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RTX REGULATED SUBSTANCE LIST

Revision H

REFERENCE DOCUMENTS

Philips Regulated Substances List – RSL 2025-2
 HP standard 011 General Specification for the Environment
 Intel Environmental Product Content Specification for Suppliers & Outsourced Manufacturers 18-1201
 Dell Materials Restricted for Use ENV0424
[OEHHA The Proposition 65 List](#)
[ECHA - understanding REACH](#)
[ECHA – Scip Suppliers of Articles](#)
[GS Safety](#)
[Stockholm Convention](#) (POP list [here](#).)

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PURPOSE

This document consists of the RTX Regulated Substance List and is part of RTX' commitment to health, safety and the environment. This document contains product substance requirements which each supplier must ensure compliance with.

SCOPE

This Regulated Substance List (RSL) applies to all items that are supplied to RTX and form part of an RTX product. This includes all products, assemblies, components, materials, packaging and documentation that form part of the final product.

The RSL contains product substance requirements related to:

- Federal, state, country or municipal law, regulation, industry standards, and
- RTX' own requirements

Additional specific RTX or legal requirements may apply for certain product categories and applications.

DEFINITIONS

Article

Article means an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition. Examples of articles may include microprocessors, plastic enclosures, coin cell batteries, capacitors, screws, labels etc.

Homogenous Material

A homogeneous material means one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.
Examples of homogeneous materials includes metals, plastics, coatings, paints and alloys.

Material

Material is defined as the physical component of something that may be assembled into a product, such as structural plastics, metals, materials for PCB, wafer, etc.

An example of material is the fabric or wood from which something is made.

Materials can be natural or synthetic/man made.

Products

All manufactured components, parts, assemblies, materials, packaging, documentation, and other items made available through RTX for distribution in the marketplace.

Substance

Substance is a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition. That is, the definition of a substance goes beyond a pure chemical compound composed of a single molecule. The term covers both substances obtained by a manufacturing process and substances in their natural state.

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RESPONSIBILITIES

It is the responsibility of the supplier to ensure that all items supplied to RTX are compliant with legal regulations **and** RTX's RSL requirements in this document and being able to provide appropriate evidence for such claimed compliance. In those cases where the supplier supplies or intends to supply products to RTX which do not comply with the RTX RSL, the supplier needs to contact RTX immediately to resolve the issue and agree on corrective actions.

EVIDENCE

Compliance to the requirements in this document is communicated to RTX via test reports, Declaration Form or specification that provides declaration, depending on the nature of the part supplied. E.g., batteries will need appropriate test reports for safety and transport, while capacitors can be documented via declaration.

LEGAL REGULATIONS

The following legal regulations are considered:

1. RoHS

RoHS Substances Restrictions (Directive 2011/65/EU and Commission Delegated Directive 2015/863/EU) refers primarily to the latest listed substances according to the Restriction of Hazardous Substances (RoHS). RoHS regulations also exist in other countries like, but not limited to: China, Korea, India, Japan, Russia.

2. REACH

The EU REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) Regulation (EC) 1907/2006 addresses the use of chemical substances of very high concern (SVHC) and the substance list is updated every half year. All articles, materials and products put on the market shall comply to the latest version of the SVHC list. Products already put physically on the market are allowed without any actions, while products in production shall be compliant the day they are put physically on the market, even though the product has been produced in many years.

Substances in the SVHC list are not allowed in articles over 0.1% w/w unless the article and all upstream products are registered in the EU SCIP database.

3. POP Regulation (EU) 2019/1021

The POP Regulation (EU) 2019/1021 recast replacing (EC) No 850/2004 concerns persistent organic pollutants.

The short-chained chlorinated paraffins (SCCPs) substances contained in material should not exceed the limit as defined in the regulation: 0.15% w/w in articles – while other POP's typically have limits of 0.001% w/w or may be forbidden entirely. The list of POP's included in the EU regulation is [here](#).

SCCP's are typically used in metal working and PVC processing but are also used as plasticizers and as flame retardants - see section 10. POP's are regulated worldwide by the Stockholm Convention - [link](#) – POP list incl. wiki [here](#). The PFAS'es PFOS and PFOA are forbidden already under the POP and REACH regulations

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4. POP Regulation Annex A (Elimination)

Parties must take measures to eliminate the production and use of the chemicals listed under Annex A. Specific exemptions are available in Annex A and apply only to Parties that have registered for them.

