

IPC-1752A - Appendix B

RoHS Substances and Exemptions List

The EU RoHS Directive continues to be updated over time. As these changes are made, the most current exemption list will be added within the 1752A in a reasonable amount of time. Revision control will be based on the EU Directive document number. Declarations for products that have been previously declared will only be relative to the current EU Exemptions when the data was provided.

On 24 September 2010 the European Commission published Commission Decision 2010/571/EU which <u>replaced</u> all previous RoHS exemptions lists. This represents a significant departure from previous Commission Decisions. Prior to September 2010, when the Commission published a Decision on the RoHS exemptions list then (apart from a few well publicized exceptions such as exemptions 9a, 22, 28 and 35) the Decision added new exemptions to the existing list. The list of exemptions in Commission Decision 2010/571/EU is also included in Annex III of the new RoHS Directive 2011/65/EU published 1 July 2011.

Commission Decision 2010/571/EU applies to all equipment which is placed on the EU market for the first time after 24 September 2010, and implemented a major revision to the list of allowed RoHS exemptions: 13 exemptions were deleted; there were significant changes to the wording to 2 exemptions, and 38 new exemptions were introduced. Commission Decision 2010/571/EU also includes expiry dates for certain exemptions. The list of valid RoHS exemptions will change every 6 months as certain exemptions reach their expiry date. For example, some RoHS exemptions in the 2010/571/EU list expired in January 2011, some exemptions expired in June 2011, more exemptions expired in December 2011, and so on. The list of valid RoHS exemptions has now become a moving target and companies need to continually review which exemptions are still valid for parts which are used to manufacture new products for sale in the EU.

Table B2 provides the RoHS exemptions which are included in Commission Decision 2010/571/EU, and subsequent Commission Decisions and Commission Delegated Directives, and their expiry dates.

Table B3 contains the list of RoHS exemptions that were valid before 24 September 2010, and their expiry dates where applicable. These exemptions can be used for spare parts which are used to repair or refurbish items of equipment that had already been placed on the EU market before 24 September 2010, or before the expiry date of the exemption where applicable. A component which relies on an exemption for RoHS compliance may require two separate declarations – one declaration for use in new equipment put on the market after 24 September 2010 which references the RoHS exemptions in Table B2, and a second declaration for use as a spare part to repair or refurbish equipment that had already been placed on the market before 24 September 2010 which references the RoHS exemptions in Table B3.

Table B4 contains the list of RoHS exemptions published in Annex IV of the new RoHS Directive 2011/65/EU, and subsequent Commission Decisions and Commission Delegated Directives, which are specific to medical devices and monitoring and control instruments.

Table B5 contains the RoHS exemptions list which was referenced in the IPC-1752 v1.1 PDF. This list is included in the IPC 1752A standard to assist companies who want to import an IPC-1752 v1.1 XML file into their IPC 1752A software solution and to map any old RoHS exemptions declared in the IPC-1752 v1.1 XML file against the current list of valid RoHS exemptions.

Table B6 contains the list of ELV exemptions in Commission Directive 2011/37/EU

On 4 June 2015 the European Commission published Delegated Directive 2015/863 which officially adds 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. The IPC 1752A Committee Meeting on 23 February 2015 decided that this should be reported as a separate Substance Category List. The list of new RoHS substances is included in Table B7.



Table B1 RoHS Substances

Unique ID Authority == IPC Unique ID Identity == EUROHS-0508 QueryList Revision == 1.0

| Identity | Substance Category Name | Threshold |
|----------|--|---|
| 00001 | Cadmium/cadmium compounds | 0.01% by weight (100 ppm) of homogeneous materials |
| 00002 | Polybrominated biphenyls (PBBs) | 0.1% by weight (1 000 ppm) of homogeneous materials |
| 00003 | Polybrominated diphenyl ethers (PBDEs) | 0.1% by weight (1 000 ppm) of homogeneous materials |
| 00004 | Chromium VI compounds | 0.1% by weight (1 000 ppm) of homogeneous materials |
| 00005 | Lead/lead compounds | 0.1% by weight (1 000 ppm) of homogeneous materials |
| 00006 | Mercury/mercury compounds | 0.1% by weight (1 000 ppm) of homogeneous materials |

