



List of Regulated Substances for Childcare Products

The following definitions provide the scope for this List of Regulated Substances for Childcare Products

Childcare Product: “Any product designed or obviously intended to safely ensure and facilitate seating, relaxing, bathing, changing and general body care, feeding, sleeping, transportation (including car seats and child restraint systems) and protection for young children. The main focus is for products intended for children up to 4 years old. Exclusions include: toys, cosmetics, apparel (clothing and shoes), medical devices, biocidal products, household appliances, diapers.

Regulation: A national regulation which regulates substances which can be present at detectable levels in childcare articles, including regulations which are established at the federal or state level in the US and Canada, or at the EU or member state level in Europe, or which has a significant impact on the global market place. Exclusions include: packaging and waste regulations, food contact regulations, toys regulations

1. EU Restriction of Certain Hazardous Substances (RoHS) Directive 2011/65/EU

http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm

The RoHS substance restrictions apply to every individual homogenous material in electrical and electronic equipment. This list of RoHS substances is aligned with the IPC 1752A Materials Declaration Standard substance category list EUROHS-0508.

Appendix A provides the list of substance applications which are exempt from the RoHS substance restrictions for certain time periods, as published in Annex III of the RoHS Directive 2011/65/EU. This list of exemptions is aligned with the IPC 1752A Materials Declaration Standard list EL2011/534/EU.

Substance group	Maximum concentration of the substance in any individual homogenous material in the part
Cadmium/cadmium compounds	0.01% by weight (100 ppm) of homogeneous materials
Hexavalent Chromium compounds	0.1% by weight (1 000 ppm) of homogeneous materials
Lead/lead compounds	0.1% by weight (1 000 ppm) of homogeneous materials
Mercury/mercury compounds	0.1% by weight (1 000 ppm) of homogeneous materials
PBBs	0.1% by weight (1 000 ppm) of homogeneous materials
PBDEs	0.1% by weight (1 000 ppm) of homogeneous materials

2. Upcoming EU RoHS substance restrictions Delegated Directive 2015/863

On 4 June 2015 the European Commission published Delegated Directive 2015/863 which added four new substances and maximum concentration values in homogenous materials to Annex II of the RoHS Directive. Electrical and electronic equipment must comply with these additional substance restrictions by 22 July 2019, except for Medical Devices (Cat. 8) and Monitoring and Control Instruments (Cat. 9) which must comply with these additional substance restrictions by 22 July 2021. This list of upcoming RoHS substance restrictions is aligned with the IPC 1752A Materials Declaration Standard substance category list EUROHS-1506.

Substance group	Maximum concentration of the substance in any individual homogenous material in the part
Bis(2-ethylhexyl) phthalate (DEHP)	0.1% by weight (1 000 ppm) of homogeneous materials
Butyl benzyl phthalate (BBP)	0.1% by weight (1 000 ppm) of homogeneous materials
Dibutyl phthalate (DBP)	0.1% by weight (1 000 ppm) of homogeneous materials
Diisobutyl phthalate (DIBP)	0.1% by weight (1 000 ppm) of homogeneous materials

3. EU Registration Evaluation Authorisation and Restriction of Chemicals (REACH) Regulation 1907/2006 (as amended)

3.1. REACH Candidate List substances which may be found in articles in childcare products, mechanical products and electrical products

REACH Article 33 requires all suppliers to inform their customers if the product they supply includes any article which contains any of the substances in the Candidate List in concentrations > 0.1% w/w of the article. A supplier may also have obligations to inform ECHA about Candidate List substances in articles under REACH Article 7.2. Manufacturers and suppliers of substances and mixtures may have additional obligations for Candidate List substances which are listed under REACH Annex XIV. An article is any item which has a special shape, surface or design which determines its function to a greater degree than its chemical composition (e.g. a screw, tape, label). Please note that this definition of an article may apply to individual components in your product. For further guidance on what is considered an article under the REACH Regulation please refer to the ECHA Guidance published at https://echa.europa.eu/documents/10162/23036412/articles_en.pdf

There are 191 Substances of Very High Concern (SVHCs) on the current REACH Candidate List published 27 June 2018 at http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp. The IEC 62474 standard and BOMcheck Substance List Working Group have determined that 102 of these SVHCs are not normally found in concentrations > 0.1% w/w in materials or parts supplied for use in childcare products, mechanical products or electrical products <https://www.bomcheck.net/reach/reach-article-33-substance-declarations>. If parts and materials are manufactured using conventional industry processes, then the supplier can rely on the BOMcheck guidance and screen out these 102 SVHCs. If any parts or materials are manufactured in a very unusual way (for example, using a secret process or unique ingredients) then the supplier must address each of the 191 SVHCs individually.

The list of 89 REACH Candidate List substances which may be found in in childcare products, mechanical products or electrical products is provided in Appendix B. This list is aligned with the IPC 1752A Materials Declaration Standard substance category list EUREACH-0618.

3.2. REACH substance restrictions applicable to childcare products, mechanical products or electrical products

REACH Article 67 contains over 65 different substance restrictions, <https://echa.europa.eu/substances-restricted-under-reach>. However, many of these restrictions are not relevant to childcare products, mechanical products or electrical products. Restrictions which are relevant to childcare products, mechanical products or electrical products are included in the table below. Appendix C provides the list of aromatic amines which may be released from azodyes which are restricted under REACH Annex XVII entry 43. Appendix D provides the list of polycyclic-aromatic hydrocarbons (PAH) which are restricted under REACH Annex XVII entry 50.