<u>Aldrin</u> ●	<u>Chlordane</u> ●	<u>Chlordecone</u> ●
<u>Decabromodiphenyl ether (commercial mixture, c-decaBDE)</u> ▲	<u>Dechlorane Plus</u> ▲	<u>Dicofol</u> ●
<u>Dieldrin</u> ●	<u>Endrin</u> ●	<u>Heptachlor</u> ●
<u>Hexabromobiphenyl</u> ▲	<u>Hexabromocyclododecane (HBCDD)</u> ▲	<u>Hexabromodiphenyl ether and heptabromodiphenyl ether</u> ▲
<u>Hexachlorobenzene (HCB)</u> ●▲	<u>Hexachlorobutadiene</u> ▲	<u>Alpha hexachlorocyclohexane</u> ●
<u>Beta hexachlorocyclohexane</u> ●	<u>Lindane</u> ●	<u>Methoxychlor</u> ●
<u>Mirex</u> ●	<u>Pentachlorobenzene</u> ●▲■	<u>Pentachlorophenol and its salts and esters</u> ●
<u>Polychlorinated biphenyls (PCB)</u> ▲	<u>Polychlorinated naphthalenes</u> ▲■	<u>Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds</u> ▲
<u>Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds</u> ▲	<u>Short-chain chlorinated paraffins (SCCPs)</u> ▲	<u>Technical endosulfan and its related isomers</u> ●
<u>Tetrabromodiphenyl ether and pentabromodiphenyl ether</u> ▲	<u>Toxaphene</u> ●	<u>UV-328</u> ▲

● = Pesticide, ▲ = Industrial chemical, ■ = unintentional production

5. POP regulation Annex B (Restriction)

Parties must take measures to **restrict** the production and use of the chemicals listed under Annex B in light of any applicable acceptable purposes and/or specific exceptions listed in the Annex.

<u>Dichloro-diphenyl-trichloroethane (DDT)</u> ●	<u>Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF)</u> ●▲
● Dechlorane Plus	● UV-328

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● PFHxS, it's salts and PFHxS related compounds	●
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6. POP regulation Annex C (Unintentional production)

Parties must take measures to reduce the **unintentional releases** of chemicals listed under Annex C with the goal of continuing minimization and, where feasible, ultimate elimination.

[Hexachlorobenzene \(HCB\)](#) 
[Hexachlorobutadiene \(HCBD\)](#) 
[Pentachlorobenzene](#) 
[Polychlorinated biphenyls \(PCB\)](#) 

[Polychlorinated dibenzo-*p*-dioxins \(PCDD\)](#) 
[Polychlorinated dibenzofurans \(PCDF\)](#) 
[Polychlorinated naphthalenes](#) 

7. Proposition 65

Material should meet [the latest requirements for chemicals as specified by Proposition 65](#), which is the US California law and administered by Cal/EPA's California Office of Environmental Health Hazard Assessment (OEHHA)

There is no enforcement from OEHHA or other official side, but all claims are settled in court.

For electronic products the highest concern relates to substances contained in the outer surface parts of the products and especially Lead (Pb), Cadmium (Cd), Phthalates (DBP, BBP, DEHP, DnHP, DINP, DIDP) and flame retardants (see section 10).

8. TSCA

Persistent, Bioaccumulative and Toxic PBT chemicals under TSCA section 6(H)

- Decabromodiphenyl ether (DecaBDE)
- Phenol, isopropylated phosphate (3:1) (PIP (3:1))

On EPA website is [a summary of the uses, identified hazards, and risk management actions for each of the five PBT chemicals](#).

9. AfPS GS PAK, Category 2 on PAH substances

The GS mark is based on the German Product Safety Act (Produktsicherheitsgesetz, ProdSG). If a manufacturer meets these requirements, a GS test certificate is issued. Material should meet the latest requirements as specified in German Product Safety Commission (AfPS) GS Specification on testing and assessment of polycyclic aromatic hydrocarbons (PAHs) substances per Category 2. See list of PAH's in Annex III. Limit is (0.5mg/kg) for relevant materials in human skin contact.

PAH's are also restricted by entry 50 of [REACH Regulation Annex XVII](#), where restriction applies to rubber and plastic components.

