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1 Introduction

The “Versuni List of Regulated Substances in Products and Product-Packaging” or Versuni Regulated Substances List (hereafter referred to as ‘RSL’) combines legal, industry, and voluntary requirements regarding chemical substances used in products, either on a homogenous material level or present in the product as such.

Suppliers must comply with the substance requirements as defined in the RSL and it is an integral part of any commercial agreement between Versuni and its suppliers.

This or newer versions of the present RSL List can be found on Versuni’s website:

<https://www.versuni.com/suppliers/sustainability/>

Changes made to this RSL version compared to its previous versions can be found back in Annex 5 ‘Revision History’ of this document.

1.1 Purpose

This document consists of the Versuni Regulated Substances List and its annexes as integral part of Versuni’s commitment to health, safety, and the environment.

The RSL contains product substance requirements related to:

- Federal, state, county or municipal law, regulation, ordinance, or code, and
- Versuni’s own requirements

The RSL is part of Versuni’s global policy and therefore included in Versuni’s general purchasing conditions. Each supplier must ensure product compliance with this list.

Additional specific Versuni or legal requirements may apply for certain product categories or applications. Examples are food contact materials, biocides or materials treated with biocides, or household chemical products. The RSL is aligned with the substances included in the BOMcheck Declaration System. The few deviations from BOMcheck in the current version of the RSL are explained in the corresponding remarks.

1.2 Scope

The RSL is a global policy of Versuni and its threshold limit values are in line with the most stringent legislation. This means that, where there is a difference between the RSL requirements and local regulatory requirements, the most stringent, meaning, the most protective for health, safety and the environment applies. Further information on legislation or more detailed requirements are given either as remarks to the right or below a table or are referenced as footnotes. For declarable substances, Versuni relies on the full listing in BOMcheck itself (e.g., the REACH Candidate List (Substances of Very High Concern list, hereafter referred to as the SVHC List)).

Versuni collects compliance data in accordance with the RSL at the (sub-)part level for every product or product packaging delivered to Versuni by a web-based Declaration System called BOMcheck (for further details see Section 2.1.).

The scope of the RSL covers all articles (such as materials, components, (sub-)parts, subassemblies, products, labels attached to products, user manuals, etc.,) and product packaging (i.e., wood, paper or card-boxes, plastic material, containers, labels, etc., further mentioned as Packaging in the RSL).

The requirements listed in the RSL are mandatory to all products, parts, and packaging materials

- placed on the global market
- used to produce Philips branded products
- used to produce products of other brands that are owned by Versuni.

This includes all consumables, accessories, and products not owned by Versuni that are by packed or integrated in Versuni products, and of which the original brand name of the OEM is still visible for the customer.

A dispensation must be applied for in case the OEM requests to waive certain policy requirements.

For products not owned by Versuni that are placed on the market by Versuni (e.g., as a distributor) it is recommended to also use the RSL as baseline requirement. At least all substance legislation applicable in the country where the product is placed on the market have to be complied with.

Restricted substances may not be present in the product or used in the manufacture of the product and its components above the designated thresholds for the particular use listed. Declarable substances that are used in products or packaging materials must be declared according to the limits given in the respective table.

If the supplier needs clarification with respect to Versuni's guidelines and rules presented here, they should discuss with the Versuni Representative, which is generally the supplier account manager.

1.3 Deviations

In those cases where the supplier supplies or intends to supply products to Versuni which do not comply with the RSL, the supplier needs to contact Versuni Procurement immediately to resolve the issue and to decide through mutual agreement on corrective actions.

Recycled content

Versuni strongly promotes the use of recycled materials, in particular, but not limited to, the use of recycled plastics. Versuni acknowledges that 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 Versuni RSL and the compliance of recycled materials, please contact Versuni Procurement for support. In very particular 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. This is, however, to be decided on a case-by-cases basis.

1.4 Threshold

Maximum concentration limit for restricted substances

Versuni acknowledges that some materials contain a certain amount of restricted substances being naturally present. However, when a substance is present above the listed maximum threshold limit value, whether it be in product or the product-related packaging, the substance is restricted to the maximum concentration threshold limit as indicated in the different tables of this RSL document. Thresholds can either be legal limits set by authorities or refer to analytical thresholds being temporarily accepted. Restricted substances (e.g., as defined under RoHS) are measured at homogeneous material level (unless otherwise specified), meaning these thresholds must be declared on the homogeneous material level (see also Annex 1 for further explanation). Substances, for which the use is exempt in specific applications as defined by legislation, are allowed for use, but must be declared.

Maximum concentration limit for declarable substances

Declarable substances (e.g., REACH SVHCs) are substances, of which the use needs to be monitored due to a regulatory requirement or because Versuni wants to monitor the uses from a precautionary point of view ("precautionary principle"). The use of these substances must be reported when above the maximum concentration limit as defined in the RSL in line with BOMcheck. In order to meet the ECHA SCIP database requirements additional data fields are required in BOMcheck.

2 Supplier Declaration Process

2.1 Declaration System

As referred to in Section 1.1., Versuni will collect substance information for its (sub-)parts, products and product packaging because regulations such as RoHS and REACH require us to maintain regulatory compliance evidence at that level. Versuni has decided to utilize BOMcheck as a system to help collect chemical substances information from suppliers (www.bomcheck.net). BOMcheck is an industry platform used by a large number of companies and represents an efficient system that helps suppliers follow up on the many legal requirements, and provides smooth communication with the customers and, in particular, with suppliers up the supply chain. BOMcheck is primarily a regulatory compliance system designed specifically to enable suppliers to provide declarations for RoHS, REACH, and any other restricted and declarable substances legislation through detailed substances reports. BOMcheck also allows suppliers to provide Full Material Declaration (FMD) of their articles. The benefit of FMD is that suppliers have to upload the total chemical composition of their articles only once (unless the formulation of supplied articles changes), while BOMcheck will then automatically update a company's compliance status every time regulatory changes are introduced.

2.2 Demonstrating compliance to the RSL through BOMcheck

Suppliers are requested to make declarations in BOMcheck for all articles (i.e., materials, components, sub-assemblies, products, labels attached to products, user manuals, etc.) and packaging materials (i.e., wood, paper or card- boxes, plastic material, containers, labels, etc.). We request suppliers to check regularly for possible updates of the RSL to remain informed of the latest changes in all legislative and policy obligations at:

<https://www.versuni.com/suppliers/sustainability/>

The BOMcheck substances list, which also includes EU REACH SVHC's, California Proposition 65 substances and RoHS exemptions, can be found via the following link:

<https://www.bomcheck.net/suppliers/restricted-and-declarable-substances-list>

3 Products Content Restrictions and Declarations

TABLE 1: RoHS Restrictions (Directive 2011/65/EU) applicable to products

Restrictions derive from EU RoHS Directive. Similar legislation is increasingly adopted in other regions and for other non-EEE applications (e.g., in EU REACH). The requirements in this Table apply to all Versuni products on homogeneous material level in all regions.

Substances (remark 1)	Maximum Concentration Limit ppm (mg/kg)	Remarks
RoHS Substance restrictions (Directive 2011/65/EU) (remark 1)		
Cadmium and Cadmium compounds (<i>remark 2</i>)	100	The restriction thresholds apply worldwide to all Versuni products on homogeneous material level.
Hexavalent Chromium compounds (<i>remark 2</i>)	1000	
Lead and Lead compounds (<i>remark 2</i>)	1000	
Mercury and Mercury compounds (<i>remarks 2 and 3</i>)	1000	
Polybrominated biphenyls (PBBs) (<i>remark 4</i>)	1000	
Polybrominated diphenyl ethers (PBDEs) (<i>remark 4</i>)	1000	
RoHS Substance restrictions amendment 1 (Directive 2011/65/EU, as amended by Directive (EU) 2015/863 of March 2015)		
Bis (2-ethylhexyl)phthalate; Di (2-ethylhexyl) phthalate (DEHP),	1000	The restriction thresholds apply worldwide to all Versuni products on homogeneous material level. (<i>remark 5</i>).
Benzyl butyl phthalate; Butyl benzyl phthalate (BBP),	1000	
Dibutyl phthalate; Di-n-butyl phthalate (DBP),	1000	
Diisobutyl phthalate; Di-i-butyl phthalate (DiBP)	1000	

1. The restrictions do not apply to the exemption limits in the European Directive RoHS (2011/65/EU), and exemption limits in other RoHS type of regulations such as but not limited to the Canadian CEPA-SOR/2014254. They also do not apply to batteries- and automotive applications as these are covered by other legislation (see e.g. EU Battery Regulation, REGULATION (EU) 2023/1542 ; see also Table 4), the European ELV directive (2000/53/EC and the amendment 2011/37/EU).The list of EU RoHS exemptions, EU Battery Regulation and EU ELV directive can be found in BOMcheck. Heavy metal restrictions for batteries and packaging are given in Tables 4 and 7, respectively.
2. Maximum concentration limit applicable for the metal (i.e., Cd, Cr6+, Pb and Hg) and not for the compounds (i.e., the concentration determination is based on the metal weight not the metal containing compound weight (for details see IEC 62321).

3. Besides the RoHS obligations, Lighting Products should also comply with the Ecodesign /ERP directive 2009/125/EC (Implementing measure EC No 245/2009), therefore, a declaration via BOMcheck is required including: (1) providing the average amount of Mercury per lamp in x.x mg (ErP); and (2) indicating the relevant RoHS exemption number within the section on RoHS in BOMcheck system.
4. Polybrominated diphenylethers (PBDE) are the same as polybrominated biphenylethers (PBBE); polybrominated diphenyloxides (PBDO) are the same as polybrominated biphenyl oxides (PBBO).
5. Since 7 July 2020 the four phthalates (individually or in any combination (i.e., sum)) are restricted under REACH (EU/2018/2005 of 17 December 2018) in a concentration equal to or greater than 0.1 % by weight of the plasticised material in the article, except for equipment in scope of RoHS and Food Contact legislation. The restriction also applies to toys and childcare articles.

TABLE 2: REACH Restrictions (Article 67) applicable to products and packaging

These substances are in line with the relevant restrictions as defined in Article 67 of the EU REACH regulation. Unless otherwise stated, the maximum concentration limits apply on the homogeneous material level. Versuni enforces these limits worldwide.

Substances	Maximum Concentration Limit ppm (mg/kg) or as given in the table	Particular use and further remarks
Restrictions for electrical and mechanical products in all applications		
Formaldehyde and formaldehyde releasers	$\leq 0,062$ mg/m ³ released from wood-based articles $\leq 0,080$ mg/m ³ released from other articles	Restricted in articles, after 6 August 2026 per EU REACH article 67, entry 77
Monomethyl dibromodiphenyl methane (DBBT)	No intentionally added content	Used e.g as dielectrics.
Dimethylfumarate (DMF)	0.1	Restricted in articles. Used as pesticides and biocides, e.g., in silica gel bags in packaging.
Monomethyl dichlorodiphenyl methane (Ugilec 121 or Ugilec 21)	No intentionally added content	Used e.g as dielectrics.
Monomethyl tetrachlorodiphenyl methane (Ugilec 141)	No intentionally added content	Used e.g. as dielectrics.
Tri-substituted organostannic compounds	1000	0.1% by weight of tin in an article or part thereof, (used as e.g. pesticides and biocides).
Polychlorinated terphenyls (PCTs)	50	Used e.g as dielectrics.