REACH restricted substance	Limit	REACH Annex XVII entry
Cadmium and cadmium compounds	0.01% by weight (100 ppm) of any article	23
Lead and lead compounds	0.05% by weight (500 ppm) of any article	63
Asbestos	No intentionally added content	06
Perfluorooctanoic acid and its salts	0.000025% by weight (25 ppb) of any article	68
Flame retardants		

Diphenylether, octabromo derivative	0.1% by weight (1 000 ppm) of any article	45
Bis(pentabromophenyl)ether	0.1% by weight (1 000 ppm) of any article	67
Polybromobiphenyls, Polybrominatedbiphenyls (PBB)	No intentionally added content	08
Heat stabilisers		
Dibutyltin (DBT) compounds	0.1% by weight of tin in a material	20
Dielectrics		
Monomethyl dibromodiphenyl methane	No intentionally added content	26
Monomethyl dichlorodiphenyl methane	No intentionally added content	25
Monomethyl tetrachlorodiphenyl methane	No intentionally added content	24
Polychlorinated terphenyls (PCTs)	0.005% (50 ppm)	01
1,2,4 Trichlorobenzene	Concentration must be < 0.1% w/w	49
Biocides and pesticides		
Dimethyl Fumarate	0.00001% (0.1 ppm) w/w	61
Tri-substituted organostannic compounds	0.1 % by weight of tin in a material	20
Tar oils and creosotes	No content permitted in wood	31
Restrictions which apply to childcare products		
Diocetyl tin (DOT) compounds	0.1% by weight of tin in a material	20
Selected Phthalates Group 1 (BBP, DBP, DEHP)	0.1% w/w of plasticised material when used in toys and childcare articles	51
Selected Phthalates Group 2 (DIDP, DINP, DNOP)	0.1% w/w of plasticised material when used in toys and childcare articles which can be placed in the mouth	52
Any individual PAH compound – toys and childcare articles	0.00005% by weight (0.5 ppm) in plastic or rubber material in toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact	50
Restrictions which apply to parts containing leather or textiles		
Chromium VI compounds	0.0003% by weight (3 ppm) of leather article	47
Diocetyl tin (DOT) compounds	0.1% by weight of tin in a material	20
Azocolourants and azodyes which form certain aromatic amines	Not permitted in textile and leather articles which may come into direct and prolonged contact with skin	43
Tri (2,3-dibromo-propyl) phosphate	Not permitted in textile articles which may come into contact with skin	04
Tris (aziridinyl) phosphin oxide	Not permitted in textile articles which may come into contact with skin	07

Nonylphenol and nonylphenol ethoxylates	Concentration must be < 0.01% w/w from February 2021	46a
Restrictions which apply to parts which come into contact with skin		
Nickel and nickel alloys	Must not be used in applications with direct and prolonged skin contact and where the rate of nickel release is > 0.5 micro gms per cm ² per week	27

4. EU Persistent Organic Pollutants (POPs) Regulation No 850/2004 (as amended)

Persistent organic pollutants, known as POPs, are organic compounds that break down very slowly and, as a result, bioaccumulate in food chains. The POPs regulation grew out of a report published by the United Nations Environment Programme in May 1995 which was adopted and put into practice at the Stockholm Convention in 2001 and has now been ratified by 179 countries around the world. The EU published the POPs Regulation 850/2004 in 2004.

Today the POPs regulation contains 24 different substance restrictions. However, many of these restrictions are not relevant to childcare products, mechanical products or electrical products. Restrictions which are relevant to childcare products, mechanical products or electrical products are included in the table below.

POPs restricted substance	Limit
Protective coatings which are resistant to water, oils, etc	
Perfluorooctane Sulfonates (PFOS)	0.1% (1 000 ppm) by weight in a material
Flame retardants	
HBCDD (Hexabromocyclododecane)	0.01% (100 ppm) by weight in a material
Shortchain chlorinated paraffins (C10 – C13)	0.15% (1 500 ppm) by weight in a material
Tetrabromodiphenyl ether	0.001% (10 ppm) by weight in a material
Pentabromodiphenyl ether	0.001% (10 ppm) by weight in a material
Hexabromodiphenyl ether	0.001% (10 ppm) by weight in a material
Heptabromodiphenyl ether	0.001% (10 ppm) by weight in a material
Plasticisers, flame retardants and dielectrics	
Polychlorinated biphenyls (PCBs)	No intentionally added content
Polychloronaphthalenes	No intentionally added content

5. Substance regulations in North America

5.1. California Proposition 65

In 1986, California voters approved Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act, to address their growing concerns about exposure to toxic chemicals. The law requires California to publish a list of chemicals known to cause cancer or reproductive toxicity, and for businesses with 10 or more employees to provide warnings when they knowingly and intentionally cause significant exposures to listed chemicals.

The list currently includes more than 900 chemicals. Proposition 65 does not ban the use of chemicals on the list. The warnings are intended to help Californians make informed decisions about their exposures to these chemicals from the products they use.

Dr Paul Goodman at RINA Consulting carried out a screening of the 900 plus substances on the Proposition 65 list and identified 105 that may be relevant to component parts of mechanical or electrical products (in other words, any component of a manufactured product which is not defined as a substance or preparation (mixture) under the REACH regulation). Dr Goodman's screening shows that 39 of these substances do not require "safe harbour" warnings. This leaves 66 substances which may be found in component parts of mechanical or electrical products and may require "safe harbour" warnings.