10. Flame Retardants

Flame retardant chemicals are used in commercial and consumer products (such as furniture and building insulation) to meet flammability standards. Not all flame retardants present concerns, but the following types often do:

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- (1) halogenated flame retardants, also known as organo-halogen flame retardants that contain chlorine or bromine bonded to carbon and
- (2) organo-phosphorous flame retardants that contain phosphorous bonded to carbon.

Flame retardants are typically used in foams and plastics. A number of chemicals that have been used either as flame retardants, or to enhance the flame-retardant properties of other chemicals, are on the Proposition 65 list.

Some of these are:

- [Antimony trioxide](#)
- [Chlorinated tris \[tris\(1,3-dichloro-2-propyl\)phosphate, TDCPP, and TDCIPP\]](#)
- [Pentabromodiphenyl ether \(PentaBDE\) mixture \[DE-71 \(technical grade\)\]](#)
- [Tetrabromobisphenol A \(TBBPA\)](#)
- [Tris\(2-chloroethyl\) phosphate \(TCEP\)](#)

This means that a statement for a given component/article to be “Halogen free” in itself does not validate that the component/article is free of flame retardants, but only that it may be free of the restricted halogenated type of flame retardants. Still to consider is the restricted phosphorous flame retardants, Antimony and SCCP’s.

Material should meet the latest requirement as specified in IEC 61249-2-21 and as per below:

- Chlorine (CRF’s) $\leq$ 900 ppm
- Bromine (BFR’s) $\leq$ 900 ppm
- Total Chlorine + Bromine Halogens $\leq$ 1500 ppm
- Short Chain Chlorinated Paraffines (SCCP’s) in plastic materials $\leq$ 1500ppm
- Antimony trioxide in plastic materials $\leq$ 1000ppm
- Phenol, isopropylated phosphate (3:1) (PIP 3:1): no intentionally added content
- Flame retardant compounds of plastic resin should meet the latest requirements of [Sweden Tax Law \(2016: 1067\)](#).

11. PVC

In line with customers and other stakeholders in the electronics industry RTX is pursuing a phase out of the use of PVC (polyvinyl chloride or PVC copolymers) in consumer products newly put on the market. For 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.

12. VOC - Volatile Organic Compound

VOC’s are regulated in many countries worldwide e.g.:

- [EPA – US Environmental Protection Agency](#)
- China VOC – see std.: GB-38507-2020

VOC’s may be used in electronics products and their productions as part of paints, coatings, inks, adhesives, primers, and cleaners. VOC’s and their compounds are banned in articles and materials delivered to RTX as well as in RTX final products.

Some customers to RTX have formulated VOC restrictions based on the China VOC standard GB-38507-2020 specifying the permissible limits for printing ink. Limits can be found in table 11 in RTX RSL.

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EPA – US Environmental Protection Agency – has in 2025 restricted use of

- TCE (trichloroethylene) and
- PCE (Perchloroethylene)

13. MOSH/MOAH

MOSH (Mineral Oil Saturated Hydrocarbons) and MOAH (Mineral Oil Aromatic Hydrocarbons) are two components of mineral oil comprising a wide range of chemical compounds obtained mainly from petroleum distillation and refining. Regulations aim to minimize exposure by setting migration limits from packaging and other materials.

In France, the restrictions tighten. From 1st of January 2025 the limits become stricter:

- MOAH in printing inks must not exceed 0.1 % (down from 1 %)
- MOSH (C16–C35) in printing inks is also capped at 0.1 %.

MOSH/ MOAH restrictions and limits are outlined in table 4 in RTX RSL.

14. Carcinogens, BEK no. 2024/290 (Denmark)

This Executive Order (BEK no. 2024/290) sets measures to prevent risks from work involving carcinogenic, mutagenic or reprotoxic substances and materials. The supplier must ensure compliance with **limit values** as defined in related regulations (for chemical agents) and perform measurement programs where required.

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PRODUCT CONTENT RESTRICTIONS

15. TABLE 1: RoHS Substances Restrictions (Directive 2011/65/EU) in 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 RTX products on homogeneous material level in all regions. RTX enforces the limits worldwide.