Substances	Maximum Concentration Limit ppm (mg/kg) or as given in the table	Particular use and further remarks
1,2,4-Trichlorobenzene	1000	
Dibutyltin (DBT) compounds	1000	0.1% by weight of tin in a material, (used as e.g. heat stabilizer).
Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs), their salts, and related substances	0.025	Since 25 February 2023; REACH article 67, entry 68.
Bisphenol A	200	In thermal paper.
Sum of selected Phthalates Group 1 (DIBP, BBP, DBP, DEHP) (remark 6)	1000	In plasticized material.
Asbestos fibres (all types)	No intentionally added content	
Undecafluorohexanoic acid (PFHxA), its salts and PFHxA-related substances,	0.025 (sum of PFHxA and its salts) 1 ppm (sum of PFHxA-related substances)	From October 2026 or October 2027 (non-clothing) In cosmetics; food contact paper and cardboard, footwear, textiles, leather, furs and hides and mixture (chemicals) (REACH article 67, entry 79).
Additional restrictions which apply to parts that contain PVC		
Lead and Lead compounds	1000	In PVC -per REACH article 67, entry 63, applies from 29 November 2024.
Additional restrictions which apply to wood preservatives		
Tar oils and creosotes	No content permitted	In wood or wooden material as preservative.
Additional restrictions which apply to parts used in toys and childcare products		
Benzene	5	Toys
Diocetyl tin (DOT) compounds	1000	0.1% by weight of tin in a material.
Sum of selected Phthalates Group 2 (DIDP, DINP, DNOP)	1000	In plasticized material when used in toys and childcare articles which can be placed in the mouth.

Substances	Maximum Concentration Limit ppm (mg/kg) or as given in the table	Particular use and further remarks
Any individual PAH compound (<i>remark 7</i>)	0.5	Plastic or rubber material coming to repetitive skin or oral cavity contact in toys and childcare articles, in force for products placed on market after 27 th December 2015. See Table 6 for additional requirements on PAH.
Additional restrictions which apply to parts that contain leather and textiles		
Diocyltin (DOT) compounds	1000	0.1% by weight of tin in a material
Azocolourants and azodyes which form certain aromatic amines) (<i>remark 8</i>)	30	Restricted in textile and leather articles. The limit of 30 ppm applies to the aromatic amines listed in Annex II, released from azocolorants and azo dyes.
Tris-(1-aziridiny) phosphin oxide	No content permitted	Not permitted in textile articles
Tri-(2,3-dibromo-propyl) phosphate	No content permitted	Not permitted in textile articles
Additional restrictions which apply to parts that come into contact with skin		
Any individual PAH compound (<i>remark 7</i>)	1	Plastic or rubber material coming to repetitive skin or oral cavity contact in consumer articles, In force for products placed on market after 27 th December 2015 See Table 6 for additional requirements on PAH.
Nickel and nickel alloys (<i>remark 8</i>)	0.5µg/cm ² /week	
Additional restrictions which apply to parts which contain chemical products (liquids, gases, powders; as substance or preparation)		
Benzene	1000	For example, use in cleaners
Nonylphenol and nonylphenol ethoxylates compounds	1000	For example, use in textile processing

6. DiBP added to the restriction. The scope of this restriction was amended from "Additional restrictions which apply to parts used in toys and childcare products" to all types of articles, including children's toys and childcare articles, and with a list of exemptions, e.g., for equipment which is in scope of RoHS, Medical Devices, Food contact legislation.
7. The PAH compounds restricted are: Benzo[a]pyrene CAS 50-32-8, Benzo[e]pyrene CAS 192-97-2, Benzo[a]anthracene CAS 56-55-3, Chrysene CAS 218-01-9, Benzo[b]fluoranthene CAS 205-99-2, Benzo[j]fluoranthene, CAS 205-82-3 Benzo[k]fluoranthene CAS 207-08-9 and Dibenzo[a,h]anthracene CAS 53-70-3. See also ECHA's PAH guidance: https://echa.europa.eu/documents/10162/106086/guideline_entry_50_pahs_en.docx/f12ac8e7-51b3-5cd3-b3a4-57bfc2405d04.
8. ECHA guidance on defining "direct and prolonged skin contact" can be found at [nickel_restriction_prolonged_contact_skin_en.pdf](#) Does not apply to Medical devices and associated equipment. Medical device safety standards require biocompatibility testing to ensure that chemical substances, which may contact patients during use per the device's intended use, do not pose a health risk, specifically with respect to biocompatibility.

TABLE 3.1: Persistent Organic Pollutants (POPs) Stockholm Convention applicable to products and packaging

Unless otherwise stated the limits are on homogeneous material level. Versuni enforces limits worldwide.

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Dechlorane plus	1 ppm	EU POP regulation as 1 ppm applicable after 15 April 2028 (1000 ppm until then), exemptions for eg. medical imaging, replacement parts of articles. In other jurisdiction, the restriction may differ (e.g., Australia).
Chlorinated Paraffins with carbon chain lengths in the range of C14-17 and Chlorination Levels $\geq 45\%$ Chlorine by Weight (MCCP)	No intentionally added content	Stockholm Convention
Long-chain perfluorocarboxylic acids (LC-PFCAs) with the formula $C_nF_{2n+1}COOH$ ($8 \leq n \leq 20$), their salts and related compounds C9-21	No intentionally added content	Stockholm Convention
Perfluorohexane-1-sulphonic acid (PFHxS), its salts and related substances	0.025 (< 1 ppm for sum of PFHxS related substances)	In any article, per 1 October 2022; RO 2022 162 of the Swiss Chemicals Risk Reduction Ordinance, ChemRRV. Also, listed under EU POP regulation per Regulation (EU) 2023/1608
UV-328	1 ppm	EU POP regulation as 1 ppm applicable from 4 August 2029 (100 ppm from 4 August 2025, 10 ppm from 4 August 2027), exemptions for eg. Triacetyl cellulose (TAC) film in polarizers used in displays, replacement parts of articles. In other jurisdiction, the restriction may differ (e.g., Australia).
Perfluorooctanoic acid (PFOA) its salts and related compounds	0.025 (<1 ppm for sum of PFOA-related compound)	EU and Australian POP
Perfluorooctane sulfonate (PFOS) its salts and related compounds	0.025 (< 1 ppm for sum of PFOS related compounds)	EU and Australian POP regulation
Hexabromocyclododecane (HBCDD) and its main diastereoisomers	75	EU POP Regulation 2016/293 on persistent organic pollutants; use as flame-retardant.

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Pentachlorophenol (PCP) its salts and esters	5 ppm	EU POP as 5 ppm; EU Biocidal Product Regulation; For textiles in Korea:0.05 ppm for children textile/leather, 0.5 ppm for adult's textile/leather.
Polychlorinated biphenyls (PCBs)	0.2 ppm (for the sum of PCB's)	EU POP regulation as 0.2 ppm for the sum of PCBs; (e.g. use as plasticizers, flame retardants and dielectrics) (25 ppm if an article containing organic pigments or dyes);
Polychlorinated and polybrominated dioxins and furans	No intentionally added content	EU POP regulation.
Polychlorinated naphthalenes	No intentionally added content	With one or more chlorine atoms, applied as stabilizer and flame-retardant in plastics; EU POP Regulation, Swiss, Canada and Japan legislation
SCCP; (Short chained chlorinated paraffins C10-C13)	1500	EU POP regulation 2015/2030 on persistent organic pollutants when applied in articles.
Polybrominated diphenyl ethers (PBDEs)	10 (sum of PBDEs)	EU POP Regulation 10 ppm for the sum of PBDEs (200 ppm for recovered materials as of 30 December 2027); use as flame-retardants; exemption for materials/parts used exclusively in electrical or electronic equipment (under scope of EU RoHS). Threshold applies to the sum of the concentration of those substances. No intentionally added content due to Japan Chemical Substance Control Law
Hexachlorobenzene (HCB)	10	In any article, EU POP regulation 2023/1608
Hexabromobiphenyl (HBB)	No intentionally added content	In any article, EU POP regulation

TABLE 3.2: Other restricted or declarable Substances in products and packaging

Unless otherwise stated the limits are on homogeneous material level. Versuni enforces limits worldwide.

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Restrictions for electrical and mechanical products in all applications		
Cholecalciferol (Vitamin D3)	Declarable	[France] Anti-Waste and Circular Economy Law 2020-105, 0.1% by weight in a mixture or article; main uses in e-cigarettes.
DiOP (diisooctyl phthalate)	Declarable	[France] Anti-Waste and Circular Economy Law 2020-105, 0.1% by weight in a mixture or article (only for consumer products, can be used in used in e.g plasticizer, dye, pigment, paint, ink, adhesive, lubricant)
Perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs) and their salts, the sum of and C9-C14 PFCA-related substances	0.025 (0.26 ppm for sum of PFCA-related substances)	In any article, per 1 October 2022; RO 2022 162 of the Swiss Chemicals Risk Reduction Ordinance, ChemRRV.
Bisphenol S	200	The Swiss Chemical Risk Reduction Ordinance (ORRChem), use in thermal paper.
Formaldehyde	No intentionally added content	In composite wood products or components (plywood, particleboard and MDF) and textiles (remark 9); U.S. EPA TSCA Title VI and California Airborne Toxic Control Measures (ATCM).
Radioactive substances	No intentionally added content	Japan Law Concerning Prevention from Radiation Hazards; EU-D 2013/59/Euratom.
Additional restrictions which apply to printing material (remark 10)		
Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings (remark 11)	1000	Per 1 January 2023; mineral oils in ink on printing material, including packaging, for the public; Article 112 of decree no.2020-105 (France).
Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms (remark 11)	1000	Per 1 January 2025; mineral oils in ink on printing material including packaging, for the public; Article 112 of decree no.2020-105 (France).
Biocides		
Biocides	No intentionally added biocide	EU Biocidal Product Regulation;
Additional requirements which apply to parts used in medical devices		

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
BPA (Bisphenol A)	Declarable	Declare if manufactured from raw materials using BPA or derived of BPA and if used in medical devices and part comes in contact with patient or patient fluids (e.g., via intravenous, inhalation, oral exposure, contact with skin, or as an implant). Canadian legislation
Latex	Declarable	The United States FDA requires all medical devices and its packaging which contain natural rubber (Latex) or dry natural rubber that can contact human skin to be marked per FDA User Labeling for Devices that Contain Natural Rubber (21 CFR 801.437)
CMR 1A and 1B substances and endocrine disrupting substances (EDCs)	1000	The use of such substances above 0.1% in Medical Devices or those parts thereof or those materials used therein that: — are invasive and come into direct contact with the human body, — (re)administer medicines, body liquids or other substances, including gases, to/from the body, or — transport or store such medicines, body fluids or substances, including gases, to be (re)administered to the body, shall be justified as per EU MDR 2017/45 annex I 10.4 and the device is to be labelled. BOMcheck contains a list of CMR and EDC substances. This list is updated regularly.
Materials of biological origin	No intentionally added content	The use of such materials is subject to specific requirements under EU MDR 2017/45 to ensure any risks associated with materials of biological origin are adequately controlled (e.g., justify the use, minimize the risk of infection, source control, etc.). Biological origin includes human, animal and microbial sources.
Additional Restrictions which apply to parts used in toys and childcare products		
Flame retardant chemicals	1000	Applied in any material. This restriction does not apply to electronic components; US State bills (e.g., California)
Di-n-pentyl phthalate (DPENP)	1000	Applied in any material. US Consumer Product Safety Improvement Act (CPSIA).
Di-n-hexyl phthalate (DHEXP/DNHP)	1000	
Dicyclohexyl phthalate (DCHP)	1000	
Diisononyl phthalate (DINP)	1000	