Class A QueryList statements

| Identity | Statement |
|---------------|---|
| 01 | Product(s) meets EU RoHS requirements without any exemptions |
| 02 | Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may also apply) |
| 03 | Product(s) meets EU RoHS requirements by application of the selected exemption(s) |
| 04 | Product(s) does not meet EU RoHS requirements and is not under exemptions |
| 05 | Product(s) is obsolete, no information is available |
| 06 | Product(s) is unknown, no information is available |

Note – Due to EU RoHS Annex III Exemption #7(b) having fully expired as of July 21, 2024, the Class A Query Statement #02 is no longer valid for New Products and should not be used in the context of IPC-1752A Class A declarations. It could be used in the context of Service Parts for products put onto the EU Market prior to the specific exemption expiration dates of various Product Categories as noted below on Page #6.

Table B2 RoHS exemptions listed in Commission Decision 2010/571/EU published 24 September 2010 (also contained in Annex III of the RoHS Directive 2011/65/EU published 1 July 2011) and in subsequent Commission Decisions and Commission Delegated Directives.

Unique ID Authority == IPC Unique ID Identity == EL2011/534/EU IPC Revision == 2.0

In 2016 the European Commission started a review process to determine which exemptions in Annex III of the RoHS Directive 2011/65/EU are still needed by industry. As stated in Article 5 paragraph 5, existing exemptions for which a renewal request has been submitted remain valid until a decision on the renewal request is taken by the Commission. The Commission decision on renewal request(s) for an exemption will either indicate the new expiry date in case of renewal, or, in case of rejection, grant a transition before the exemption expires, i.e., a period of minimum 12 months, maximum 18 months following the decision date.

As part of the periodic update to these Appendices, Table B2 may be updated to a new revision when Delegated Directives with renewal or rejection decisions are published. Additional columns have been added to the table to provide links to the Delegated Directives and to indicate what are the applicable product categories and validity dates for the renewed exemptions. If no start date is provided then the exemption is currently valid unless an expiration date is stated and has passed.

| 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 | Delegated Directive (EU) 2022/276 |



| | | Expired on 24 February 2023 | | |
|-----------------|--|--|---------------|---|
| 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 Expired on 24 February 2023 | All | Delegated Directive (EU) 2022/276 |
| 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 | Expired on 24 February 2023 | All | Delegated Directive (EU) 2022/276 |
| 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 | Expired on 24 February 2023 | All | Delegated Directive (EU) 2022/276 |
| 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 Expired on 24 February 2023 | All | Delegated Directive (EU) 2022/276 |
| 1(f) | Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For special purposes: 5 mg | Replaced by Exemptions 1(f)-I and 1(f)-II | All | Delegated Directive (EU) 2022/281 |
| 1(f)-I | Mercury in single capped (compact) fluorescent lamps not exceeding (per burner): For lamps designed to emit mainly light in the ultraviolet spectrum: 5 mg | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/281 |
| 1(f)-II | Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):For special purposes: 5 mg | Expires on 24 February 2025 | 5 | Delegated Directive (EU) 2022/281 |
| 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 | Expired on 24 August 2023 | 5 | Delegated Directive (EU) 2022/277 |
| 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 Expired on 24 February 2023 | 5 | Delegated Directive (EU) 2022/284 |
| 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 Expired on 24 August 2023 | 5 | Delegated Directive (EU) 2022/284 |
| 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 Expired on 24 August 2023 | 5 | Delegated Directive (EU) 2022/284 |
| 2(a)(4) | 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 28 mm (e.g. T12): 3.5 mg | Expired on 31 December 2012; 3.5 mg may be used per lamp after 31 December 2012 Expired on 24 February 2023 | 5 | Delegated Directive (EU) 2022/284 |
| 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 Expired on 24 February 2023 | 5 | Delegated Directive (EU) 2022/284 |
| 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 | 1 to 7 and 10 | |