TABLE 1

Substances*	Maximum Concentration Limit ppm (mg/kg)	Remarks
RoHS Substance restrictions (Directive 2011/65/EU) *		
Cadmium and Cadmium compounds** and *****	100	The restriction thresholds apply worldwide to all RTX products on homogeneous material level.
Hexavalent Chromium compounds**	1000	
Lead and Lead compounds** and *****	1000	
Mercury and Mercury compounds**	1000	
Polybrominated diphenyl ethers (PBDEs)***	1000	
Polybrominated biphenyls (PBBs)***	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), CAS 117-81-7	1000	The restriction thresholds apply worldwide to all RTX products on homogeneous material level.
Dibutyl phthalate; Di-n-butyl phthalate (DBP), CAS 84-74-2	1000	
Benzyl butyl phthalate; Butyl benzyl phthalate (BBP), CAS 85-68-7	1000	
Diisobutyl phthalate; Di-i-butyl phthalate (DiBP), CAS 84-69-5	1000	

*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 directive ([2006/66/EU](#)); see also Section 10.4), the European ELV directive ([2000/53/EC](#) and the amendment [2011/37/EU](#)). Heavy metal restrictions for batteries and packaging are given in Section 10.4 and 10.6, respectively.

** 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).

*** Polybrominated diphenylethers (PBDE) are the same as polybrominated biphenylethers (PBBE); polybrominated diphenyloxides (PBDO) are the same as polybrominated biphenyl oxides (PBBO).

**** 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, Medical Devices and Food Contact legislation. The restriction also applies to toys and childcare articles.

***** Note that some countries has stricter limit for some use cases: e.g. Korea has limits (75ppm for Cd and 300ppm for Pb) for earphone and headset products (applied only to the part that contacts the ear).

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**16. TABLE 2: REACH Article 67 (Annex XVII) Substance Restrictions in products and packaging
(Regulation (EC) 1907/2006)**

These substances are in line with the relevant restrictions as defined in Article 67 – referring to Annex XVII - of the EU REACH regulation. Unless otherwise stated, the maximum concentration limits apply on the homogeneous material level. RTX enforces the limits worldwide.

TABLE 2

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		
Asbestos (all types)	No intentionally added content	
Dibutyltin (DBT) compounds	1000	0.1% by weight of tin in a material, used as heat stabilizer.
Dimethylfumarate	0.1	Used as pesticides and biocides, e.g. in silica gel bags in packaging.
Tri-substituted organostannic compounds	1000	0.1% by weight of tin in a material, used as pesticides and biocides.
Tar oils and creosotes	No content permitted	In wood or wooden material as preservative.
Monomethyl dibromodiphenyl methane (DBBT)	No intentionally added content	Used as dielectrics.
Monomethyl dichlorodiphenyl methane (Ugilec 121 or Ugilec 21)	No intentionally added content	
Monomethyl tetrachlorodiphenyl methane (Ugilec 141)	No intentionally added content	
Polychlorinated terphenyls (PCTs)	No intentionally added content	
1,2,4-Trichlorobenzene	1000	Used as dielectrics, in any substance or preparation.
Sum of selected Phthalates Group 1 (DIBP, BBP, DBP, DEHP)	1000	In plasticized material.
Bisphenol A	200	In thermal paper.
Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs)	0.025	In any article, per 25 February 2023; REACH Annex XVII, entry 68.
Lead in PVC	1000	Lead shall not be placed on the market or used in articles produced from polymers or copolymers of vinyl chloride (PVC) with a concentration of

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		more than 0.1% by weight of the PVC material, effective November 29, 2024
Formaldehyde and formaldehyde-releasing substances	$\leq 0.062 \text{ mg/m}^3$ released from wood-based articles $\leq 0.080 \text{ mg/m}^3$ for other articles	Shall not be placed on the market in auricle, after 6 August 2026, per EU REACH article 67, entry 77. Medical devices in scope of Medical Device Regulation (EU)2017/745 are excluded from this restriction.
Additional restrictions which apply to parts that contain leather and textiles		
Diocetyl tin (DOT) compounds	1000	0.1% by weight of tin in a material
Aromatic amines (released from Azocolourants and azodyes) (see note ***** in section 10.6)	30	Restricted in textile and leather articles
Tris-(1-aziridinyl) 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		
Nickel and nickel alloys	0.5 $\mu\text{g}/\text{cm}^2/\text{week}$ Not intentionally added	Directive 2014/84/EU as well as REACH Regulation
Any individual PAH compound (<i>see Annex II</i>)	1	Plastic or rubber material coming to repetitive skin or oral cavity contact in consumer articles, See 9.5 and Annex II for additional requirements on PAH.