BOMcheck's assessment of Dr Goodman's screening has identified that 29 of these 66 substances are already regulated under RoHS, REACH substance restrictions, POPs regulation or REACH Candidate List. In other words, if supplier parts are already compliant to the RoHS, REACH substance restrictions, POPs regulation and REACH Candidate List then there are only 37 new substances that suppliers need to assess for Proposition 65. This detailed screening assessment reduces the time and cost for Proposition 65 compliance by 97%.

If the finished product includes a supplier part which contains Proposition 65 substance(s) then you need to assess whether the user could be exposed to the part during normal use of the product. If yes, then you should provide an appropriate "safe harbour" warning and communicate the name of one Proposition 65 substance for each endpoint (for example, one carcinogen of the Proposition 65 substance(s) are listed for cancer).

Proposition 65 substances which can normally be found in hardware articles	Limit
Lead and Lead Compounds	0.009% (90 ppm) of any material
Phthalate plasticisers	
Diisononyl phthalate (DiNP)	No intentionally added content
Di-isodecyl phthalate (DIDP)	No intentionally added content
Di-n-hexyl phthalate (DnHP)	No intentionally added content
Flame retardants and phthalate plasticisers	
Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP)	0.0025% by weight (25 ppm) of any material
Tris(2-chloroethyl) Phosphate	0.0025% by weight (25 ppm) of any material
Tris(2,3-dibromopropyl)phosphate	0.0025% by weight (25 ppm) of any material
Flame retardants	
Antimony Oxide (Antimony trioxide)	0.1% by weight (1 000 ppm) of any material
Tetrabromobisphenol A	0.1% by weight (1 000 ppm) of any material
2,2-Bis(bromomethyl)-1,3-propanediol	0.1% by weight (1 000 ppm) of any material
Mirex	0.1% by weight (1 000 ppm) of any material
UV protection agents	
Benzophenone	0.1% by weight (1 000 ppm) of any material
Colourants	
Benzidine-based Dyes	0.1% by weight (1 000 ppm) of any material
3,3'-Dimethoxybenzidine-based dyes metabolized to 3,3'-dimethoxybenzidine	0.1% by weight (1 000 ppm) of any material
3,3'-Dimethylbenzidine-based dyes metabolized to 3,3'-dimethylbenzidine	0.1% by weight (1 000 ppm) of any material
D&C Orange No. 17	0.1% by weight (1 000 ppm) of any material
1-Amino-2,4-dibromoanthraquinone	0.1% by weight (1 000 ppm) of any material
1-Amino-2-methylantraquinone	0.1% by weight (1 000 ppm) of any material
Direct Blue 6 (Technical Grade)	0.1% by weight (1 000 ppm) of any material
Direct Brown 95 (Technical Grade)	0.1% by weight (1 000 ppm) of any material
Disperse Blue 1	0.1% by weight (1 000 ppm) of any material
Impurities in extender oils and black colourants	
Naphthalene	0.0001% by weight (1 ppm) of any material
Proposition 65 substances which are already restricted under REACH Article 67 at appropriate limits	
Any individual PAH compound	0.0001% by weight (1 ppm) in plastic or rubber material that come into direct, prolonged or repetitive skin or oral cavity contact
Asbestos	No intentionally added content

Azocolourants and azodyes which form certain aromatic amines	Not permitted in textile and leather articles which may come into direct and prolonged contact with skin
Perfluorooctanoic acid and its salts	0.0000025% by weight (25ppb) of any article
Nickel and nickel alloys	Must not be used in applications with direct and prolonged skin contact and where the rate of nickel release is > 0.5 micro gms per cm ² per week
Tar oils and creosotes	No content permitted in wood and wooden materials
Proposition 65 substances which are already restricted under the RoHS Directive at appropriate limits	
Cadmium/cadmium compounds	0.01% by weight (100 ppm) of homogeneous materials
Mercury/Mercury compounds	0.1% by weight (1 000 ppm) of homogenous materials
PBBs	0.1% by weight (1 000 ppm) of homogenous materials
PBDEs	0.1% by weight (1 000 ppm) of homogenous materials
Proposition 65 substances which are already declarable under REACH Article 33 at appropriate limits	
4,4'-isopropylidenediphenol [Bisphenol A; BPA]	0.1% by weight (1 000 ppm) of any article
DEHP (Di(2-ethylhexyl) phthalate)	0.1% by weight (1 000 ppm) of any article
DBP (Dibutyl phthalate)	0.1% by weight (1 000 ppm) of any article
BBP (Benzylbutyl phthalate)	0.1% by weight (1 000 ppm) of any article
SCCP (Short-chained chlorinated paraffins)	0.1% by weight (1 000 ppm) of any article
Direct Black 38 (Technical Grade)	0.1% by weight (1 000 ppm) of any article
4-Aminoazobenzene	0.1% by weight (1 000 ppm) of any article
Proposition 65 substances which are already restricted under Persistent Organic Pollutants Regulation at appropriate limits	
PFOS (Perfluorooctane Sulfonates)	0.1% by weight (1 000 ppm) of any material

5.2. Other substance regulations in North America

The US Consumer Product Safety Improvement Act was signed on 14 August 2008 and imposes new substance restrictions and new testing and documentation requirements. The Act is targeted mostly towards "children's products", which are defined as any consumer product designed or intended primarily for children 12 years of age or younger. Other substance regulations have been implemented in Canada (Canadian Prohibition of Certain Toxic Substances Regulations of 2012, Canada Consumer Product Safety Act amended 2014) and in certain US States including California (Safer Consumer Products Regulation of 2014), Maryland (House Bill 229 of 2014, House Bill 99 of 2013), Vermont (Senate Bill 81 of 2013), New York (Law A06195 of 2013, Law A4741/S3703-B of 2015) and Minnesota (Chapter 325F of 2017).