| 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 15 mg limit expired on 24, February 2023, and 10 mg limit expires on 24 February 2025 | 5 | Delegated Directive (EU) 2022/282 |
| 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 | Replaced by exemptions 2(b)(4)-I, 2(b)(4)-II, and 2(b)(4)-III | All | Delegated Directive (EU) 2022/287 |
| 2(b)(4)-I | Mercury in other fluorescent lamps not exceeding (per lamp):Lamps for other general lighting and special purposes (e.g. induction lamps): 15 mg | Remains valid due to renewal request on 1 August 2023 | 5 | Delegated Directive (EU) 2022/287 |
| 2(b)(4)-II | Mercury in other fluorescent lamps not exceeding (per lamp):Lamps emitting mainly light in the ultraviolet spectrum: 15 mg | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/287 |
| 2(b)(4)-III | Mercury in other fluorescent lamps not exceeding (per lamp):Emergency lamps: 15 mg | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/287 |
| 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 Expires on 24 February 2025 | 5 | Delegated Directive (EU) 2022/274 |
| 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 Expires on 24 February 2025 | 5 | Delegated Directive (EU) 2022/274 |
| 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 Expires on 24 February 2025 | 5 | Delegated Directive (EU) 2022/274 |
| 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 | Delegated Directive (EU) 2022/280 |
| 4(a)-l | Mercury in low pressure non-phosphor coated discharge lamps, where the application requires the main range of the lampspectral output to be in the ultraviolet spectrum: up to 15 mg mercury may be used per lamp | Expired on 24 February 2023 Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/280 |
| 4(b) | Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 80: P ≤ 105 W: 16 mg may be used per burner | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/283 |
| 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 Expired on 24 February 2023 | 1 to 7 and 10 | Delegated Directive (EU) 2022/283 |
| 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 Expired on 24 February 2023 | 1 to 7 and 10 | Delegated Directive (EU) 2022/283 |

| 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 Expired on 24 February 2023 | 1 to 7 and 10 | Delegated Directive (EU) 2022/283 |
|-----------------|--|--|---------------|---|
| 4(c)-I | Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): P less than or equal to 155 W: 20 mg | No limitation of use until 31 December 2011; 25 mg may be used per burner after 31 December 2011 Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/275 |
| 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: 25 mg | No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011 | 5 | Delegated Directive (EU) 2022/275 |
| 4(c)-III | Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner): P greater than 405 W: 25 mg | Expires on 24 February 2027 No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011 Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/275 |
| 4(d) | Mercury in High Pressure Mercury (vapour) lamps (HPMV) | Expired on 13 April 2015 | All | |
| 4(e) | Mercury in metal halide lamps (MH) | Expires on 22 February 2027 | 5 | Delegated Directive (EU) 2022/278 |
| 4(f) | Mercury in other discharge lamps for special purposes not specially mentioned in this Annex | Replaced by exemptions 4(f)-I, 4(f)-II, 4(f)-III, and 4(f)-IV | All | Delegated Directive (EU) 2022/279 |
| 4(f)-I | Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex | Remains valid due to renewal request on 1 August 2023 | 5 | Delegated Directive (EU) 2022/279 |
| 4(f)-II | Mercury in high pressure mercury vapour lamps used in projectors where an output ≥ 2000 lumen ANSI is required | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/279 |
| 4(f)-III | Mercury in high pressure sodium vapour lamps used for horticulture lighting | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/279 |
| 4(f)-IV | Mercury in lamps emitting light in the ultraviolet spectrum | Expires on 24 February 2027 | 5 | Delegated Directive (EU) 2022/279 |
| 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. | Expired on 31 December 2018 | 1 to 7 and 10 | |
| 5(a) | Lead in glass of cathode ray tubes | Expired 21 July 2016 for Categories 1 to 7 and 10 Expired 21 July 2021 for 8 and 9 other than in vitro and industrial Expired 21 July 2023 for Category 8 "in vitro" Expired 21 July 2024 for Category 9 "industrial" and Category 11 | All | |