* 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.

17. TABLE 3: Substances in products and packaging prohibited under Stockholm Convention and/or regional POPs Regulation

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

TABLE 3

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Hexachlorobenzene (HCB)	10	In any article, EU POP Regulation.
Dechlorane plus	1 ppm	EU POP regulation as 1 ppm applicable after 30 months (1000 ppm during the first 30 months after entry into force (expected in August/September 2025)), exemptions for eg. medical imaging, replacement parts of articles. In other jurisdiction, the restriction may differ (e.g., Australia).

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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).
Polybrominated diphenyl ethers (PBDEs)	10 ppm (for the sum of PBDEs)	EU POP Regulation as 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, see Table 1). Threshold applies to the sum of the concentration of those substances. No intentionally added content due to Japan Chemical Substance Control Law
Perfluorooctanoic acid (PFOA), its salts and related compounds	0.025 (<1 mg/kg for sum of PFOA-related compound)	EU and Australian POP regulation
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 2016/293 on persistent organic pollutants ; use as flame-retardant.
Pentachlorophenol (PCP)	5 ppm	EU POP regulation 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 PCBs)	EU POP regulation as 0.2 ppm for the sum of PCBs (25 ppm if an article containing organic pigments or dyes); use as e.g. plasticizers, flame retardants and dielectrics.
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
Alkanes, C10-13, chloro (SCCP; Short chained chlorinated paraffins)	1500	EU POP 2015/2030 on persistent organic pollutants when applied in articles.

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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), their salts, and related compounds	No intentionally added content	Stockholm Convention

18. TABLE 4: Substances restricted or declarable by other legislation in products and packaging

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

TABLE 4

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		
Diisooctyl phthalate (CAS No. 27554-26-3)	0.1%	[France] On the 14th of September 2023, the Minister of Ecological Transition and Territorial Cohesion published Order of 30 August 2023 relating to the presence of dangerous substances in products generating waste. The listed substances are those 2 mentioned to the left:
1,3-benzenediol (resorcinol) (CAS No. 108-46-3)	0.1%	
Colecalciferol (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 (di-iso octyl phthalate)	Declarable	[France] Anti-Waste and Circular Economy Law 2020-105, 0.1% by weight in a mixture or article (for consumer products, used in 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; 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.

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Biocides	No intentionally added biocide	EU Biocidal Product Regulation; Medical devices are exempted.
Carbon Black - CAS: 1333-86-4	0.1%	Carcinogens, BEK no. 2024/290 (Denmark) Relates to handling in production. Not to use in final product.
Additional restrictions which apply to printing material**		
Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings	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). In scope also when product is discarded at homes.
Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms	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). In scope also when product is discarded at homes.
Additional requirements which apply to parts used in medical devices		
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	No intentionally added content	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
Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
Di-n-pentyl phthalate (DPENP)	1000	
Di-n-hexyl phthalate (DHEXP/DNHP)	1000	Applied in any material. US Consumer Product

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Dicyclohexyl phthalate (DCHP)	1000	Safety Improvement Act (CPSIA).
Diisononyl phthalate (DINP)	1000	
Tris(2-chloroethyl)phosphate (TCEP; CAS 115-96-8)	No content permitted*	
Tris(2-chloro-1-methylethyl) phosphate (TCPP; CAS 13674-84-5)		
Tris(1,3-dichloro-2-propyl)phosphate (TDCPP/TDCP; CAS 13674-87-8)		
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 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)

*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.

**Examples of printing material are stickers, labels, directions for use (DFU), warranty leaflets and other product and parts related documentation.

19. TABLE 5: Substance Legislative Restrictions in Batteries

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

TABLE 5

Substances	Maximum concentration limit ppm (mg/kg)	Remarks/Legislation
Cadmium and cadmium compounds	10	Chinese standard GB 24427-2021
Lead and lead compounds*	40	Chinese Standard GB 24427-2009
Mercury and mercury compounds	1	Chinese Standard GB 24427-2009
Perchlorates in all batteries	0.006	Labelling requirement in Californian regulation

*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 24427-2009 (Alkaline zinc manganese dioxide batteries) and the EU battery directive.