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Tris(2-chloroethyl)phosphate (TCEP)	No content permitted	(See remark 12 for legislation)
Tris(2-chloro-1-methylethyl)phosphate (TCPP)		
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP/TDCPP)		
Lead and lead compounds	100	Applied in accessible parts in toys and childcare products; US Consumer Product Safety Improvement Act
Lead and lead compounds	90	Applied in paint and similar surface coatings, sticker, film, or other similar material that can be removed; US Consumer Product Safety Improvement Act and Canada Consumer Product Safety Act (Surface Coating Materials)
Mercury	10	A sticker, film or other similar material that can be removed, or a surface coating material; Canada Consumer Product Safety Act (Surface Coating Materials)
Additional restrictions which apply to parts which come into contact with food		
Bisphenol A (BPA) and hazardous bisphenols or hazardous bisphenol derivatives (remark 13)	No content permitted	In all food contact materials in consumer products (regulation EU 2024/3190)
Additional restrictions which apply to parts which contain chemical products (liquids, gases, powders; as substance or preparation on their own or incorporated in an article)		
Ozone depleting substances	No intentionally added content	All applications; Montreal protocol and EU Regulation No 2037/2000 and China GB 44499-2024
Fluorinated Greenhouse gases (PFC, SF6, HFC) (F-gas)	No content permitted	EU regulation 2024/573, 517/2014 and Canada (SOR/2016-137) (This includes foams incorporated F-gas)
Additional requirements which apply to parts containing textiles		
Flame-retardant chemicals	1000	Applied in any material. This restriction does not apply to electronic components; US States bills (e.g., California)

9. Composite wood finished goods must be labeled showing compliance with U.S. EPA TSCA Title VI regulation (it is voluntary to also label in compliance with the California Air Resources Board (CARB) Airborne Toxic Control Measures (ATCM) Phase II emission standards). Formaldehyde emission from materials: Emission from hardwood plywood (HWPW) veneer core is 0.05 ppm after 1-Jan-2010. HWPW composite core emission limit is 0.05 ppm from 1-July-2012. Emission limit from particleboard (PB) is 0.09 ppm from 1-Jan-2011. Emission limit from medium density fibreboard (MDF) is 0.11 ppm from 1-Jan-2011. Emission limit from thin medium density fibreboard (MDF) is 0.13 ppm from 1-Jan-2012. Composite wood is defined by California Code of Regulations (CCR), Title 17, Section 93120.1. Refer to CCR, Title 17, Section 93120.9 for test methods.
10. Examples of printing material are stickers, labels, directions for use (DFU), warranty leaflets and other product and parts related documentation, as well as Fox or other packaging labels.
11. Regarding MOAH and MOSH: A 12-month period for the exhaustion of packaging stocks (all types) and printed papers manufactured or imported is permitted. Note that the terminology 'public' excludes professional end-users, but includes

when the packaging is discarded at homes.

12. TRIS flame-retardants are regulated for childcare articles and children's products in Canada, EU toy directive 2009/48/EC and by US states New York, Maryland, and Vermont. The US District of Columbia restricts TCEP and TDCPP in consumer products for children under 12 years of age from 2018 onwards and in all consumer products from 2019 onwards. See the BOMcheck online guidance for more details on these legislations.
13. Current hazardous bisphenols include BPS, 4,4'-Isobutylethylidenediphenol, Phenolphthalein, BPAF and TBBPA. Follow applicable requirements in markets with restrictions. In markets without specific restrictions a content limit of 0.1 ppm applies.

TABLE 3.3: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals under TSCA Section 6(h) in products and packaging.

Unless otherwise stated the limits are on homogeneous material level. Versuni enforces limits worldwide.

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Restrictions for electrical and mechanical products in all applications		
Decabromdiphenylether (DecaBDE)	No intentionally added content	One of EU RoHS substances (as PBDE, see Table 1); U.S. EPA TSCA Section 6(h)
Phenol, isopropylated phosphate (3:1) (PIP 3:1)	No intentionally added content	After October 31, 2024, non-FDA regulated products must adhere to 'no permitted content', whereas FDA regulated products remain declarable. Used as a.o. plasticizer and additive flame retardant in materials such as PVC, polyethylene, electrical wire, synthetic rubber, flexible polyurethanes, polyurethane foam, epoxy resins, and various industrial coatings, adhesives, sealants with good performance on electrical isolation and can be present in oils and lubricants. Also used in engineering thermoplastics. U.S. Environmental Protection Agency (EPA) under TSCA.

TABLE 4: Batteries Restrictions

The limits are on battery level. Versuni enforces the limits worldwide.

Substances	Maximum concentration limit ppm (mg/kg)	Remarks/Legislation
Cadmium and cadmium compounds (see remark 2)	10	Chinese standard GB 24427-2021
Mercury compounds	1	Chinese standard GB 24427-2021
Lead and lead compounds (see remark 14)	40	Chinese standard GB 24427-2021
Perchlorates	0.006	Labelling requirement in Californian regulation

14. The lowest restriction limit for non-alkaline zinc-manganese dioxide batteries is 1000 ppm from Conama 257/99 (Brazil) and from Swiss legislation. The IEC 62474 database includes a restriction on Lead and Lead compounds in all types of batteries of 0.004% (40 ppm) by weight of battery based on Chinese Standard GB 24427-2021 (Alkaline zinc manganese dioxide batteries) and the EU battery regulation.

TABLE 5.1: REACH Candidate List Substances (Regulation (EC) 1907/2006) – Regulatory compliance declaration for all product and product packaging related applications.

REACH Candidate list substances are subject to the obligations defined in Article 33 of the EU REACH regulation. The limits are on REACH article level. Versuni enforces these limits worldwide.

Due to the fact that the European Chemicals Agency updates this list at least twice a year, we refer to the https://echa.europa.eu/candidate-list-table for the most recent list of candidate substances. BOMcheck will also contain the most recent list of SVHC and separates between those SVHC, which are likely to be found in electronics and those that are not. Please see the lists for substances likely to be present in product and packaging applications in the following link: Link to BOMcheck. The use of an SVHC is allowed (unless otherwise stated in any of the other Tables in the RSL). However, when the concentration on the article level is found to be above the limits stated here, declaration is obligatory. For definitions, such as "Article", please see the Annex 1.

TABLE 5.2: California proposition 65 substances used in all product and product-packaging related applications, which are not included in any other Table in the RSL.

The limits are on homogeneous material level. Versuni enforces these limits worldwide.

Prop 65 requires companies doing business in California to provide a "clear and reasonable" warning via product labeling before knowingly and intentionally exposing anyone to a Prop 65 Listed Chemical, unless the manufacturer can show that the anticipated exposure level will not pose a significant risk of cancer or is significantly below levels observed to cause birth defects or other reproductive harm. Safe Harbor Levels exist for some Listed Chemicals and include No Significant Risk Levels (NSRLs) for cancer-causing chemicals and Maximum Allowable Dose Levels (MADLs) for chemicals causing reproductive toxicity. These levels are measured in µg/day and must consider all exposure routes (e.g., via inhalation, oral, dermal). When the product exposes individuals to chemicals above the Safe Harbor Level, a clear and reasonable warning must be provided by the manufacturer. When no Safe Harbor Level is available and the product contains a Prop 65 Listed Chemical, a manufacturer also would be required to provide a Proposition 65 warning, unless the manufacturer can show that the anticipated exposure level will not pose a significant risk of cancer or reproductive harm.

Because OEHHA updates the Prop 65 list regularly, we refer to the list in BOMcheck. BOMcheck will only show those substances, which are likely to be found in hardware products and electrical and electronic equipment and are not listed elsewhere in BOMcheck. Please see this list via the following link: [Link to BOMcheck](#).

TABLE 6: Industry Restricted and declarable substances in products and product packaging

Unless otherwise stated the limits are on homogeneous material level. Versuni enforces the limits worldwide. These restrictions and declarations go beyond legislation and are included due to upcoming legislation and customer requirements.

** Mark shows entries having additional requirements to BOMcheck.*

*** Means any content is to be declared: in Bomcheck is mentioned 'no intentionally added content' though it is not a ban it is declaration of any content*

Substances	Restricted or declarable	Maximum Concentration or declaration Limit ppm (mg/kg)
*Per and polyfluoroalkyl substances (PFAS) (remark 15)	Restricted in some application/ Declarable in other	Any content is to be declared **
Critical raw materials (remark 16)	Declarable	Any content is to be declared **
Beryllium and Beryllium Compounds by weight of any material (remark 17)	Declarable	1000
Substance of Concern (SoC) (Remark 18)	Declarable	Any content is to be declared **
Precious Metals and Rare earth minerals		
*Rare Earth Minerals (see remark 19)	Declarable	Any content is to be declared ** (the mass to be specified in mg per part)
*Precious Metals (see remark 19)	Declarable	Any content is to be declared ** (the mass to be specified in mg per part)
Brominated Flame retardant BFRs		

Substances	Restricted or declarable	Maximum Concentration or declaration Limit ppm (mg/kg)
*Brominated Flame Retardants (BFR) (other than PBBs, PBDEs and HBCDD) in any plastics parts; (<i>remark 20</i>)	Restricted in consumer products, declarable in professional Lighting	1000 (for total bromine concentration by weight in homogeneous material used in plastics)
*Brominated Flame Retardants (BFR) in printed wiring board laminate (other than PBBs, PBDEs and HBCDD); (<i>remark 20</i>)	products and medical devices	900 (for total bromine concentration by weight in homogeneous material used in printed wiring laminates)
Chlorinated Flame retardant (CFRs)		
*Chlorinated Flame Retardants (other than the one restricted in other part of RSL) in any plastics parts; (remark 21)	Declarable except in external housing in USA where it is restricted	1000 (for total chlorine concentration by weight in homogeneous material used in plastics)
Chlorinated Flame Retardants other than the one restricted in other part of RSL) in printed wiring board laminate;	Declarable	900 (for total chlorine concentration by weight in homogeneous material used printed wiring laminates)
PVC and PVC copolymers		
*Polyvinyl Chloride (PVC) and PVC copolymers (<i>see remark 22</i>)	Restricted in consumer products / Declarable in professional Lighting products and medical devices.	1000 (for total chloride concentration by weight in homogeneous material)
Antimony trioxide in plastic materials		
Antimony trioxide in plastic materials;	Declarable	1000
Phthalates		
Phthalates (<i>if not declared elsewhere in the RSL</i>)	Declarable (See Annex III)	1000
Additional restrictions which apply to parts used in lamps and lamp ballasts		
Antimony compounds in glass of lamp bulbs	Restricted	1000
Arsenic compounds in glass of lamp bulbs	Restricted	1000
PAH (Polycyclic aromatic hydrocarbons) in potting material for electronic ballast of lamps	Restricted	50
Additional restrictions which apply to parts which come into contact with skin		
Azocolorants and azodyes which form certain aromatic amines) (remark 23)	Restricted	Not permitted where the released aromatic amine(s) exceed 30 ppm

Substances	Restricted or declarable	Maximum Concentration or declaration Limit ppm (mg/kg)
PAH compounds and their sum	Restricted	German product safety requirement for consumer products See Annex IV for limit values
Additional restrictions which apply to parts that contain leather and textiles		
Alkylphenol and alkylphenol ethoxylates (<i>remark 24</i>)	Restricted	100

15. Per and polyfluoroalkyl substances PFAS are already regulated under several states' laws in US (e.g. State of Maine Colorado, ...) in cookware, cleaning products and textiles. However, it will be kept as "Declarable" only on BOMCheck in order to avoid confusion. There are more upcoming requirements (both to restrict and to declare PFAS especially for consumer products) under development in federal level and in other states as well as in the EU under REACH restriction. The US EPA has provided a PFAS list which is updated continuously. This entry covers the PFAS which are not otherwise restricted in the RSL.

16. Due to upcoming EU legislation requiring information on critical raw materials. (CRMs) For the CRM list, refer to Annex I to the European CRM Regulation (EU) 2024/1252.

17. By making these substances declarable, Versuni intends to collect information on the presence of the Beryllium and Beryllium compounds also when no feasible technological alternatives exist, such as in the following applications: i) Be metal and BeO used in X-Ray applications, ii) BeO as ceramic heat-resistant in semiconductors, iii) Be metal alloy (e.g., BeCu), and iv) BeO used in high power RF resistors.