| | | Remains valid for categories 1-7 and 10 due to renewal request on 16 January 2015 | | |
|---------|--|--|---------------|---|
| 5(b) | Lead in glass of fluorescent tubes not | Expired 21 July 2021 for 8 and 9 other than in vitro and industrial | All | |
| | exceeding 0.2% by weight | Expired 21 July 2023 for Category 8 "in vitro" | | |
| | | Expired 21 July 2024 for Category 9 "industrial" and Category 11 | | |
| 6(a) | Lead as an alloying element in steel for machining purposes and in galvanized steel | Expired 1 July 2019 for Categories 1 to 7 and 10 | 1 to 7 and 10 | Delegated Directive (EU) |
| | containing up to 0.35% lead by weight | Remains valid due to renewal requests on 17 January 2020, and 9 October 2020 | 8, 9 and 11 | 2018/739 |
| 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 galvanised steel components containing up to 0.2% lead by weight | Remains valid due to renewal request on 17 January 2020 | 1 to 7 and 10 | Delegated Directive (EU) 2018/739 |
| | | Expired 1 July 2019 for Categories 1 to 7 and 10 | 1 to 7 and 10 | Delegated |
| 6(b) | Lead as an alloying element in aluminium containing up to 0.4% lead by weight | Remains valid due to renewal requests on 17 January 2020, and 9 October 2020 | 8, 9 and 11 | Directive (EU) 2018/740 |
| 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 | Remains valid due to renewal request on 03 December 2019 | 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 | Remains valid due to renewal request on 08 November 2019 | 1 to 7 and 10 | Delegated Directive (EU) 2018/740 |
| 6(c) | Copper alloy containing up to 4% lead by weight | Remains valid for all categories due to renewal requests on 03 January 2020, and 9 October 2020 | All | Delegated Directive (EU) 2018/741 |
| 7(a) | Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead) | Remains valid for all categories due to renewal requests on 06 January 2020, and 9 October 2020 | All | Delegated Directive (EU) 2018/742 |
| | | Expired on 21 July 2016 for categories 1 to 7 and 10 | | |
| 7/b) | Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, | Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial | All | |
| 7(b) | transmission, and network management for telecommunications | Expired on: 21 July 2023 for category 8 in vitro; | All | |
| | | Expired on: 21 July 2024 for category 9 industrial and for category 11 | | |
| 7(c)-l | Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound | Remains valid for all categories due to renewal requests on 02 January 2020, and 9 October 2020 | 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 | Remains valid for all categories due to renewal requests on 10 December 2019, and 9 October 2020 | All | Delegated Directive (EU) 2019/169 |

| 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 | 1 to 7 and 10 | |
|----------|--|---|---------------|--|
| | | Expired on: 21 July 2021 for categories 1-7 and 10, 8 and 9 other than in vitro and industrial | | |
| 7(c)-IV | Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors | Expired on: 21 July 2023 for category 8 in vitro | All | Delegated Directive (EU) 2019/170 |
| | | Expired on: 21 July 2024 for category 9 industrial and for category 11 | | |
| 8(a) | Cadmium and its compounds in one shot pellet type thermal cut-offs | Expired on 1 January 2012 | 1 to 7 and 10 | |
| 8(b) | Cadmium and its compounds in electrical contacts | Expired on: 29 February 2020 for categories 1-7 and 10 Remains valid for Categories 8, 9 & 11 due to renewal requests on 16 January 2020, and 9 October 2020 | 8, 9 and 11 | Delegated Directive (EU) 2019/171 |
| 8(b)-l | Cadmium and its compounds in electrical contacts used in: circuit breakers, thermal sensing controls, thermal motor protectors (excluding hermetic thermal motor protectors), AC switches rated at: 6 A and more at 250 V AC and more, or 12 A and more at 125 V AC and more, DC switches rated at 20 A and more at 18 V DC and more, and switches for use at voltage supply frequency greater than or equal to 200 Hz | Remains valid due to renewal request on 16 January 2020 | 1 to 7 and 10 | Delegated Directive (EU) 2019/171 |
| 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 | Expired on: 05 March 2020 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro Expired on: 21 July 2024 for category 9 industrial and for category 11 | 8, 9 and 11 | |
| 9(a)-l | Up to 0.75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators (including minibars) designed to operate fully or partly with electrical heater, having an average utilised power input less than 75 W at constant running conditions | Expired on: 05 March 2021 | 1 to 7 and 10 | Delegated Directive (EU) (EU) 2020/361 |
| 9(a)-II | Up to 0.75 % hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators:- designed to operate fully or partly with electrical heater, having an average utilised power input greater than or equal to 75 W at constant running conditions, designed to fully operate with non-electrical heater. | Remains valid due to renewal request on 16 January 2020 | 1 to 7 and 10 | Delegated Directive (EU) (EU) 2020/361 |