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20. TABLE 6: Substances restricted under TSCA in product and packaging

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

TABLE 6

Substances	Maximum concentration limit ppm (mg/kg) or as given in the Table	Particular use / Legislation
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)	Restricted for non-FDA regulated products	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.

21. TABLE 7: 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. RTX enforces these limits worldwide.

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. RTX 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 [Candidate List of substances of very high concern for Authorisation - ECHA](#) for the most recent list of candidate substances.

The use of an SVHC is allowed in concentration up to 0.1% w/w and only unless otherwise stated in any of the other Tables in the RSL. However, in exceptional cases, when the concentration on the article level is found to be above the limits stated here, it may be possible to obtain an exception grant by submitting exempt request to RTX Compliance Support. In such cases, declaration is obligatory. For definitions, such as "Article", please see the Annex 1.

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22. TABLE 8: California Proposition 65 substances (Prop65)

The limits are on homogeneous material level. RTX 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: [The Proposition 65 List - OEHHA](#)

For some substances OEHHA has offered a "safe harbor list" that sets a maximum limit of content of the substance. The limits are on homogeneous material level.

23. TABLE 9: Industry Restricted and declarable substances in products and product packaging

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

TABLE 9

Substances	Restricted or declarable	Maximum Concentration or declaration Limit ppm (mg/kg)
Restrictions for electrical and mechanical products in all applications		
Beryllium and Beryllium Compounds by weight of any material*	Declarable	1000
Brominated Flame Retardants (BFR) in printed wiring board laminate (other than PBBs, PBDEs and HBCDD); restriction/declaration threshold for total bromine concentration by weight in homogeneous material used in printed wiring laminates	Restricted in consumer products, declarable in medical devices	900
Brominated Flame Retardants (BFR) (other than PBBs, PBDEs and HBCDD) in any plastics parts; restriction/declaration threshold for total bromine concentration by weight in homogeneous material used in plastics		1000
Polyvinyl Chloride (PVC) and polyvinyl chloride copolymers in total chloride concentration by weight in homogeneous material**		1000
Chlorinated Flame Retardants in printed wiring board laminate; declaration threshold for total chlorine concentration by weight in homogeneous material used printed wiring laminates	Declarable	900

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Chlorinated Flame Retardants in any plastics parts; declaration threshold for total chlorine concentration by weight in homogeneous material used in plastics	Declarable	1000
Antimony trioxide in plastic materials;	Declarable	1000
Phthalates (<i>if not declared elsewhere in the RSL</i>)	See Annex III	1000
Rare Earth Minerals and Precious Metals***	Declarable	intentionally added content (the mass to be specified in mg per part)
Per and polyfluoroalkyl substances (PFAS)****	Restricted in BU MCC and declarable in other products.	No intentionally added content (Please check <i>remark 18</i> for restriction)
Substances of Concern	Declarable	EU legislation (e.g., CSRD ESRS, ESPR, PPWR)
Additional restrictions which apply to parts which come into contact with skin		
Aromatic amines (released from Azocolourants and azodyes)	Restricted	30
PAH compounds (German product safety requirement for consumer products)	Restricted	See Annex IV for limit values
Additional restrictions which apply to parts that contain leather and textiles		
Alkylphenol and alkylphenol ethoxylates*****	Restricted	100

* By making these substances declarable, RTX 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.

**In line with customers and other stakeholders in the electronics industry RTX is pursuing a phase out of the use of PVC (polyvinyl chloride or PVC copolymers) in consumer products newly put on the market. For 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.

*** Rare earth minerals and precious metals must be declared when intentionally added above 1 mg at product level as per the French AGECE 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.

**** Per and polyfluoroalkyl substances PFAS are already regulated for juvenile products (products used by children under 12 years old, except electronic products or any associated peripheral such as power supply unit), textiles and cleaning agents under the US State of California, Colorado, and Minnesota. 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.