Restricted substances	Limit
US Consumer Product Safety Improvement Act restrictions applicable to childcare products	
Lead/lead compounds in consumer products designed or intended primarily for children 12 years of age	0.01% by weight (100 ppm) in accessible parts in toys and childcare articles
Lead/lead compounds in paint and similar surface coatings of toys and other articles intended to be used by children	0.009% by weight (90 ppm) in paint in toys and childcare articles
DEHP, DBP, BBP, DINP, DIBP, DPENP, DHEXP or DCHP	0.1% by weight (1 000 ppm) of any phthalate
Other regulatory requirements in North America applicable to childcare products	
Tris (2-chloroethyl) phosphate (TCEP)	No content permitted
Tris(2-chloro-1-methylethyl) phosphate (TCPP)	No content permitted
Tris (1,3-dichloro-2-propyl) phosphate (TDCPP)	No content permitted
Bisphenol A	No content permitted
Formaldehyde	No content permitted
Decabromodiphenyl ether	0.1% by weight (1 000 ppm)
Hexabromocyclododecane	0.1% by weight (1 000 ppm)
Lead	0.004% by weight (40 ppm)
Cadmium	0.004% by weight (40 ppm)

6. Other substances which are restricted or declarable by other legislation around the world

Other legislation around the world which regulates substances includes Austria (Chemicals Prohibition Ordinance), Chili (Ministry of Health Decree No. 135/04 restricting the use of toluene in Toys and Children's articles), Denmark (Chemical Substances and Products Act), EU (Regulation 528/2012 on Biocidal Products, Regulation 2037/2000 on Ozone Depleting Substances, Regulation 517/2014 on fluorinated greenhouse gases, Directive 96/29/Euratom), Germany (Regulation on the Prohibition of Chemicals [ChemVerbotsV]), Japan (Law Concerning Prevention from Radiation Hazards), Korea (Special Act on Safety Managements of Children's Products – Enactment of Common Safety Standards of Children's Products, Supplier's Declaration of Conformity Act Annex 1 – Leather Products and Annex 15 – Textile Products), Netherlands (Commodities Act on Pentachlorophenol) and Norway (Product Control Regulations). Appendix E provides the list of allergenic disperse dyes which are prohibited in childcare products in Korea above 50 mg/kg (each).

Substances which can normally be found in hardware articles	Limit	Reference
Pentachlorophenol (PCP)	No intentionally added content	Netherlands Commodities Act on Pentachlorophenol
Polychlorinated and polybrominated dioxins and furans	No intentionally added content	Germany Regulation on the Prohibition of Chemicals [ChemVerbotsV]

Radioactive substances	No intentionally added content	Japan Law Concerning Prevention from Radiation Hazards
Biocides	No intentionally added biocides	EU Biocidal Products Regulation
Mercury and mercury compounds	0.001% by weight (10 ppm)	Norway Product Control Regulations
Restrictions which apply to childcare products		
Allergenic disperse dyes	No intentionally added content	Korea Special Act on Safety Managements of Children's Products
Toluene	0.017% by weight (170 ppm)	Chili Ministry of Health Decree No. 135/04 restricting the use of toluene in Toys and Children's articles
Bisphenol A in soothers	No content permitted	France Law No. 2016-41
Sum of all phthalates	0.05% by weight (500 ppm)	Denmark Order No. 855

7. Batteries substance restrictions

The following restrictions apply to all types of batteries.

Substances	Maximum concentration in the battery
Cadmium/cadmium compounds	0.001 % by weight (10 ppm) of battery
Mercury/mercury compounds	0.0001% by weight (1 ppm) of battery
Lead/lead compounds	0.004% by weight (40 ppm) of battery
Perchlorates	0.0000006% by weight (6 ppb) of battery

8. Laboratory testing for EN 71-3: Specification for migration of certain elements

European Standard EN 71-3: Specification for migration of certain elements, is the recognized standard prescribed by the Toy Safety Directive for laboratory testing of toys. Laboratory testing for product compliance with EN 71-3 is also required by many safety standards for accessible parts of childcare products.

EN 71-3 specifies laboratory testing requirements to demonstrate that migration limits are not exceeded. Supplier material declarations can't be used to demonstrate compliance to EN 71-3 requirements. Although companies do not ask suppliers to provide materials declarations for substances listed in EN 71-3, the laboratory test requirements for EN 71-3 are listed here for completeness.

8.1. Laboratory testing for soluble Heavy Metal Migration specified in EN 71-3:1994 and ASTM F963

Element	Laboratory Test Migration Limit (mg/kg)
Antimony	60
Arsenic	25
Barium	1000
Cadmium	75
Chromium	60
Lead	90
Mercury	60
Selenium	500

8.2. Laboratory testing for Heavy Metal Migration specified in EN 71-3:2013

Element	Laboratory Test Migration Limit (mg/kg) – Category III
Aluminum	70,000
Antimony	560
Arsenic	47
Barium	18,750
Boron	15,000
Cadmium	17
Chromium(III)	460
Chromium(VI)	0.053
Cobalt	130
Copper	7,700
Lead	23
Manganese	15,000
Mercury	94
Nickel	930
Selenium	460
Strontium	56,000
Tin	180,000
Organic Tin	12
Zinc	46,000

Appendix A: Exemptions to the RoHS Directive (2011/65/EU), as published in Commission Decision 2010/571/EU of 24 September 2010, which are still valid as at June 2018.