18. Due to upcoming EU product legislation that may restrict certain Substances of Concern (SoCs). There is no single list of SoCs, instead, the definition is provided in Article 2 of the Ecodesign Framework Regulation (EU) 2024/1781. Based on the definition, BOMcheck creates and maintains a list of SoCs.

19. Rare earth minerals and precious metals must be declared when intentionally added above 1 mg at product level as per the French AGECL law article 13 (France Decree 2022-748). Precious Metals: gold, silver, platinum, palladium. Rare earth minerals: scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium.

20. Versuni is pursuing a phase out of the use of BFRs in consumer products newly put on the market. Mains power cord sets are exempt from this policy. The use of BFRs needs to be declared to Versuni via the BOMcheck system. For Versuni consumer products organobromine compounds in the form of flame retardants should not be used in parts, components, materials, or products in concentrations equal to or greater than 0.1% (1000 ppm maximum of Bromine) by weight in any homogeneous material and 0.09% (900 ppm maximum of Bromine) by weight in any homogeneous material used in printed wiring laminates. BFRs are declarable for professional lighting products, medical devices, and main power supply cord sets.

21. CFRs (other than the one already regulated in other entries of this RSL) are restricted in plastic enclosures for consumer products in the U.S.A due to the U.S. Washington State Rule on organ halogen flame retardants in plastic enclosures of electrical and electronic equipment intended for indoor use. Certain exemptions are applicable e.g., wires, cords, cables, switches, etc. For other applications than restricted ones, CFRs are declarable.

22. Versuni is pursuing a phase out of the use of PVC in consumer products newly put on the market. Therefore, the use of PVC needs to be declared to Versuni via the BOMcheck system. For Versuni consumer products organochlorine compounds in the form of polyvinyl chloride or PVC copolymers should not be used in parts, components, materials, or products in concentrations equal to or greater than 0.1% (1000 ppm maximum of Chlorine) by weight in any homogeneous material. Mains power cord sets are exempt from this PVC phase out. PVC is declarable for professional Lighting products, medical devices, and mains power cord sets.

23. This restriction of aromatic amines released from Azocolourants, and Azo dyes as applied in the RSL goes beyond the legal restriction under REACH article 67 (see Table 2) as Versuni restricts the use of Azo dyes in all applications that come into direct contact with the human skin or oral cavity, and not only for textiles and leather. A full list of all aromatic amines that are restricted according to the RSL can be found in Annex 2. Also, two additional aromatic amines are restricted in Versuni, additionally to the 22 aromatic amines already restricted under EU REACH Article 67, based on regulations in Japan, Thailand, and China. These 2 additional aromatic amines are: 2,6-xylydine (CAS: 87-62-7) and 2,4-xylydine (CAS: 95-68-1).

24. Increasing number of alkyl phenols and their ethoxylates are becoming regulated under legislation, e.g., EU REACH restriction in 2021 for textiles and leather (100 ppm). In view of the increasing concern and attention focused on these alkylphenols and their ethoxylates, a precautionary approach is taken to restrict the allowable concentration of these substances in parts to < 0.01 % w/w. Examples of such alkylphenols, including their ethoxylates are octylphenol and nonylphenol.

TABLE 7: Additional restrictions in Product-Packaging

Unless otherwise stated the limits are on homogeneous material level. Versuni enforces the limits worldwide.

** Mark shows entries having additional requirements to BOMcheck.*

Substances	Maximum concentration limit ppm (mg/kg)	Remarks
Sum of Heavy metals (Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Cr ⁶⁺) and Lead (Pb))	100	EU packaging regulation
Expanded polystyrene (EPS) and other polymeric foam materials (e.g, EPP, EPE, EVA, PUR)	Not permitted	Per Western Australian law for plastics. For example, PUR, EPP, EPE, EVA as shock absorber buffers enclosing the product, excluding thin foam sheets and foam bags.
Non-recyclable styrenic polymers or copolymers	Not Permitted	Per French Climate law, Article 23, as of January 1, 2025, packaging made entirely or in part of styrenic polymers or copolymers, non-recyclable and incapable of entering a recycling channel, is prohibited.
Arsenic compounds, applied for wood packaging	No intentionally added content	REACH Article 67, bans the use of arsenic compounds for the preservation of wood
Degradable plastic (including e.g. oxo and and landfill degradable plastics)	No content permitted	Applicable to all products and packaging; EU Single- use Plastics Directive; Western Australia law
Industry substances		
*Polyvinyl chloride (PVC) and (P)VC copolymers	1000	

ANNEX 1 - Definitions and interpretation of certain terms

Declaration on homogeneous material (EU RoHS) level

A "homogenous material" means one material of uniform composition throughout or a material, consisting of a combination of materials, which cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes. For example, a single material such as a thermoplastic (the PVC insulation on insulated copper wire). Components such as capacitors, transistors and semiconductor packages are not regarded as "materials" but instead contain several different homogenous materials. For example, a semiconductor package will contain at least six homogenous materials as shown In Figure 1. The RoHS materials restrictions apply to each of these individual homogenous materials.

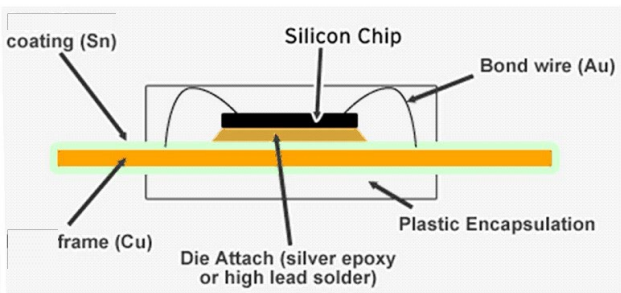


Figure 1: Material breakdown of an Integrated Circuit (IC) component

Substance 'X' < 0.1% at Homogeneous Material level means:

- Plastic encapsulation → X < 0.1%
- Bond wire → X < 0.1%
- Silicon ship → X < 0.1%
- "Lead Frame" coating (Cu) → X < 0.1%
- "Lead Frame" coating (Sn) → X < 0.1%
- Die Attach → X < 0.1%
- Etc.

Other terms and definitions

The RSL provides an overview of the definition of terms used within this document, serving on sense and purpose of the RSL.

Term	Definition
Annex XVII of the REACH Regulation (Art. 67)	Annex XVII of REACH Regulation (EC) 1907/2006 includes a list of all restricted chemicals, as well as conditions for their use and the specific uses they are restricted to within the European Union.

Article	An article means an object, which during production is given a special shape, surface, or design, which determines its function to a greater degree than does its chemical composition. (<i>Note:</i> The European Court of Justice ruled on September 10, 2015, concerning the EU REACH Regulation article definition, that each of the articles, which are assembled or joined together in a complex object, remain articles and are covered by the relevant duties to notify and provide information when they contain a Substance of Very High concern in a concentration above 0.1% of their mass.)
BOMcheck	BOMcheck is a web based, regulatory compliance service designed specifically to enable suppliers to provide declarations for RoHS, EU REACH, and other restricted and declarable substances falling under various legislations, regulations, and ordinances.
California Proposition 65	Also known as the <i>California Safe Drinking Water and Toxic Enforcement Act</i> , 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 in a product. California adopts safe harbor levels (levels of exposure that trigger the warning requirement) for many listed chemicals. Exposures below those levels do not require a warning.
CMR	CMR substances are substances that are carcinogenic, mutagenic, or toxic to reproduction.
Declarable substances	Declarable substances must be reported (in BOMcheck), if the threshold limits, as defined in the RSL, are exceeded. Declarable substances are not prohibited from use but are those which Versuni is required to monitor (e.g., to meet the SCIP database requirements) and to disclose due to legal reporting obligations (e.g., Article 33 of EU REACH or California Proposition 65) or because Versuni eventually may want to phase out the substance ("precautionary principle").
EDCs	Endocrine-disrupting chemicals
EU REACH	European Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (Regulation (EC) No 1907/2006)

FMD	A Full Material Declaration in BOMcheck provides the percentage weight of each individual material in the part and the percentage weight of each substance, which is intentionally added to each material. A FMD can also be made confidential in BOMcheck. The total chemical composition of articles has to be uploaded only once (unless the formulation of supplied articles changes), while BOMcheck will automatically update a company's compliance status every time regulatory changes are introduced.
Homogeneous material	Means a material that cannot be mechanically disjointed into different materials. The term "homogeneous" is understood as "of uniform composition throughout". Examples of "homogeneous materials" are individual types of plastics, ceramics, glass, metals, alloys, paper, board, resins, and coatings. See also Annex 1 (1.1) for more detailed explanation.
Part	A single component made up of one or more homogenous material(s). A part on its own can be an article or can be one of the many articles used to form a complex object. See also article definition.
Product	May be an article or "complex object" (assembly of multiple articles; example: Bicycle). See also article definition.
No content permitted	No chemical substance is allowed to be present. In other words, the use and subsequent presence of the chemical substance is prohibited.
Regulated substances	Any material or substance, which is regulated via restriction, prohibition or declaration under applicable Laws.
Restricted substances	Restricted substances are generally limited in use or banned (prohibited) from manufacture or placing on the market (including imports), and which can impose any relevant condition, such as requiring technical measures or specific labels (e.g., under California Proposition 65). A restriction may apply to any substance on its own, in a mixture or in an article/product.
RoHS	The EU Directive on the Restriction of Hazardous Substances (2011/65/EU and further amendments, e.g., 2015/863/EU adding 4 phthalates to Annex II) restricts the use of specific hazardous materials found in electrical and electronic products (known as EEE). The RSL follows the EU RoHS requirements.

Substance of Very High Concern (SVHC)	Substances falling under the definition of Article 57 of the EU REACH Regulation. Also referred to as Candidate List substances.
Index number	List number allocated only for substances with an officially harmonized classification and labelling entry in Annex VI of the CLP Regulation (EC) No 1907/2006. The index number should not be confused with the REACH Registration number.
TSCA	The Toxic Substance Control Act, a chemical control law in the United States under the authority of the Environmental Protection Administration (EPA).