***** 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.

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24. TABLE 10: Additional restrictions in Product-Packaging

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

TABLE 10

Legislative 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 directive
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	No content permitted	Applicable to all products and packaging; EU Single Use Plastics Directive, Western Australia Plan for Plastic
Mineral oil aromatic hydrocarbons (MOAH) containing 1-7 aromatic rings*	1000	Per 1 January 2023; mineral oils in ink on packaging for the public*; Article 112 of decree no.2020-105 (France)
Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms*	1000	Per 1 January 2025; mineral oils in ink on packaging for the public*; Article 112 of decree no.2020-105 (France)
Expanded polystyrene (EPS) and other polymeric foam materials (e.g, EPP, EPE, EVA)	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, nonrecyclable and incapable of entering a recycling channel, is prohibited.
Industry substances		
Polyvinyl chloride (PVC) and (P)VC copolymers	1000	
Polymeric foam materials inside any consumer product packaging	Not permitted	For example, PUR, EPP, EPE, EVA as shock absorber buffers enclosing the product, excluding thin foam sheets and foam bags.

* 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.

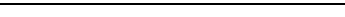
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25. TABLE 11: Limits for VOC (Volatile Organic Compounds)

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

TABLE 11

Ink Type	Application Type	VOC Limit (wt%)
Solvent-based ink	Gravure	≤75
	Flexographic	≤75
	Ink-jet	≤95
	Screen	≤75
Water-based ink	Gravure (absorbent printed material)	≤15
	Gravure (non-absorbent printed material)	≤30
	Flexographic ink (absorbent printed material)	≤5
	Flexographic ink (non-absorbent printed material)	≤25
	Ink-jet ink	≤30
	Screen ink	≤30
Offset ink	Sheet-fed offset ink	≤3
	Cold-set web-fed ink	≤3
	Heat-set web-fed ink	≤10
Energy curing ink	Offset ink	≤2
	Flexographic ink	≤5
	Screen ink	≤5
	Ink-jet ink	≤10
	Gravure ink	≤10
Intaglio ink		≤20

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ANNEX I - DEFINITIONS AND INTERPRETATION OF CERTAIN TERMS

1.1 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.

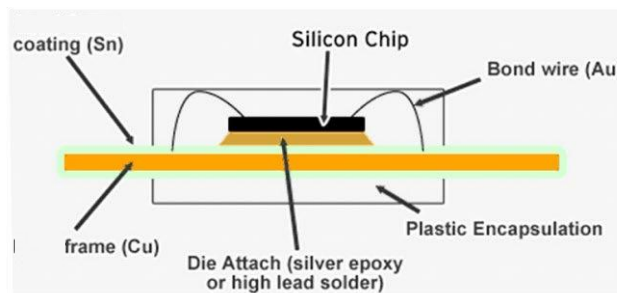


Figure 1: Material breakdown of an Integrated Circuit (IC) component

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.

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1.2 Other terms and definitions

The RTX Regulated Substances List 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. Annex XVII usually have a sunset date. The sunset date is the date after which the placing on the market and the use of a substance is prohibited unless an authorization is granted to the user. The total prohibition of a substance implies that none of its uses is authorized.
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. (Note: 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.)
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.
CLP	EU CLP Regulation 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures
CMR	CMR substances are substances that are carcinogenic, mutagenic, or toxic to reproduction.
Declarable substances	Declarable substances must be reported to RTX, if the threshold limits, as defined in the RSL, are exceeded. Declarable substances are not prohibited from use but are those which RTX 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 RTX 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 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.
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.

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Placing on the market	The moment a product is made available within the distribution chain in the designated market destination.
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 Environmental 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 (EU Directive 2015/863) restricts the use of specific hazardous materials found in electrical and electronic products (known as EEE). The RSL follows the EU RoHS requirements, being the most stringent worldwide.
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. Not to be mistaken with the restricted substances under the RoHS Directive 2002/95/EC. While RoHS only restricts substances present in electrical/electronic equipment (wiring, components, circuit boards, displays, sub-assemblies, cabling), REACH controls all chemicals that might be used to manufacture the product, including enclosures, brackets, coatings, paints, solvents, and chemicals used during manufacture.
Index number	List number allocated only for substances with an officially harmonized classification and labelling entry in Annex VI of the CLP regulation.
EU REACH	European Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (Regulation (EC) No 1907/2006)
TSCA	The <i>Toxic Substance Control Act</i> , a chemical control law in the United States under the authority of the Environmental Protection Administration (EPA).