| 9(a)-III | Up to 0.7 % hexavalent chromium by weight, used as an anticorrosion agent in the working fluid of the carbon steel sealed circuit of gas absorption heat pumps for space and water heating | Expires: 31 December 2026 | 1 | Delegated Directive (EU) (EU) 2023/171 |
|-------------|--|---|------------------------------|--|
| | | Expired on 5 July 2018 for Categories 1 to 7 and 10 Expired on: 21 July 2021 for | 1 to 7 and 10 | |
| 9(b) | Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications | categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for | 8, 9 and 11 | Delegated Directive (EU) 2017/1010 |
| | | category 9 industrial and for category 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 | Expired on 21 July 2019 | 1 to 7 and 10 | 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 on 24 September 2010 | All | |
| 13(a) | Lead in white glasses used for optical applications | Remains valid for all categories due to renewal request on 28 November 2019 | All | Delegated Directive (EU) 2017/1011 |
| 13(b) | Cadmium and lead in filter glasses and glasses used for reflectance standards | Expired on 5 July 2018 for Categories 1 to 7 and 10 Remains valid for categories 8, 9, and 11 due to renewal request on 28 November 2019 | 1 to 7 and 10 8, 9 and 11 | Delegated Directive (EU) 2017/1009 |
| 13(b)-(l) | Lead in ion coloured optical filter glass types | Valid from 6 July 2018 Remains valid due to renewal request on 28 November 2019 | 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 from 6 July 2018 Remains valid due to renewal request on 28 November 2019 | 1 to 7 and 10 | Delegated Directive (EU) 2017/1009 |
| 13(b)-(III) | Cadmium and lead in glazes used for reflectance standards | Valid from 6 July 2018 Remains valid due to renewal request on 28 November 2019 | 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 | Expired on: 29 February 2020 for categories 1-7 and 10 Remains valid for categories 8,9, and 11 due to renewal requests on 16 January 2020, and 9 October 2020 | 8, 9 and 11 | Delegated Directive (EU) 2019/172 |



Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following **Delegated** criteria applies: a semiconductor technology Remains valid due to renewal 15(a) 1 to 7 and 10 Directive (EU) node of 90 nm or larger; a single die of 300 request on 16 January 2020 2019/172 mm2 or larger in any semiconductor technology node; stacked die packages with die of 300 mm2 or larger, or silicon interposers of 300 mm2 or larger Lead in linear incandescent lamps with silicate 16 Expired on 1 September 2013 ΑII coated tubes Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in Lead halide as radiant agent in high intensity vitro and industrial 17 discharge (HID) lamps used for professional All reprography applications Expired on: 21 July 2023 for category 8 in vitro Expired on 21 July 2024 for category 9 industrial and for category 11 Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as specialty lamps for diazoprinting 18(a) reprography, lithography, insect traps, Expired on 1 January 2011 All photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb) Remains valid for categories 1-7 and 10, 8 and 9 other than invitro and industrial, and 11 due to renewal requests on 20 Lead as activator in the fluorescent powder January 2020, and 13 January **Delegated** (1% lead by weight or less) of discharge lamps 2023 18(b) ΑII Directive (EU) when used as sun tanning lamps containing 2019/177 phosphors such as BSP (BaSi2O5:Pb) Expired on 21 July 2023 for category 8 in-vitro Expired on 21 July 2024 for category 9 industrial Remains valid for category 5 Lead as activator in the fluorescent powder (1 due to renewal request on 20 5 excluding % lead by weight or less) of discharge lamps January 2020 Delegated applications 18(b)-I containing phosphors such as BSP Directive (EU) covered by entry (BaSi2O5:Pb) when used in medical Expired on 21 July 2021 for 2019/177 34 of Annex IV phototherapy equipment Category 8 and Category 8 in vitro Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and 19 Expired on 1 June 2011 ΑII with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL) Lead oxide in glass used for bonding front and 20 rear substrates of flat fluorescent lamps used Expired on 1 June 2011 ΑII for Liquid Crystal Displays (LCDs) Expired on: 29 February 2020 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in Lead and cadmium in printing inks for the vitro and industrial **Delegated** 21 application of enamels on glasses, such as 8, 9 and 11 Directive (EU) borosilicate and soda lime glasses Expired on: 21 July 2023 for 2019/173 category 8 in vitro; Expired on 21 July 2024 for category 9 industrial and for category 11 1 to 7 and 10 Expired 21 July 2021 for 21(a) Cadmium when used in colour printed glass to **Delegated**