This list of substance applications are exempt from the RoHS substance restrictions for certain time periods, as published in Annex III of the RoHS Directive 2011/65/EU. This list of exemptions is aligned with the IPC 1752A Materials Declaration Standard list EL2011/534/EU.

Identity	Description	Validity dates	Applicable product categories	Delegated Directive
1(a)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes less than 30 W: 2.5 mg	Expired on 31 December 2011; 3.5 mg may be used per burner after 31 December 2011 until 31 December 2012; 2.5 mg shall be used per burner after 31 December 2012	All	
1(b)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes greater than or equal to 30 W and less than 50 W; 3.5 mg	Expired on 31 December 2011; 3.5 mg may be used per burner after 31 December 2011	All	
1(c)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes greater than or equal to 50 W and less than 150 W; 5 mg		All	
1(d)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes greater than or equal to 150 W; 15 mg		All	
1(e)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes with circular or square structural shape and tube diameter less than or equal to 17 mm: 7 mg	No limitation of use until 31 December 2011; 7 mg may be used per burner after 31 December 2011	All	
1(f)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For special purposes: 5 mg		All	
1(g)	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For general lighting purposes less than 30 W with a lifetime equal or above 20,000 h: 3.5 mg	Expires on 31 December 2017	All	
2(a)(1)	Mercury in double-capped linear fluorescent lamps for generation lighting purposes not exceeding (per lamp):Tri-band phosphor with normal lifetime and a tube diameter less than 9 mm (e.g. T2): 4 mg	Expired on 31 December 2011; 4 mg may be used per lamp after 31 December 2011	All	
2(a)(2)	Mercury in double-capped linear fluorescent lamps for generation lighting purposes not exceeding (per lamp):Tri-band phosphor with normal lifetime and a tube diameter greater than or equal to 9 mm and less than or equal to 17 mm (e.g. T5): 3 mg	Expired on 31 December 2011; 3 mg may be used per lamp after 31 December 2011	All	
2(a)(3)	Mercury in double-capped linear fluorescent lamps for generation lighting purposes not exceeding (per lamp):Tri-band phosphor with normal lifetime and a tube diameter greater than 17 mm and less than or equal to 28 mm (e.g. T8): 3.5 mg	Expired on 31 December 2011; 3.5 mg may be used per lamp after 31 December 2011	All	
2(a)(4)	Mercury in double-capped linear fluorescent lamps for generation	Expired on 31 December 2012; 3.5	All	

	lighting purposes not exceeding (per lamp):Tri-band phosphor with normal lifetime and a tube diameter greater than 28 mm (e.g. T12): 3.5 mg	mg may be used per lamp after 31 December 2012		
2(a)(5)	Mercury in double-capped linear fluorescent lamps for generation lighting purposes not exceeding (per lamp):Tri-band phosphor with long lifetime (greater than or equal to 25,000 h): 5 mg	Expired on 31 December 2011; 5 mg may be used per lamp after 31 December 2011	All	
2(b)(1)	Mercury in other fluorescent lamps not exceeding (per lamp):Linear halophosphate lamps with tube greater than 28 mm (e.g. T10 and T12): 10 mg	Expired on 13 April 2012	All	
2(b)(2)	Mercury in other fluorescent lamps not exceeding (per lamp):Non-linear halophosphate lamps (all diameters): 15 mg	Expired on 13 April 2016	All	
2(b)(3)	Mercury in other fluorescent lamps not exceeding (per lamp):Non-linear tri-band phosphor lamps with tube diameter greater than 17 mm (e.g. T9): 15 mg	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011	All	
2(b)(4)	Mercury in other fluorescent lamps not exceeding (per lamp):Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011	All	
3(a)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Short length (less than or equal to 500 mm): 3.5 mg	No limitation of use until 31 December 2011; 3.5 mg may be used per lamp after 31 December 2011	All	
3(b)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Medium length (greater than 500 mm and less than or equal to 1,500 mm): 5 mg	No limitation of use until 31 December 2011; 5 mg may be used per lamp after 31 December 2011	All	
3(c)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp): Long length (greater than 1,500 mm): 13 mg	No limitation of use until 31 December 2011; 13 mg may be used per lamp after 31 December 2011	All	
4(a)	Mercury in other low pressure discharge lamps (per lamp): 15 mg	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011	All	
4(b)-I	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra greater than 60: P less than or equal to 155 W: 30 mg	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011	All	
4(b)-II	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra greater than 60: P greater than 155 W and less than or equal to 405 W: 40 mg	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011	All	
4(b)-III	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra greater than 60: P greater than 405 W: 40 mg	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011	All	
4(c)-I	Mercury in High Pressure Sodium (vapour) lamps for general lighting	No limitation of use until 31 December	All	