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ANNEX II — SUMMARY TABLE OF PHTHALATE RESTRICTIONS

Chemical Substance Name	Abbreviation	CAS No.	EU RoHS restricted since 2019	Restriction REACH (1)	Proposition 65 declarable	Declaration as industry substance	REACH declarable
			RSL Table 1	RSL Table 2	RSL Table 8	RSL Table 9	RSL Table 7
Bis (2-ethylhexyl)phthalate ; Di (2-ethylhexyl) phthalate	DEHP	117-81-7	X	X	X	X	X (4)
Dibutyl phthalate ; Di-n-butyl phthalate	DBP	84-74-2	X	X	X	X	X (4)
Benzyl butyl phthalate ; Butyl benzyl phthalate	BBP	85-68-7	X	X	X	X	X (4)
Diisobutyl phthalate ; Di-i-butyl phthalate	DIBP	84-69-5	X			X	X (4)
Di-isononyl phthalate ; Diisononyl phthalate	DINP	28553-12-0; 68515-48-0		X	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	
Diisooctyl phthalate	DIOP	27554-26-3				France Dangerous Substances List	
Di-n-hexyl phthalate	DHEXP/ DNHP	84-75-3			X	X	X
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters	DIHP	71888-89-6				X	X
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear	DHNUP	68515-42-4				X	X
Bis(2-methoxyethyl) phthalate	DMEP	117-82-8				X	X
N-pentyl-isopentylphthalate	-	77629769-9				X	X
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear		84777-06-0				X	X
Di-n-pentyl phthalate	DPENP/ DPP	131-18-0				X	X
Diisopentylphthalate	-	605-50-5				X	X
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	-	68515-50-4				X	X
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters ; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl		68515-51-5 or 68648-93-1				X	X

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diesters with ≥ 0.3% of dihexyl phthalate							
Dicyclohexyl phthalate	DCHP	84-61-7				X	X

1) REACH Restriction under Annex XVII: 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.

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ANNEX III – DETAILED REQUIREMENTS FOR CONSUMER PRODUCT SKIN CONTACT PARTS FOR PAH COMPOUNDS IN GERMANY AND EU.

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 longterm 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 shortterm 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	

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ANNEX IV – REVISION HISTORY AND SHORT EXPLANATION

REVISION	DATE	CHANGES DESCRIPTION	INITIATOR	ECR
A	Jul 09, 2020	Initial Release	EHS	
B	2021-05-14	Renaming and restructuring document. Expanding to include restricted substance list and their limits.	TRI	
C and D		Editorials	TRI	
E	2021-10-05	Reordering and editorials	TRI/ EPE	
F	2023-01-25	Updates and editorials	TRI	
H	2025-10-7	New sections and tables added, updates and editorials	KDS	

Date Revision	Short Explanation
Jan 2023 Revision F	- Version F - 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.1010105 changed to: <i>Mineral oil aromatic hydrocarbons (MOAH) and Mineral oil saturated hydrocarbon (MOSH) consisting of 16-35 carbon atoms [...]n 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> - 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 5.2: 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 - Table 2: Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms (PFCAs) restriction added as per REACH Article 67 Annex XVII, 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

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Version G	- Added Antimony and Antimony Trioxide (no safe harbour level) to Proposition 65 - Added max level for lead and phthalates to Proposition 65 - Added max level for Bisphenol A to Proposition 65 - Added complete POP list including 3 POPs not yet ratified by EU (but ratified by Japan) 2023-10-23 - Added 2 substances to section 10.3 as declared by France (Diisooctyl phthalate and 1,3-benzenediol (resorcinol)) - In section 18 specified when (and how) exception for REACH SVHC limit can be granted - In section 19 specified when (and how) exception for P65 limit can be granted - Added Dechlorane Plus, UV328 and PFHxS to POP section - Added Dimethyl hydrogen phosphite to Proposition 65 section - Added Diisooctyl phthalate to Annex II
Version H (September 2025)	- Added Specific restrictions for HBCDD under POP regulation section 6 - Added EPA – US Environmental Protection Agency restatements for TCE and PCE - Section 16 – REACH Article 67: new restrictions added reg. Formaldehyde and formaldehyde-releasing substances after 6 August, 2026 - Section 8, TSCA: The following substances are removed: 2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP), Hexachlorobutadiene (HCBD), Pentachlorothiophenol (PCTP) - Section 23, Additional restrictions in Product-Packaging: several editorials - New table added: Table 11 – Limits for VOC - New table added: Table 3 – Substances in product and packaging prohibited under Stockholm Convention - New table added: Table 6 – TSCA