| r | | | | |
|-------|--|--|---------------|---|
| | provide filtering functions, used as a component in lighting applications installed in displays and control panels of EEE | Categories 1 to 7 and 10 | | <u>Directive (EU)</u> 2019/173 |
| 21(b) | Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses | Expired 21 July 2021 for Categories 1 to 7 and 10 | 1 to 7 and 10 | Delegated Directive (EU) 2019/173 |
| 21(c) | Lead in printing inks for the application of enamels on other than borosilicate glasses | Expired 21 July 2021 for Categories 1 to 7 and 10 | 1 to 7 and 10 | Delegated Directive (EU) 2019/173 |
| 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 | Remains valid for categories 1-11 due to renewal request on 10 January 2020 | All | Delegated Directive (EU) 2018/737 |
| 25 | Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring | Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for | All | |
| | | category 8 in vitro Expired on 21 July 2024 for category 9 industrial and for category 11 | | |
| 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 | Remains valid for categories 1-7, 10, and 11 due to renewal request on 20 November 2019 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro Expired on 21 July 2024 for category 9 industrial | All | Delegated Directive (EU) 2019/174 |
| 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 | Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for category 9 industrial and for category 11 | All | |



| 39(b) | | 31 December 2027 | All | Delegated |
|-------|---|---|-----|--|
| 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 mm2 of display screen area) Cadmium in downshifting semiconductor | 21 November 2025 | All | Delegated Directive (EU) 2024/1416 |
| 38 | Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide | Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for category 9 industrial and for category 11 | All | |
| 37 | Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body | Expired on: 21 July 2021 for categories 1-7 and 10, 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for category 9 industrial and for category 11 | All | Delegated Directive (EU) 2019/176 |
| 36 | Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display | Expired on 1 July 2010 | All | |
| 34 | Lead in cermet-based trimmer potentiometer elements | Remains valid for all categories due to renewal requests on 20 January 2020, and 9 October 2020 | All | Delegated Directive (EU) 2018/738 |
| 33 | Lead in solders for the soldering of thin copper wires of 100 micrometer diameter and less in power transformers | Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro Expired on: 21 July 2024 for category 9 industrial and for category 11 | All | |
| 32 | Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes | Remains valid for categories 1-7 and 10, 8 other than in-vitro, and 9 due to renewal request on 20 January 2020 Expired on: 21 July 2023 for category 8 in vitro Expired on: 21 July 2024 for category 11 | All | Delegated Directive (EU) 2019/175 |
| 31 | Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting) | Expired on: 21 July 2016 for categories 1-7 and 10 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for category 9 industrial and for category 11 | All | |

| | nanocrystal quantum dots directly deposited on LED semiconductor chips for use in display and projection applications (< 5 µg Cd per mm2 of LED chip surface) with a maximum amount per device of 1 mg | | | Directive (EU) 2024/1416 |
|----|---|---|--|-----------------------------|
| 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 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(*) | Expired on 31 March 2022 for categories 1-7 and 10 Expired on 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro; Expired on: 21 July 2024 for category 9 industrial Expired on: 31 March 2022 for category 11 | All | |
| 42 | Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment: with engine total displacement greater than or equal to 15 litres; or with engine total displacement less than 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications | Remains valid due to renewal request 20 January 2023 | 11 excluding applications covered by entry 6(c) of Annex III | Directive (EU) 2019/178 |
| 43 | Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin and the concentration value of bis(2-ethylhexyl) phthalate does not exceed: (a) 30 % by weight of the rubber for (i) gasket coatings; (ii) solid-rubber gaskets; or (iii) rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine. (b) 10 % by weight of the rubber for rubber-containing components not referred to in point (a). For the purposes of this entry, "prolonged contact with human skin" means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day | Expired on 21 July 2024 | 11 | Directive (EU) 2019/1845 |
| 44 | Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council (*), installed in equipment used at fixed positions while in operation which is designed for professionals, but also used by non-professional users | Remains valid due to renewal request 20 January 2023 | 11 | Directive (EU) 2019/1846 |
| 45 | Lead diazide, lead styphnate, lead dipicramate, orange lead (lead tetroxide), lead dioxide in electric and electronic initiators of explosives for civil (professional) use and barium chromate in long time pyrotechnic delay charges of electric initiators of explosives for civil (professional) use | Remains valid due to renewal request 17 October 2024 | 11 | Directive (EU) 2021/647 |