ANNEX 2 - Summary Table of Aromatic Amines (released from Azocolourants and azodyes) Restrictions

Versuni restricts the use of Aromatic amines in Azo dyes in all applications that come into direct contact with the human skin or oral cavity. A full list of all aromatic amines that are restricted according to the RSL (maximum concentration permitted: 30 mg/kg) can be found below:

Chemical Substance Name	Index number	EC No.	CAS No.
4,4'-methylene-bis-(2-chloro-aniline) ; 2,2'-dichloro-4,4'-methylene-dianiline (MOCA)	612-078-00-9	202-918-9	101-14-4
4,4'-Diaminodiphenylmethane (MDA); 4,4'-methylenedianiline	612-051-00-1	202-974-4	101-77-9
4,4'-oxydianiline	612-199-00-7	202-977-0	101-80-4
4-Chloraniline	612-137-00-9	203-401-0	106-47-8
3,3'-dimethoxybenzidine ; o-dianisidine	612-036-00-X	204-355-4	119-90-4
3,3'-Dimethylbenzidine; o-tolidine	612-041-00-7	204-358-0	119-93-7
6-Methoxy-m-toluidine ; p-cresidine	612-209-00-X	204-419-1	120-71-8
2,4,5-trimethylaniline	612-197-00-6	205-282-0	137-17-7
4,4'-Thiodianiline	612-198-00-1	205-370-9	139-65-1
4-Aminoazobenzene	611-008-00-4	200-453-6	60-09-3
4-methoxy-m-phenylenediamine	612-200-00-0	210-406-1	615-05-4
4,4'-methylenedi-o-toluidine	612-085-00-7	212-658-8	838-88-0

o-anisidine ; 2-methoxyaniline	612-035-00-4	201-963-1	90-04-0
2-naphthylamine	612-022-00-3	202-080-4	91-59-8
3,3'-dichlorobenzidine ; 3,3'-dichlorobiphenyl-4,4'-ylenediamine	612-068-00-4	202-109-0	91-94-1
Biphenyl-4-ylamine ; 4-aminobiphenyl xenylamine	612-072-00-6	202-177-1	92-67-1
Benzidine ; 4,4'-diaminobiphenyl ; biphenyl-4,4'-ylenediamine	612-042-00-2	202-199-1	92-87-5
o-Toluidine ; 2-aminotoluene	612-091-00-X	202-429-0	95-53-4
4-chloro-o-toluidine	612-196-00-0	202-441-6	95-69-2
4-Methyl-m-phenylenediamine ; 2,4-Toluenediamin	612-099-00-3	202-453-1	95-80-7
4-o-Tolylazo-o-toluidine ; 4-amino-2',3-dimethylazobenzene ; fast garnet GBC base ; AAT ; o-aminoa-zotoluene ; C.I. Solvent Yellow 3	611-006-00-3	202-591-2	97-56-3
5-nitro-o-toluidine	612-210-00-5	202-765-8	99-55-8
2,4-xylydine		202-440-0	95-68-1
2,6-xylydine ; 2,6-dimethylaniline	612-161-00-X	201-758-7	87-62-7

ANNEX 3 - Summary Table of Phthalate Restrictions

Chemical Substance Name	Abbreviation	CAS No.	EU RoHS restricted since 2019	Restriction REACH (1)	Restriction CPSIA	France dangerous substance list	Proposition 65 declarable	Declaration as industry substance	MDD/MDR labeling (3)	REACH declarable
			RSL Table 1	RSL Table 2	RSL Table 3	RSL Table 3	RSL Table 5.2	RSL Table 6	RSL Table 3	RSL Table 5.1
Bis (2- ethylhexyl)phthalate ; Di (2-ethylhexyl) phthalate	DEHP	117-81-7	X	X	X (2)		X	X	X	X (4)
Dibutyl phthalate ; Di-n-butyl phthalate	DBP	84-74-2	X	X	X (2)		X	X	X	X (4)
Benzyl butyl phthalate ; Butyl benzyl phthalate	BBP	85-68-7	X	X	X (2)		X	X	X	X (4)
Diisobutyl phthalate ; Di-i-butyl phthalate	DiBP	84-69-5	X		X			X	X	X (4)
Di-isononyl phthalate ; Diisononyl phthalate	DINP	28553-12-0; 68515-48-0		X	X (2)		X	X		
Di-isodecyl phthalate ; Diisodecyl phthalate	DIDP	26761-40-0; 68515-49-1		X			X	X		
Di-n-octyl phthalate	DNOP	117-84-0		X				X		
Di-n-hexyl phthalate	DHEXP/ DNHP	84-75-3			X		X	X	X	X
Diisooctyl phthalate	DiOP	27554-26-3				X				
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters	DIHP	71888-89-6						X	X	X
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear	DHNUP	68515-42-4						X	X	X
Bis(2-methoxyethyl) phthalate	DMEP	117-82-8						X	X	X
N-pentyl- isopentylphthalate	-	776297-69-9						X		X
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear		84777-06-0						X	X	X
Di-n-pentyl phthalate	DPENP/DPP	131-18-0			X			X	X	X
Diisopentylphthalate	-	605-50-5						X	X	X
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	-	68515-50-4						X	X	X
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters ; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate		68515-51-5 or 68648-93-1						X		X
Dicyclohexyl phthalate	DCHP	84-61-7			X			X	X	X

- 1) REACH Restriction under article 67: Restriction applies to the sum of the phthalates (the sum of DEHP, DBP, BBP) and (the sum of DINP, DIDP, DNOP). Since 7 July 2020 DEHP, DBP, BBP and DiBP (individually or in any combination (i.e., sum)) are restricted under REACH (EU/2018/2005 of 17 December 2018) in a concentration equal to or greater than 0,1 % by weight of the plasticised material in the article, except for medical devices and EEE. It also applies to toys and childcare articles.
- 2) Same substances also restricted in REACH. CPSIA, USA: section 108
- 3) MDD: Medical Devices Directive; MDR: Medical Devices Regulation.
- 4) REACH authorization per 21-02-2015.

ANNEX 4 –Detailed Requirements for Consumer Product Skin Contact Parts for PAH Compounds in Germany

The German GS-Mark on product safety ("Geprüfte Sicherheit") has revised their PAH-limits for consumer products.

Three different product categories have been defined. See below Table 2 for details.

For each category, material needs to fill not only the total maximum allowable sum for all 15 PAHs, but also the individual PAH substance limits described in the table below.

In Table 2 of this RSL, you will find the EU REACH restrictions on PAH. The REACH-restricted PAH-compounds have been marked in the table below.

Substance	CAS	Category 1: Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3 years of age with intended long-term skin contact (> 30 seconds) (mg/kg)	Category 2: Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin		Category 3: Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (≤ 30 seconds)		EU REACH restricted PAH (x)
			2a: Use by children under 14 (mg/kg)	2b Other consumer products (mg/kg)	3a Use by children under 14 (mg/kg)	3b Other consumer products (mg/kg)	
Benzo[a]pyrene (BaP)	50-32-8	<0.2	<0.2	<0.5	<0.5	<1	X
Benzo[a]anthracene	56-55-3	<0.2	<0.2	<0.5	<0.5	<1	X
Chrysene	218-01-9	<0.2	<0.2	<0.5	<0.5	<1	X
Benzo[b]fluoranthene	205-99-2	<0.2	<0.2	<0.5	<0.5	<1	X
Benzo[k]fluoranthene	207-08-9	<0.2	<0.2	<0.5	<0.5	<1	X
Dibenzo[a,h]anthracene	53-70-3	<0.2	<0.2	<0.5	<0.5	<1	X
Benzo[j]fluoranthene	205-82-3	<0.2	<0.2	<0.5	<0.5	<1	X

Benzo[e]pyrene	192-97-2	<0.2	<0.2	<0.5	<0.5	<1	X
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.2	<0.2	<0.5	<0.5	<1	
Benzo(g,h,i)perylene	191-24-2	<0.2	<0.2	<0.5	<0.5	<1	
Phenanthrene	85-01-08	<1 (sum)	<5 (sum)	<10 (sum)	<20 (sum)	<50 (sum)	
Anthracene	120-12-7						
Fluoranthene	206-44-0						
Pyrene	129-00-0						
Naphthalene	91-20-3	<1	<2	<2	<10	<10	
Sum of 15 PAH		<1	<5	<10	<20	<50	

ANNEX 5 - Revision History

Date Revision	Short Explanation
July 2026	Version Versuni 7 Table 3.1: Persistent Organic Pollutants (POPs) Stockholm Convention - LC-PFCAs: The name was updated for clarification. - SCCP: The name was updated for clarification. - Hexabromobiphenyl: Although this substance is already covered by Polybrominated biphenyls (PBBs) entry under RoHS section (Table 1), it was decided to be added to the POPs section to cover non-EEE products. Table 3.2: Other Restricted or Declarables - Materials of biological origin: added as a new entry as per a requirement under EU MDR. Table 5.1: REACH Candidate List (Article 33) - There is no SVHC update in Bomcheck in this round. Table 6: Industry Restricted and Declarable - Azocolourants and azodyes which form certain aromatic amines: The entry name was slightly updated to be in line with the entry under REACH. No regulatory change. - Critical Raw Materials: Reference to the EU CRM Regulation was added. - Substances of concern: An explanation was added for the definition of SoCs.
February 2026	Version Versuni 6 - More alignment with BOMcheck in terms of titles/sub-sections, names and orders of the listed substances. The order of all the footnotes (remarks) was also adjusted. - Table 0: removed, instead, "" mark was added to the entries having additional requirements to BOMcheck. - Table 2: REACH Restrictions (Article 67) - PCTs: limit value is corrected to reflect the exact wording in the legislation - PFHxA: limit value for the sum of PFHxA related substances is corrected from 0.001 ppm to 1 ppm - Table 3.1: Persistent Organic Pollutants (POPs) Stockholm Convention - Dechlorane Plus and UV-328 entries are updated to include specific timelines - Table 3.2: Other Restricted or Declarable Substances - Latex: clarification is added as "declarable" - Table 5.1: REACH Candidate List (Article 33) new SVHC added in Bomcheck - Table 6: Industry Restricted and Declarable - New entry for Critical Raw Materials: added to reflect upcoming EU legislation. - Substances of concern: added a remark - BFR entries: clerical changes (information moved from one column to the other for easy reading) - CFRs (plastic parts): clerical changes (the same as for BFR) + a remark is added to explain additional restriction - Table 7: Packaging Restricted Substances (additional to other Tables) - Polymeric foam materials inside any consumer product packaging: entry is deleted due to a duplication with the other entry "Expanded polystyrene (EPS) and other polymeric foam materials (e.g, EPP, EPE, EVA)" in Table 7
July 2025	Version Versuni 5 - Table 2: small changes - Dimethylfumarate (DMF) and Tri-substituted organostannic compounds: changed the basis of concentration calculation from "material" to "articles" to align with the actual requirements under REACH. - Formaldehyde and formaldehyde-releasing substances: align with the scope of this entry 77. - Table 3 Reshuffled to align with BOMCheck structure, now split into Table 3.1, 3.2 and 3.3 - Table 3.1: - New limit values are added for Dechlorane Plus, UV-328, PBDEs, PFOS, PCP, and PCBs as per EU POPs Regulation - New entries: Medium-chain chlorinated paraffins (MCCPs, Chlorinated paraffins, C14-17) and Long-chain perfluorocarboxylic acids (PFCAs), their salts and related compounds as per Stockholm Convention - Table 3.2: Other substances:

	• Colecalciferol: the name was corrected from B3 to D3. • MOAH & MOSH: added a clarification for packaging. • Bisphenol A (BPA): updated to include other hazardous bisphenols or hazardous bisphenol derivatives • Table 3.3: TSCA: added DecaBDE as a separate entry under TSCA to align with BOMCheck structure already covered under ROHS • Table 5.1 new SVHC added to Bomcheck • Table 6: Industry Restricted and declarable substances • PFAS: editorial changes • New entry: Substances of Concern (SoC) were added as declarable substances • Table 7: BOMcheck will now include packaging in RCD tool, redundancies in requirements with other part of RSL have been removed: MOAH & MOSH entries are deleted due to overlapping entries in Table 3.2
February 2025	Version Versuni 4 • Table 2: Addition of Undecafluorohexanoic acid (PFHxA), its salts and PFHxA-related substances, new entry 79 to Annex XVII of REACH • Table 3: IEC alignment topics: • Reporting threshold for PBDEs to No intentionally added content, • Addition of France EDC, Colecalciferol or Cholecalciferol (vitamin B3) (CAS:67-97-0) • Table 3: added declarable for PIP(3;1) for FDA regulated products • Table 3 and 7: France Agec law no.2020-105: added the remark that the regulation is in scope when the product and packaging are discarded at homes. • Table 5.1: On 21 Jan 2025 and 7 Nov 2024, the European Chemicals Agency added 6 new substances (all screened in form BOMCheck list) those were added to REACH Candidate List which now contains 247 substances. • Table 6: PFAS changed from restricted to declarable and editorial changes have been made in comment 18
August 2024	Version Versuni 3 • Table 3: Hexabromocyclododecane (HBCDD) threshold has been changed from 100 ppm to 75 ppm. The amendment to F-gas regulation EU 2024/573, has been adopted on 7 February 2024 and is in force as of 11 March 2024. The amendment has been added to the remark as reference. • Table 5.1: On 27 June 2024, the European Chemicals Agency added one new substance to the REACH Candidate List which now contains 241 substances. • Table 5.2: OEHHHA added 4 new substances to the Proposition 65 List. 2 out of 4 new substances have been added to BOMcheck. Ethylene Oxide, which was previously screened-out, has been added to the BOMcheck Proposition 65 list due to its use in equipment sterilization. • Table 6: There are 7 additions to the current PFAS list. Remark 18 is revised to indicate continuous update of PFAS regulations and related PFAS lists. • Table 7: Legislative substances; - Expanded polystyrene (EPS) and other polymeric foam materials (e.g, EPP, EPE, EVA) entry has been revised and reference is set per Australian law on plastics. - A new entry is added for Non-recyclable styrenic polymers or copolymers per French Climate law. - Existing entry of Oxo-degradable plastics is revised as Degradable plastics per Australian law. • Annex 3: DiOP CAS number and name is corrected.
April 2024	• Formatting changes no change in content
February 2024	Version Versuni - 2 • Introduction some editorial change • Adjustment of RSL table numbering • Table 1: Remark 1, EU Battery Directive is changed to EU Battery Regulation. • Table 2: • Lead and lead compounds has been added to the list as 0.1% by weight in PVC per EU REACH Article 67 entry 63. • Small textual correction: Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs) the remark has been corrected by deletion of 'in any article' to endorse the homogeneous material level. • Remark 8: Broken link to relevant regulation document is fixed. • Formaldehyde is added to the list as per entry 77 of EU REACH Article 67. • Table 3: • Hexachlorobenzene has been added to the list as in any article at 0.001% weight, per Annex I of the POP Regulation. • UV-328 has been added to the list as not intentionally added per Stockholm Convention. • Dechlorane plus has been added to the list as not intentionally added per Stockholm Convention. • DiOP (dioctyl phthalate) has been added to the list as declarable per France National regulation.

