates \(DBP,DEHP,BBP and DIBP\)](#)
- [REGULATION \(EC\) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals \(REACH\)](#)
- [EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 94/62/EC on packaging and packaging waste](#)
- [Directive 2006/66/EC of the European Parliament and of the Council on batteries and accumulators and waste batteries and accumulators](#)
- [BOMcheck List of Restricted and Declarable Substances](#)