	purposes not exceeding (per burner): P less than or equal to 155 W: 25 mg	2011; 25 mg may be used per burner after 31 December 2011		
4(c)-II	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): P greater than 155 W and less than or equal to 405 W: 30 mg	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011	All	
4(c)-III	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): P greater than 405 W: 40 mg	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011	All	
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expired on 13 April 2015	All	
4(e)	Mercury in metal halide lamps (MH)		All	
4(f)	Mercury in other discharge lamps for special purposes not specially mentioned in this Annex		All	
4(g)	Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (a) 20 mg per electrode pair + 0.3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 °C; (b) 15 mg per electrode pair + 0.24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.	Expires on 31 December 2018	All	
5(a)	Lead in glass of cathode ray tubes		All	
5(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight		All	
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight	Expires 1 July 2019 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2018/741
		Expires 21 July 2021 for Categories 8, 9 and 11	8, 9 and 11	
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0.35% lead by weight and in batch hot dip galvanized steel components containing up to 0.2% lead by weight	Expires 21 July 2021 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2018/741
6(b)	Lead as an alloying element in aluminium containing up to 0.4% lead by weight	Expires 1 July 2019 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2018/740
		Expires 21 July 2021 for Categories 8, 9 and 11	8, 9 and 11	
6(b)-I	Lead as an alloying element in aluminium containing up to 0.4% lead by weight, provided it stems from lead-bearing aluminium scrap recycling	Expires 21 July 2021 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2018/740
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content of up to 0.4% lead by weight	Expires 18 May 2021 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2018/740
6(c)	Copper alloy containing up to 4% lead by weight	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all	All	Delegated Directive (EU) 2018/741

		other categories and subcategories		
7(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories	All	Delegated Directive (EU) 2018/742
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	Expires on 21 July 2016 for categories 1 to 7 and 10	All	
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories	All	Delegated Directive (EU) 2018/736
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher		All	
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expired on 1 January 2013	All	
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors	Expires on 21 July 2016	All	
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expired on 1 January 2012	All	
8(b)	Cadmium and its compounds in electrical contacts		All	
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution		All	
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Expires 5 July 2018 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2017/1010
		Expires 21 July 2021 for Categories 8, 9 and 11	8, 9 and 11	
9(b)-(I)	Lead in bearing shells and bushes for refrigerant- containing hermetic scroll compressors with a stated electrical power input equal or below 9 kW for heating, ventilation, air conditioning and refrigeration (HVACR) applications	Valid for Category 1 from 6 July 2018	1	Delegated Directive (EU) 2017/1010
11(a)	Lead used in C-press compliant pin connector systems	Expired 24 September 2010	All	
11(b)	Lead used in other than C-press compliant pin connector systems	Expired on 1 January 2013	All	
12	Lead as a coating material for the thermal conduction module C-ring	Expired 24 September 2010	All	
13(a)	Lead in white glasses used for optical applications	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21	All	Delegated Directive (EU) 2017/1011

		July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories		
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	Expires 5 July 2018 for Categories 1 to 7 and 10	1 to 7 and 10	Delegated Directive (EU) 2017/1009
		Expires 21 July 2021 for Categories 8, 9 and 11	8, 9 and 11	
13(b)-(I)	Lead in ion coloured optical filter glass types	Valid for Categories 1 to 7 and 10 from 6 July 2018	1 to 7 and 10	Delegated Directive (EU) 2017/1009
13(b)-(II)	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	Valid for Categories 1 to 7 and 10 from 6 July 2018	1 to 7 and 10	Delegated Directive (EU) 2017/1009
13(b)-(III)	Cadmium and lead in glazes used for reflectance standards	Valid for Categories 1 to 7 and 10 from 6 July 2018	1 to 7 and 10	Delegated Directive (EU) 2017/1009
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight	Expired on 1 January 2011	All	
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages		All	
16	Lead in linear incandescent lamps with silicate coated tubes	Expired on 1 September 2013	All	
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications		All	
18(a)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as specialty lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba) ₂ MgSi ₂ O ₇ :Pb)	Expired on 1 January 2011	All	
18(b)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi ₂ O ₅ :Pb)		All	
19	Lead with PbBiSn-Hg and PblnSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	Expired on 1 June 2011	All	
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expired on 1 June 2011	All	
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses		All	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less	Expired 24 September 2010	All	
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial	All	Delegated Directive (EU) 2018/737

		monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories		
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring		All	
26	Lead oxide in the glass envelope of black light blue lamps	Expired on 1 June 2011	All	
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on 24 September 2010	All	
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC		All	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more		All	
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)		All	
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes		All	
33	Lead in solders for the soldering of thin copper wires of 100 micrometer diameter and less in power transformers		All	
34	Lead in cermet-based trimmer potentiometer elements	Expires on: 21 July 2023 for category 8 in vitro diagnostic medical devices; 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11; 21 July 2021 for all other categories and subcategories	All	Delegated Directive (EU) 2018/738
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expired 1 July 2010	All	
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body		All	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide		All	
39(a)	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (less than 0.2 microgram Cd per mm ² of display screen area)	Expires 31 October 2019	All	
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expired on 31 December 2013	All	
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and	Expires 31 December 2018	All	

	electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council(*)			
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Appendix B: REACH Candidate List substances which may be found in in childcare products, mechanical products or electrical products.

The CAS numbers published by ECHA for the 89 REACH Candidate List substances which may be found in childcare products, mechanical products or electrical products are included in the table below. Note that ECHA has not published CAS numbers for some REACH Candidate List Substances. This list is aligned with the IPC 1752A Materials Declaration Standard substance category list EUREACH-0618.