	- Table 4: The legislation references for thresholds of cadmium and cadmium compounds, mercury compounds and lead and lead compound to be updated to Chinese standard GB 24427-2021. Remark 13 is deleted as no further use. The following remark numbers are revised accordingly. - Table 5.1 : On 23 January 2024, the European Chemicals Agency added five new substances to the REACH Candidate List which now contains 240 substances. 3 out of 5 new SVHCs are added to BOMcheck as relevant substances and require supplier declaration. 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) - Bumetrizole (UV-326) - Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol - Table 5.2 :OEHHA added 3 new substances to the Proposition 65 List on 11 August 2023. 1 out of 3 new substances, Dimethyl hydrogen phosphite is added to BOMcheck. - Table 7: 'Expanded polystyrene EPS' entry is moved under legislative substances section as 'not permitted' per French AGECL law. 'Polymeric foam materials inside any consumer product packaging' entry is kept unchanged under industry substances section. - Annex 3: DiOP is added to the table.
March 2023	- Version Versuni – 1 - Change Philips Domestic Appliances to Versuni
February 2023	- Version 24 - Small textual corrections: Remark 18: The reference materials (e.g., gold, silver, ... and scandium, yttrium,...) for Rare Earth Minerals and Precious Metals and have been accidentally switched with each other and have now been assigned correctly.

February 2023	• Version 23 • Table 3: the CMR 1A and 1B substances and endocrine disrupting substances (EDCs) list has been extended in de RCD tool in BOMcheck. • Table 3: Lead and lead compounds restriction in surface coatings materials in childcare products and toys (less than 90 mg/kg) added as per Canada Consumer Product Safety Act. • Table 3: Mercury in childcare products and toys restriction added for surface coating materials (10 mg/kg (10 ppm or 0.001 % w/w)) as per Canada Consumer Product Safety Act. • Table 5.1: 9 new REACH SVHC substances added to the SVHC full list in BOMcheck: - 1,1'-[ethane-1,2-diylbisoxo]bis[2,4,6-tribromobenzene] CAS: 37853-59-1 - 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol CAS : 79-94-7 - 4,4'-sulphonyldiphenol CAS: 80-09-1 - Barium diboron tetraoxide CAS: 13701-59-2 - Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof - Isobutyl 4-hydroxybenzoate CAS: 4247-02-3 - Perfluoroheptanoic acid and its salts - Melamine CAS: 108-78-1 - Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine • Table 6: addition of two new entries on 'Rare Earth minerals' and '' with a limit set to "No intentionally added content" regarding the new French labelling requirement (France Decree 2022-748). The BOMcheck tool will capture information on the amount (mg) of rare earth minerals/precious metals where the indicated compliance status = no (i.e., parts contain these substances) • Table 6: Per and polyfluoroalkyl substances (PFAS) (indicative EPA list) added with a restriction set to "no intentionally added content". The full list of 824 substances is available in the BOMcheck RCD tool only.
July 2022	• Version 22 • Small textual corrections: Table 3 and 7: Mineral oil aromatic hydrocarbons (MOAH) and Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms [...] as per Article 112 of
	decree no.1010-105 changed to: <i>Mineral oil aromatic hydrocarbons (MOAH) and Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms [...] as per Article 112 of decree no.2020-105.</i> • Small textual correction in Annex 5 Revision History for entry July 2022: From Table 7: Oxo-degradable plastic: new substance group added with a restriction set to "<u>no intentionally added content</u>" [...] change to Oxo-degradable plastic: <i>new substance group added with a restriction set to "<u>no content permitted</u>" [...]</i>

July 2022	• Version 21 • Table 1: Four phthalates status change from “declarable” to “restricted” for medical devices (category 8) and monitoring and control instruments (category 9), per 22 July 2021. • Table 2: Pentachlorophenol (PCP) substance entry removed due to the deletion from Annex XVII to REACH (PCP remains present in Table 3 of the RSL as per POPs Regulation ((EU) 2019/1021)) • Table 3: Phenol, isopropylated phosphate (3:1) (PIP 3:1) set from “no intentionally added content” to “declarable” (until October 31, 2024). • Table 3: Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings and Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms added with a restriction as per Article 112 of decree no.1010-105 • Table 3: PFHxS its salts and PFHxS related substances and Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs) and C9-C14 PFCA-related substances restriction added as per AS 2022 162 of the Swiss Chemicals Risk Reduction Ordinance, ChemRRV • Table 5.1: 1 new REACH SVHC substance (- N-(hydroxymethyl)acrylamide (NMA) CAS: 924-42-5) added to the SVHC full list in BOMcheck • TABLE 5.2: 4 new California Proposition 65 substances added as declarable substances • Table 7: Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings and Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms added with a restriction as per Article 112 of decree no.1010-105 • Table 7: Oxo-degradable plastic: new substance group added with a restriction set to “no content permitted” as per EU Single-use Plastics Directive
January 2022	• Version 20 • Table 2: Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs) restriction added as per REACH Article 67, Entry 68 • Table 3: Changing the restriction date for PIP (3:1) to 31 October 2024 for non-FDA regulated products in all applications. After October 31, 2024, non-FDA regulated products are restricted, whereas FDA regulated products remain declarable. • Table 5.1: Adding 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC) as new declarable. • Annex 1.2: small textual adaptation to 'Other terms and definitions' • Annex 3: Updated information on Dicyclohexyl phthalate (DCHP): also REACH SVHC
March 2021	• Version 19 • Change of the 'valid from' date from 2021-02-05 to 2021-03-26 • Table 3: Phenol, isopropylated phosphate (3:1) (PIP 3:1): new substance added with a restriction set to “no intentionally added content”. • Table 3: PFOA: Addition of new threshold limit value (2 ppm) applicable to medical devices only. Removal of the Norwegian threshold limit value (1000 ppm in all applications or for textiles 1
	µg/cm²) and removal of “RSL/BOMcheck limit before 2018 was not set to: intentionally added/1000 ppm”).

January 2021	• Version 18 • New introduction text added • Sections 1.1, 1.2, 1.3 and 1.4: revision of text. • Chapter 1.4: re-wording from "Philips Supply Management" to "Philips Procurement" • Table 2: Bisphenol A: restriction added for thermal paper as per EU REACH Annex XVII • Table 2: Re-wording for DBBT, Ugilec 121 or Ugilec 12, Ugilec 141 and PCT's (all used as dielectrics) from "No additionally added content" to "no intentionally added content", now being in line with BOMcheck. • Table 2 and table 6: Re-wording of <i>Azocolourants and azodyes which form certain aromatic amines (see remark 19) to Aromatic amines (released from Azocolourants and azodyes) (see remark 18).</i> • Remark 18: Following remark content has been removed: See further in Annex II for all legal requirements for phthalates and replaced with the content of the subsequent following remark (former remark 19, now remark 18. Former Remark 20 is now remark 19 and so on). Also, more specification on the applicability and scope of the Aromatic amines restriction has been added ("direct contact with the human skin or oral cavity"). • Table 3: Bisphenol S: restriction added for thermal paper (200 ppm) in accordance with the Swiss Chemical Risk Reduction Ordinance • Table 3: Hydrofluorocarbons (HFC): Change in threshold from "Specific permission needed" to "No content permitted"; Additional referencing to the Canadian Ozone-depleting Substances and Halocarbon Regulations (ODSHAR - SOR/2016-137). • Table 3: Short chained chlorinated paraffins (SCCP): removal of the Dutch Legislation on plasticizers and flame-retardants and the 'not intentionally added' (ruling expired per 20-12-2013); Added new maximum concentration limit 1500 ppm (mg/kg) in accordance with the EU POP Regulation • Table 3: Radioactive substances legislation updated from EU-D 96/29/Euratom to EU-D 2013/59/Euratom. • Table 3 regarding CMR 1A and 1B substances and endocrine disrupting substances (EDCs): Description on particular use/legislation has been refined and aligned with the official legal text. More specifically, the criteria: - <i>(re)administer medicines, body liquids or other substances, including gases, to/from the body</i>, has been added. • Annex 1: New sub-chapter added: 1.2 <i>Other terms and definitions</i>; Removal of the article definition (was added to the new sub-chapter 1.2 <i>Other terms and definitions</i>.) • Annex 2: is renamed to: ANNEX 2 - Summary Table of Aromatic amines (released from Azocolourants and azodyes) Restrictions which is containing the full list of all 24 restricted Aromatic amines (released from Azocolourants and azodyes) as per Philips RSL. Former ANNEX 2 - Summary Table of Phthalate Restrictions has now become ANNEX 3 - Summary Table of Phthalate Restrictions and so on.
July 2020	• Version 17 • Alignment with BOMcheck version 6.1 and future version(s) of 2020 • In section 1.4 additional ECHA SCIP database requirements, to be fulfilled in BOMcheck, are mentioned.
	• Note, that additional substances (REACH Candidate List substance, California Prop 65, EU MDR) have been added to BOMcheck, which are not listed in this RSL. • Table 3: PFOS restriction: 'applicable as of' date added for medical devices • Table 8: deleted (Name of table: Substances restricted in Manufacturing Processes) and all references thereto (excluding Annex 4).
January	• Version 16