REACH Candidate List Substances	CAS number(s) published by ECHA	Threshold
<i>Included in REACH Candidate List on 28 October 2008</i>		
Benzyl butyl phthalate (BBP)	85-68-7	0.1% by weight (1 000 ppm) of any article
Dibutyl phthalate (DBP)	84-74-2	0.1% by weight (1 000 ppm) of any article
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	0.1% by weight (1 000 ppm) of any article
Hexabromocyclododecane (HBCDD) and all major diastereoisomers	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	0.1% by weight (1 000 ppm) of any article
Shortchain chlorinated paraffins (C10 – C13)	85535-84-8	0.1% by weight (1 000 ppm) of any article
Cobalt dichloride (CoCl ₂)	7646-79-9	0.1% by weight (1 000 ppm) of any article
Diarsenic pentoxide	1303-28-2	0.1% by weight (1 000 ppm) of any article
Diarsenic trioxide	1327-53-3	0.1% by weight (1 000 ppm) of any article
Tributyl tin oxide (TBTO)	56-35-9	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 13 January 2010</i>		
Tris (2-chloroethyl) phosphate (TCEP)	115-96-8	0.1% by weight (1 000 ppm) of any article
Lead chromate	7758-97-6	0.1% by weight (1 000 ppm) of any article
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	0.1% by weight (1 000 ppm) of any article
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	0.1% by weight (1 000 ppm) of any article
Diisobutyl phthalate (DIBP)	84-69-5	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 18 June 2010</i>		
Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	0.1% by weight (1 000 ppm) of any article
Tetraboron disodium heptaoxide, hydrate	12267-73-1	0.1% by weight (1 000 ppm) of any article
Boric acid	10043-35-3, 11113-50-1	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 20 June 2011</i>		

1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	0.1% by weight (1 000 ppm) of any article
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 19 December 2011</i>		
2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.1% by weight (1 000 ppm) of any article
N,N-dimethylacetamide	127-19-5	0.1% by weight (1 000 ppm) of any article
Bis(2-methoxyethyl) phthalate	117-82-8	0.1% by weight (1 000 ppm) of any article
Bis(2-methoxyethyl) ether	111-96-6	0.1% by weight (1 000 ppm) of any article
Aluminosilicate Refractory Ceramic Fibres	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
Zirconia Aluminosilicate Refractory Ceramic Fibres	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 18 June 2012</i>		
Diboron trioxide	1303-86-2	0.1% by weight (1 000 ppm) of any article
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.1% by weight (1 000 ppm) of any article
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.1% by weight (1 000 ppm) of any article
<i>Included in REACH Candidate List on 19 December 2012</i>		
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	0.1% by weight (1 000 ppm) of any article
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.1% by weight (1 000 ppm) of any article
Diisopentylphthalate	605-50-5	0.1% by weight (1 000 ppm) of any article
N-pentyl-isopentylphthalate	776297-69-9	0.1% by weight (1 000 ppm) of any article
Dibutyltin dichloride (DBTC)	683-18-1	0.1% by weight (1 000 ppm) of any article
Lead oxide sulfate	12036-76-9	0.1% by weight (1 000 ppm) of any article
[Phthalato(2-)]dioxotrilead	69011-06-9	0.1% by weight (1 000 ppm) of any article
Dioxobis(stearato)trilead	12578-12-0	0.1% by weight (1 000 ppm) of any article
Fatty acids, C16-18, lead salts	91031-62-8	0.1% by weight (1 000 ppm) of any article
Lead dinitrate	10099-74-8	0.1% by weight (1 000 ppm) of any article

Pentalead tetraoxide sulphate	12065-90-6	0.1% by weight (1 000 ppm) of any article
Sulfurous acid, lead salt, dibasic	62229-08-7	0.1% by weight (1 000 ppm) of any article
Tetralead trioxide sulphate	12202-17-4	0.1% by weight (1 000 ppm) of any article
Trilead dioxide phosphonate	12141-20-7	0.1% by weight (1 000 ppm) of any article
Orange lead (lead tetroxide)	1314-41-6	0.1% by weight (1 000 ppm) of any article
Lead cyanamidate	20837-86-9	0.1% by weight (1 000 ppm) of any article
Pyrochlore, antimony lead yellow	8012-00-8	0.1% by weight (1 000 ppm) of any article
4-Aminoazobenzene	60-09-3	0.1% by weight (1 000 ppm) of any article
1,2-Diethoxyethane	629-14-1	0.1% by weight (1 000 ppm) of any article
Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped	68784-75-8	0.1% by weight (1 000 ppm) of any article
N,N-dimethylformamide; dimethyl formamide	68-12-2	0.1% by weight (1 000 ppm) of any article
Lead titanium trioxide	12060-00-3	0.1% by weight (1 000 ppm) of any article
Lead titanium zirconium oxide	12626-81-2	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 20 June 2013		
4-Nonylphenol, branched and linear, ethoxylated <i>[substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]</i>	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.1% by weight (1 000 ppm) of any article
Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.1% by weight (1 000 ppm) of any article
Cadmium	7440-43-9	0.1% by weight (1 000 ppm) of any article
Cadmium oxide	1306-19-0	0.1% by weight (1 000 ppm) of any article
Dipentyl phthalate (DPP)	131-18-0	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 16 December 2013		

Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.1% by weight (1 000 ppm) of any article
Trixylyl phosphate	25155-23-1	0.1% by weight (1 000 ppm) of any article
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.1% by weight (1 000 ppm) of any article
Dihexyl phthalate	84-75-3	0.1% by weight (1 000 ppm) of any article
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	0.1% by weight (1 000 ppm) of any article
Cadmium sulphide	1306-23-6	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 16 June 2014		
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 17 December 2014		
2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.1% by weight (1 000 ppm) of any article
2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.1% by weight (1 000 ppm) of any article
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	0.1% by weight (1 000 ppm) of any article
Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 15 June 2015		
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with greater than or equal to 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5, 68648-93-1	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 17 December 2015		
Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1, 21049-39-8, 4149-60-4	0.1% by weight (1 000 ppm) of any article
1,3-propanesultone	1120-71-4	0.1% by weight (1 000 ppm) of any article
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.1% by weight (1 000 ppm) of any article
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	0.1% by weight (1 000 ppm) of any article