2020

- Alignment with BOMcheck version 5.4.
- Remark 2: for metals in RoHS, added the clarification that the concentration determination is based on the metal weight not the metal containing compound weight (for details see IEC 62321).
- Remark 6: re-wording on the scope exceptions of the four phthalates restrictions under REACH (EU/2018/2005).
- Table 2: PFOA restriction deleted and moved to Table 3. In the new Table 3 entry (now under EU POP), the references to the time related exemption for medical devices were deleted: "except medical device" and "This 1000 ppm limit will be the limit for medical devices until 2032."
- Table 2: Sum of selected Phthalates Group 1 (BBP, DBP, DEHP) deleted under section "Additional restrictions which apply to parts used in toys and childcare products". New restriction for Sum of selected Phthalates Group 1 (DIBP, BBP, DBP, DEHP), 1000 ppm in plasticized materials under section "Restrictions for electrical and mechanical products in all applications".
- Remark 7 (Table 2): new remark explaining the changes on the scope of the Sum of selected Phthalates Group 1 (DIBP, BBP, DBP, DEHP) restriction, the new substance restriction (DIBP) and the with a list of exemptions (e.g., for equipment which is in scope of RoHS, Medical Devices, Food contact legislation).
- Remarks numbering and references updated accordingly.
- Table 3: new restriction under sections "Additional Restrictions which apply to parts used in toys and childcare products" and "Additional requirements which apply to parts containing textiles" for Flame retardant chemicals, 1000 ppm, applied in any material (except electronic components). US States bills (e.g., California).
- Table 3: deleted restriction for Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4- trimethylpentene (BNST) since it has been removed from the Canada's Prohibition of Certain Toxic Substances Regulations.
- Table 3: correction of "Polychloronaphtalenes" into "Polychlorinated naphthalenes", "chloro atoms" into "chlorine atoms" and "UN Stockholm Convention on POPs" into "EU POP regulation".
- Table 3: restriction on "Alkanes, C10-13, chloro (SCCP; Short chained chlorinated paraffins), 10000 ppm" deleted from sub-section "Additional restrictions which apply to parts which contain chemical products (liquids, gases, powders; as substance or preparation)" for alignment with BOMcheck.
- Remark 18 (Table 6): deleted specific example on declarable phthalates in medical devices.
- Annex 2: included reference to MDR: Medical Devices Regulation, in the table header and as remark 3.
- Annex 3: table adapted according to the new specifications for PAHs under GS Mark: number of PAHs reduced from 18 to 15- by removing acenaphthylene, acenaphthene and fluorene from the group of seven PAHs; scope of Category 1 expanded by including 'articles for children up to three years of age'; Categories 2 and 3 divided into two sub-categories each, being 2a and 3a for 'products used by children under the age of 14' and 2b and 3b for 'Other consumer products (mg/kg)'; new limits for sub-categories 2a and 3a; category description deleted from introductory text.

July 2019	• Version 15 • Header: new Philips logo. • Alignment with BOMcheck version 5.3. • Section 2.1: added BOMcheck "system". • Table 1: in introduction changed "restrictions" into "requirements". • Table 1: divided into two sections: "RoHS Substance restrictions (Directive 2011/65/EU)" and "RoHS Substance restrictions amendment 1 (Directive 2011/65/EU, as amended by Directive (EU) 2015/863 of March 2015)". Added new column "Remarks" with details on scope, conditions, and timelines. • Table 1.1 deleted. Substances moved to Table 1, under section "RoHS Substance restrictions amendment 1 (Directive 2011/65/EU, as amended by Directive (EU) 2015/863 of March 2015)". • Table 1: new remarks number 5 and 6 with details on four phthalates restriction date for category 8 and 9 and note about upcoming restriction under REACH in 2020 (except medical devices and EEE). Remarks numbering adapted throughout the document. • Table 3, section "Restrictions for electrical and mechanical products in all applications": corrected column "particular uses/ legislation" and remark 9 for Formaldehyde to reflect that label in compliance with U.S. EPA TSCA Title VI regulation is mandatory and it is voluntary to label also according to CARB ATCM standards. • Table 3, section "Additional Restrictions which apply to parts used in toys and childcare products": added four CPSIA substances under section: Di-n-pentyl phthalate (DPENP), Di-n-hexyl phthalate (DHEXP), Dicyclohexyl phthalate (DCHP), Diisononyl phthalate (DINP). • Table 3: new entry for Polybrominated diphenyl ethers (PBDEs), for materials/parts not under EU RoHS Scope • Table 6: distinction between Br limit for printed wiring laminates and used in other plastics clarified also in remark 15. • Annex 1: homogenous material definition in line with EU RoHS legal definition. • Annex 2: separated columns for REACH and CPSIA restrictions. Marked new Table 3 CPSIA substances relevant for CPSIA. Adapted footnote 2. • Annex 2: added note about upcoming restriction under REACH in 2020 (except medical devices and EEE) in remark 1). • Annex 3: Naphthalene name corrected. • Annex 4: added in "March 2019" the new document reference: PE_005520
March 2019	• Version 14 – Typo correction • New document reference: PE_005520 • Alignment with BOMcheck version 5.2. • Section 1.1: removed versions numbers of RSL and BOMcheck (moved into Annex 4).
January 2019	• Version 13. • BOMcheck (declaration) "tool" changed into "system". • Table O aligned with Table 6: added clarification that lighting products exempted are "professional"; deleted exemption for "mains power supply cord sets" for BFR restriction at 900 ppm; added "(P)VC copolymers" to BFR and PVC restriction at 1000 ppm.

	- Section 2.2: added "Proposition 65 substances" to the substances that can be found in BOMcheck substances list. - Table 1: added remark with clarification on maximum concentration limit applicable for the metal (i.e., Cd, Cr⁶⁺, Pb and Hg) and not for the compounds. - Remarks numbering and references updated accordingly. - Table 1.1: added note informing that as per 7 July 2020 new requirements on phthalates from EU/2018/2005 of 17 December 2018 will apply. - Table 3: corrected TCCPP name by adding "phosphate". - Table 3: added new entry (label and justify or restrict) for additional requirements which apply to parts used in medical devices "CMR 1A and 1B substances and endocrine disrupting substances (EDCs)". - Table 4: added reference to remark 2 for cadmium and cadmium compounds restriction. - Table 6: changed "Beryllium Oxide" to "Beryllium compounds"; added "by weight of any material"; changed from "restricted" into "declarable". - Table 6: added clarification that PVC requirements also apply to "poly"vinyl chloride copolymers. - Table 6: correction/alignment with BOMcheck for chlorinated flame retardants declarable from 900 ppm by replacing "plastics" for "printed wiring laminates" and chlorinated flame retardants declarable from 1000 ppm by replacing "printed wiring laminates" for "plastics". - Remark 12 on Beryllium adapted to explain the changes in the Beryllium requirements (Table 6) from restricted (when feasible alternatives exist) into declarable (to collect information also when no feasible technological alternatives exist). - Annex 2, note 2: new hyperlink added for the Phthalates Business Guidance & Small Entity Compliance Guide - Annex 2: updated RSL Table references for Proposition 65 ("RSL Table 5.2") and for REACH declarable ("RSL Table 5.1"); changed Proposition 65 from "restricted" into "declarable"; deleted remarks 3), 4) and 5) on Proposition 65 and other remarks renumbered. - Format changes.
May 14, 2-18	- Version 12 - California Proposition 65 legislation substances are added in Table 5.2 as declarable substances. The California Proposition 65 listed in previous RSL versions are removed from Table 3 and visible in Table 5.2 in version 12. - Medical device exemptions are added for Biocides in Table 3 and PFOA in Table 2. - Phthalates, when present in specific medical devices need labelling under the current EU MDD legislation are transferred from Table 3 to Table 6 to better align with BOMcheck - Scope is adapted to have non-Philips branded and owned products when by-packed or integrated in Philips owned products in scope of RSL. - Table 0 only contains 2 instead of 4 differences between Philips RSL and BOMcheck. - Tables 2, 3 and 6 are also valid for packaging now. Table 7 shows only the additional requirements for packaging. - Further alignment between BOMcheck and RSL took place in listing of substances per application. Skin contact and leather & textiles are listed under textiles & leather now.

February 8, 2018	• Version 11 • The restriction for Perfluorooctanoic acid (PFOA) and its salts is set from 1000 ppm for all applications and no additionally added content for textile and leather applications to 25 ppb due to upcoming EU REACH legislation per July 2020. • The restrictions for Azo colorants containing certain amines is changed to Azocolourants and azodyes which form certain aromatic amines (Table 2 and 6). The maximum concentration limit is changed from "No content permitted" to 30 mg/kg. • Biocides are added to Table 3 to declare with threshold <i>No intentionally added biocide content</i> due to the EU Biocidal Product Regulation. • Following text is added to comment 8: <i>US District of Columbia restricts TCEP and TDCPP in consumer products for children under 12 years of age from 2018 onwards and in all consumer products from 2019 onwards.</i> It is noted here that businesses falling into this scope should take care of this additional requirement.
Nov 30, 2017	• Version 10. • SUS-007 identification added to be able to link the document to the new E2E PEPF processes. Content remains the same as previous version: PHGR-GS-BP01-012 version 9.
May 15, 2017	• Version 8 and 9. • RSL version 8 is not published. RSL version 8 is aligned with BOMcheck 4.8, RSL version 9 with BOMcheck 4.9. • Separate categories has been made within the Tables for leather and textiles, toys and childcare, chemical products, skin contact applications, medical devices, food contact applications, lamp and lamp ballasts. • Scope of RSL slightly adapted on page 1 to have it mandatory for all Philips and Philips branded and licensed products only. • Fluorinated Greenhouse gases (PFC, SF6, HFC) added to Table 3 replacing the SF6 entry, due to EU regulation 517/2014. Will be active in BOMcheck version 4.9. • 3 phthalates with CMR class 1b have been added to Annex 2, due to labelling requirements under the • current MDD (Table 3). • 2 azo dyes added to Table 6 additional to REACH due to requirements in Japan, Thailand and China • Annex 3 on PAHs has been made clearer. • Phenols in Table 6 changed into Alkylphenols and their ethoxylates in leather and textile applications (100 ppm, Table 6) due to upcoming legislation and customer demands. Will be active in BOMcheck version 4.9. • PCP has been adjusted in Table 3 to no intentionally added content as threshold due to the EU biocide directive. PCP was also restricted due to various country legislations with a 5 ppm or even lower limit depending on the application. See Further in Table 3. Will be active in BOMcheck version 4.9. • Mains power supply cord sets exempted for PVC/BFR restriction in Table 6. • Table O adapted to the changes not included in BOMcheck yet and format adapted • Latex as declarable substance was added to Table 3 due to FDA labelling requirements. Will be active in BOMcheck version 4.9.

	- References to legislations have been made clearer (e.g. lead in batteries, remark 11 adjusted). When no reference to legislation is made, the substance is restricted or declarable due to Philips policy. - Scope and purpose section have been made clearer. - Phthalates DiDP, DnHP and DiNP have been added to Table 3 to align with BOMcheck and due to California proposition 65 requirements. - Exemption for BeO used in high power RF resistors added to industry restrictions for Be compounds in Table 6. - Threshold was changed from "no content permitted" to "no intentionally added content" for PCTs, DBBT, Ugilecs 21 or 121 and 141 in Table 2 to align with BOMcheck and other similar restrictions. Will be active in BOMcheck version 4.9. - Perchlorate was added to Table 4 for batteries due to a labelling requirement in California legislation. This will be active in BOMcheck version 4.9.
April 2016	- Version 7 - Table 3: Application text and threshold changed for Alkanes, C10-13, chloro (SCCP; Short chained chlorinated paraffins) and Hexabromocyclododecane (HBCDD) and its main diastereoisomers due to EU POP regulations 2015/2030 and 2016/293. - Minor text changes in Chapter 1.3, 2.1 and 2.2.
January 2016	- Version 6 - Edited the Table 0 to reflect the differences between RSL and BOMcheck list of reportable and declarable substances - Table 2, the sub header "Substances which are liquids at room temperature" changed to "Restrictions applicable to substances and preparations" - Table 3, added restriction for hexabromocyclododecane, HBCDD - Table 3, added restriction for Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene, BNST - Table 3, restrictions to the use of named phthalates (DEHP, BBP, DBP, DIDP and DNHP for cables in headsets and DEHP, BBP and DBP in bas, pouches and other accessories) from Table 6 to emphasize the obligatory restrictions - Table 3, included the term "food contact" in the sub header "Parts used in medical devices or in toys and childcare products" to correctly reflect the scope of BPA restriction - Table 4, added a remark to the footnote for lead compounds "For zinc chloride zinc manganese batteries, the concentration limit 1000 ppm is applied" - Table 7, foam use in packaging restriction scope clarified - Table 8, Hexavalent chromium passivation term clarified - Annex I, article definition changed due to EU Official Court ruling on 10th September 2015 - Annex II, included phthalate 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)
January 2015	- Version 5 - Edited the Table 0 to reflect the differences between RSL and BOMcheck list of reportable and declarable substances

	• Added new Table 1.1 describing the RoHS phthalates; now declarable and restricted from 2019 onwards • Corrected Table 2 PAH restriction scope: any PAH compound instead of sum of PAH • Table 2, added a footnote to official guidance on prolonged skin contact for nickel • Table 2, benzene requirement clarified • Table 3, formaldehyde requirement aligned with wording in BOMcheck • Table 3, revised the scope and limit values for TRIS flame retardants and added new TRIS substance Tris(2-chloro-1-methylethyl) phosphate (TCPP; CAS 13674-84-5) • Table 3, clarified the scope of lead in paint and similar coatings • Table 3, added a footnote describing the Philips BPA policy • Table 4, lead compounds in batteries limit value updated • Table 6, replaced outdated PAH and Benzo(a)pyrene limits with reference to detailed requirement found in ANNEX 3 • Table 6, the scope of PVC restriction clarified; also, vinyl chloride copolymers belong to the scope (previously mentioned in PVC footnote) • Table 7, included other foam polymeric packaging materials into the scope of EPS ban • Annex 2: Phthalate table updated • Annex 3: Detailed requirements for PAH compounds for German GS mark added
February 2014	• Version 4, GS-BP01-2014-001 (change to ISO conform version numbering, 4th version RSL) • Added a remark on additional requirements which apply to special products into paragraph 1.1 Purpose • Edited the Table 0 to reflect the differences between RSL and BOMcheck list of reportable and declarable substances • Clarified the restriction for phthalates under REACH Article 67 restrictions, Table 2 • Added REACH Article 67 regulation for PAH compounds to Table 2 with footnote listing the restricted substances. Restriction will be in force from 27th Dec 2015 • Transferred the Californian Formaldehyde emissions requirement from Table 8 (Transport Emissions) to Table 3 • Added the new restriction on PFOA originating from Norway to Table 3 • Added the restrictions on TCEP and TDCPP in toys and childcare, and in children's' products originating from state-level legislation in USA to Table 3 • Corrected the restriction of PAH compounds limit for to be taken into the mouth or in contact with the skin of small children to Table 6 parts • Added the list of PAH compounds with their CAS numbers as a footnote to Table 6 • Removal of Table 8 (Transport emissions), replaced by internal control document • Added a summary of Phthalate requirements in the RSL to the Annex 2
February 2013	• Version C, CSO-BP01-2013-001

	• Lead and lead compounds in primary alkaline zinc-manganese dioxide batteries to 40 ppm in line with China Standard: GB 24427-2009 • Lead and lead compounds in non-alkaline zinc-manganese dioxide batteries to 1000 ppm in line with Brazil Legislation (CONAMA Resolution 401/2008) • Cadmium in batteries to 10 ppm in line with change in Swiss legislation (20 ppm) and Korean legislation (10 ppm) • RSL further aligned with BOMcheck and legislation (addition of antimony trioxide in plastics to Table 6, SF6 to Table 3 (Austrian Legislation), thresholds for dimethylfumarate, organo stannic compounds and arsenic compounds in products and/or packaging) • Certain tin compounds (DBT and DOT) moved from table 6 to Table 2 (REACH article 67) • Phthalates in some applications moved from Tables 2 and 3 to Table 6 and further specified which phthalates need to be declared if not asked elsewhere in the RSL. • Ozone depleting substances and PFOS moved from Table 2 to Table 6, • Phenols in Table 6 have been further specified. • Philips policy on PVC and Bromine and Chlorine flame retardants has been slightly adapted in Table 6. • Added Diisobutyl phthalate (DIBP) 84-69-5 in footnote 7 to align with the essential requirements of the EU Medical Devices Directive.
15.09.2011	• Version B, CSO-BP01-2011-001 • Clarified in Section 1.1 where the RSL deviates from BOMcheck • Changed Lead and lead compounds restriction limit from 300 to 100ppm in line with US legislation. • Reorganised sequence of the Tables and a number of substances so it is the same sequence as BOMcheck (www.bomcheck.net) • paragraph explaining different thresholds moved from chapter 2.2 to chapter 1.4 • Added clarification that waivers may be obtained to stimulate use of recycled content in chapter 1.3 • added chapter 2.3 Demonstrating compliance through BOMcheck • Revision in Chapter 3 moved completely to Annex II • Adjusted the schedule for medical devices' RoHS compliancy in Chapter 3, Table 1 • Added hyperlink to RoHS recast in Official Journal of European Union and to BOMcheck with ELV and RoHS exemptions in Chapter 3, Table 1 • Adjusted table sub-header to "toys and childcare products" in Chapter 3, Table 2 • Organostannic compounds restriction corrected to "tri-substituted organostannic compounds" in Chapter 3, Table 2 • Dioctyltin and Dibutyltin compounds restriction added to Chapter 3, Table 6. • Removed remarks from asbestos, Ozone depleting substances, PFOS exemptions in Chapter 3, Table 2 • Added new legislation concerning the phthalates use, based on Proposition 65 of California, USA, to Chapter 3, Table 3

	• Added a remark on the phthalates in the scope of new Proposition 65 regulation in Chapter 3, Table 3 • Added CAS-numbers and corrected faulty EC numbers for medical devices phthalates remark in Chapter 3, Table 3 • Formaldehyde, radioactive substances and lead advisory remarks removed in Chapter 3, Table 3 • Added new batteries regulations to Chapter 3, Table 4 • Cadmium remark for medical devices removed from Chapter 3, Table 4 • Added word "declarations" to better describe the contents of Chapter 3, Table 6 contents • Removed explanatory remark for PAH compounds in Chapter 4, Table 5 • Arsenic compounds concentration limit changed from 10 ppm to "no content permitted" in Chapter 3, Table 6 • Removed the substances table for REACH Candidate list substances and added a reference to BOMcheck as source of information for Chapter 3, Table 7 • Old Table 7 contents moved to be part of Chapter 3, Table 3 • Old Table 8 contents moved to be part of Chapter 3, Table 3 • Annex I on RoHS exemptions removed • Annex II with examples on CAS-names removed
22-3- 2010	• Version A, CSO-BP01-2010-001 • The Philips Regulated Substances List covers not only restricted, but also declarable substances and, therefore, replaces both the Restricted and Relevant Substances Lists in Products (CSO-BP01-2006-11 and CSO-BP01-2006-12). • The layout of the Philips RSL was aligned with the BOMcheck IT System. • Inclusion of BOMcheck substances, such as tars oils, creosotes, and dioxins. • Hg declaration - ErP(2009/125/EC) Implementing measure EC No 245/2009 and Philips policy for Lighting products in anticipation of the revision the EU RoHS exemption list. • List of exemptions of Annex 1 updated (new exemptions added according to Decision 2009/443/EC. Expired exemptions are crossed out). • Updated Annex 1 with exemptions for RoHS Categories 8 and 9 in anticipation of RoHS Recast. • The List has been broadened from Substances in products to other relevant applications like packaging and transport material. Also regulated declarable substances as requested by REACH have been included. • Dimethylfumarate restricted in all applications according to Decision 2009/251/EC. • Restriction of Phenol and Phenolic compounds in PCB's was removed, as there is no reason to believe it still represents a problem in this application. • SCCP are no longer restricted but declarable, in line with the REACH regulation. • PVC and BFR declaration should comply with Industry guide – IEC 61249-2-21. • Expanded Polystyrene (EPS) restricted when used in consumer products. • Limits for (gas) emissions from products, product-packaging and transport material as to fulfil with Dutch requirements (http://www.vrominspectie.nl/actueel/publicaties/uitvoering-motie-

	poppe-boelhouwer-containers-met-gevaarlijke-gassen.aspx). Substances being controlled are Carbon monoxide, Carbon dioxide, Cyanide, Ammonia, Sulfurylfluoride, Chloropicrine, Dichloroethane, Benzene, Styrene, Toluene and Xylene and fumigants, Phosphine and Methyl bromide.
1-1-2009	• Lead in Childcare products according to USA requirements was added. • Beryllium: exemption Be metal alloy added (where no feasible technological alternative exist). • EU RoHS substances for medical devices were added to the restricted List with a phase-out date of 1-1-2013. • Formaldehyde emission levels from composite wood have been changed according to California legislation • Restriction to Cr⁶⁺ in processes limited to passivation processes • EU RoHS exemptions lists is replaced by the December 3 2008 EU Commission proposal • Annex 1.1 is added with an explanation on homogeneous and article product declaration
7-8-2008	• Beryllium: few exemptions and possibility for waivers were included. • Cadmium and Mercury declaration obligation above 50 ppm, moved from the footnote to one of the remarks just below the table for more visibility. There was no change on the content. • Perfluorooctane Sulfonates (PFOS's) compounds were added to the list as they will be restricted as from 27 June 2008 (EU DIRECTIVE 2006/122/ECOF). • Sum of all Polycyclic Aromatic Hydrocarbons (PAHs) (16 mentioned in EPA list) and Benzoapyrene: Those substances are included in the UNECE Protocol to be formalized in Regulation 850/2004/EEC on Persistent Organic Pollutants (POPs). Furthermore, also the "German Stiftung Warentest" or GS imposes this requirements for consumer products, based on the German transposition of the General Product Safety Directive (2001/95/EC) and the regulation on food contact materials (EC/1935/2004) to justify the legal basis for this requirement. • Formaldehyde: requirements have been split into two categories, namely in products (in e.g. wooden loudspeakers, bread roasters, etc.) and packaging material (incl. transportation material, like pellets). Official requirements exist in many countries, like Germany Chem Verbot, Denmark statut. order nr 289, Austria, Norway, Poland, Lithuania, Finland, The Netherlands, USA – CA (93120-93120.12, title 17, California Code of Regulations). The limits in CA for HWPW were corrected. • Restricted Substances in Batteries: to follow legislation. • Chlorobenzene: general "chlorobenzene" was replaced by the two hazardous forms, hexachlorobenzene and trichlorobenzene (CMR 1 and 2, respectively). • Chromium⁶⁺ in plating process: Due to the difficulties to control the plating Cr⁶⁺ process, posing compliance risks of products brought to the market by Philips, it is proposed to fully restrict use of this substance in any plating or passivation process. • Ozone Depleting Substances in processes: ODCs are subject of federal excise tax law applied to all imported electronics in USA. As part of federal efforts to implement the Montreal Protocol, the U.S. tax code applies excise taxes on the importation of a range of products – including electronics – based on the use or presence of banned/restricted ODCs. These taxes apply even if the ODCs were only used as process chemicals in the manufacture of the products and were never intended to be in the finished product. While there is a minimis exception for certain types of products, this exception does not apply to electronics. Prove of non-use must be delivered in order to apply for exemption.

	• For clarity and help, annexes containing a list with exemptions and more detailed information about the substances of this list (CAS numbers, names, legislation information, use) were added.
1-1-2007	• Due to its toxicity (CMR category 1) and to prepare ourselves on REACH, Beryllium is made restricted now. • To solve problems at numerous suppliers, who only guarantee the RoHS limits, the restriction thresholds limits for Cd in plastics and Hg are changed to the RoHS limits (100 and 1000 ppm, respectively). To be sure that these supplied materials have Cd and Hg concentrations well below the legal RoHS limits, declaration above 50 ppm is introduced for these substances. Therefore, also the text "declaration threshold" is changed into "restriction threshold" on the restricted substance list. • Some minor text changes are made for phthalates on the restricted list and lead reporting for PMS on the relevant list.