Included in REACH Candidate List on 20 June 2016		
Benzo[def]chrysene	50-32-8	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 12 January 2017		
4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.1% by weight (1 000 ppm) of any article
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7, 335-76-2, 3830-45-3	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 7 July 2017		
Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 15 January 2018		
Benz[a]anthracene	56-55-3, 1718-53-2	0.1% by weight (1 000 ppm) of any article
Cadmium hydroxide	21041-95-2	0.1% by weight (1 000 ppm) of any article
Chrysene	218-01-9, 1719-03-5	0.1% by weight (1 000 ppm) of any article
1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	No CAS number(s) provided	0.1% by weight (1 000 ppm) of any article
Included in REACH Candidate List on 27 June 2018		
Benzo[ghi]perylene	191-24-2	0.1% by weight (1 000 ppm) of any article
Octamethylcyclotetrasiloxane [D4]	556-67-2	0.1% by weight (1 000 ppm) of any article
Decamethylcyclopentasiloxane [D5]	541-02-6	0.1% by weight (1 000 ppm) of any article
Dodecamethylcyclohexasiloxane [D6]	540-97-6	0.1% by weight (1 000 ppm) of any article
Terphenyl, hydrogenated	61788-32-7	0.1% by weight (1 000 ppm) of any article
Disodium octaborate	12008-41-2	0.1% by weight (1 000 ppm) of any article
Lead	7439-92-1	0.1% by weight (1 000 ppm) of any article
Dicyclohexyl phthalate [DCHP]	84-61-7	0.1% by weight (1 000 ppm) of any article

Appendix C: Aromatic amines which may be released from azodyes which are restricted under REACH Annex XVII entry 43.

Substance name	CAS number
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4
2,4,5-trimethylaniline	137-17-7
2-Methoxyaniline,o-Anisidine	90-04-0
2-naphthylamine	91-59-8
3,3'-dichlorobenzidine 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1
3,3'-dimethoxybenzidine o-dianisidine	119-90-4
3,3'-dimethylbenzidine 4,4'-bi-o-toluidine	119-93-7
4,4'-methylenedi-o-toluidine	838-88-0
4,4'-oxydianiline	101-80-4
4,4'-thiodianiline	139-65-1
4,4'- Diaminodiphenylmethane (MDA)	101-77-9
4-Aminoazobenzene	60-09-3
4-chloro-o-toluidine	95-69-2
4-chloroaniline	106-47-8
4-methoxy-m-phenylenediamine	615-05-4
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7
5-nitro-o-toluidine	99-55-8
6-methoxy-m-toluidine (p-cresidine)	120-71-8
Benzidine	92-87-5
Biphenyl-4-ylamine,4-aminobiphenyl xenylamine	92-67-1
o-aminoazotoluene,4-amino-2',3-dimethylazobenzene,4-o-tolylazo-o-toluidine	97-56-3
o-toluidine,2-aminotoluene	95-53-4

Appendix D: Polycyclic-aromatic hydrocarbons (PAH) which are restricted under REACH Annex XVII entry 50.

Substance name	CAS number
Benzo[a]pyrene (BaP)	50-32-8
Benzo[e]pyrene (BeP)	192-97-2
Benzo[a]anthracene (BaA)	56-55-3
Chrysen (CHR)	218-01-9
Benzo[b]fluoranthene (BbFA)	205-99-2
Benzo[j]fluoranthene (BjFA)	205-82-3
Benzo[k]fluoranthene (BkFA)	207-08-9
Dibenzo[a,h]anthracene (DBAhA)	53-70-3

Appendix E: Allergenic disperse dyes which are prohibited in childcare products in Korea above 50 mg/kg (each).

Substance name	CAS number
Disperse Blue 1 (C.I. 64 500)	2475-45-8
Disperse Blue 3 (C.I. 61 505)	2475-46-9
Disperse Blue 7 (C.I. 62 500)	3179-90-6
Disperse Blue 26 (C.I. 63 305)	3860-63-7
Disperse Blue 35	12222-75-2
Disperse Blue 102	12222-97-8
Disperse Blue 106	12223-01-7
Disperse Blue 124	61951-51-7
Disperse Orange 3 (C.I. 11 005)	730-40-5
Disperse Orange 1 (C.I. 11 080)	2581-69-3
Disperse Orange37/59/76	13301-61-6
Disperse Red 1 (C.I. 11 110)	2872-52-8
Disperse Red 11 (C.I. 62 015)	2872-48-2
Disperse Red 17 (C.I. 11 210)	3179-89-3
Disperse Yellow 1 (C.I. 10 345)	119-15-3
Disperse Yellow 3 (C.I. 11 855)	2832-40-8
Disperse Yellow 9 (C.I. 10 375)	6373-73-5
Disperse Yellow 39	12236-29-2
Disperse Yellow 49	54824-37-2
Disperse Brown 1	23355-64-8
Basic red 46	12221-69-1
Naphtol AS reactive	92-77-3
Acid red 14 (carminique acid natural)	3567-69-9
Basic VIOLET 3	548-62-9