| | | Effective: 1 August 2024 | | |
|----|---|--|----|-------------------------|
| 46 | Cadmium and lead in plastic profiles containing mixtures produced from polyvinyl chloride waste (hereinafter referred to as "recovered rigid PVC"), used for electrical and electronic windows and doors, where the concentration in the recovered rigid PVC material does not exceed 0,1 % cadmium by weight and 1,5 % | Expires 28 May 2026 for the production of articles other than new articles included in categories specified in entry 63, points 18(a) to (d) of Annex XVII to Regulation (EC) No 1907/2006 | 11 | Directive (EU) 2024/232 |
| | lead by weight. | Expires: 28 May 2028 for the production of new articles under categories specified in entry 63, points 18(a) to (d) of Annex XVII to Regulation (EC) No 1907/2006 | | |

Table B3 RoHS exemptions that were valid before 24 September 2010

Unique ID Authority == IPC Unique ID Identity == EL2010/122/EU IPC Revision == 1.0

| Identity | Description | Expiry date |
|----------|--|-------------------------|
| 1 | Mercury in compact fluorescent lamps not exceeding 5 mg per lamp. | |
| 2a | Mercury in straight fluorescent lamps for general purposes not exceeding 10 mg in halophosphate lamps. | |
| 2b | Mercury in straight fluorescent lamps for general purposes not exceeding 5 mg in triphosphate lamps with a normal lifetime. | |
| 2c | Mercury in straight fluorescent lamps for general purposes not exceeding 8 mg in triphosphate lamps with long lifetime. | |
| 3 | Mercury in straight fluorescent lamps for special purposes. | |
| 4 | Mercury in other lamps not specifically mentioned in this Annex. | |
| 5 | Lead in glass of cathode ray tubes, electronic components and fluorescent tubes. | |
| 6 | Lead as an alloying element in steel containing up to 0,35 % lead by weight, aluminium containing up to 0,4 % lead by weight and as a copper alloy containing up to 4 % lead by weight. | |
| 7a | Lead in high melting temperature type solders (i.e. lead based solder alloys containing $85\ \%$ by weight or more lead). | |
| 7b | Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications. | |
| 7c | Lead in electronic ceramic parts (e.g. piezoelectronic devices). | |
| 8 | Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC (1) amending Directive 76/769/EEC (2) relating to restrictions on the marketing and use of certain dangerous substances and preparations. | |
| 9 | Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators. | |
| 9a | DecaBDE in polymeric applications. | Expired on 30 June 2008 |
| 9b | Lead in lead-bronze bearing shells and bushes. | |
| 11 | Lead used in compliant pin connector systems. | |
| 12 | Lead as a coating material for the thermal conduction module c-ring. | |
| 13 | Lead and cadmium in optical and filter glass. | |
| 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. | |
| 15 | Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages. | |
| 16 | Lead in linear incandescent lamps with silicate coated tubes. | |
| 17 | Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications. | |
| 18 | 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 (BaSi2O5:Pb) as well as when used as specialty lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb). | |



Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-19 Hg as auxiliary amalgam in very compact Energy Saving Lamps (ESL). Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for 20 Liquid Crystal Displays (LCD) 21 Lead and cadmium in printing inks for the application of enamels on borosilicate glass. Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic Expired on 31 December 22 communication systems until 31 December 2009. 2009 Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less 23 with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with copper lead frames Lead in solders for the soldering to machined through hole discoidal and planar array ceramic 24 multilayer capacitors. Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus 25 electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes. Lead oxide in the glass envelope of Black Light Blue (BLB) lamps. 26 Lead alloys as solder for transducers used in high-powered (designated to operate for several Expired on 24 September 27 hours at acoustic power levels of 125 dB SPL and above) loudspeakers 2010 Hexavalent chromium in corrosion preventive coatings of unpainted metal sheetings and 28 fasteners used for corrosion protection and Electromagnetic Interference Shielding in equipment Expired on 1 July 2007 falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 29 Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on 30 the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more. Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid 31 crystal displays, design or industrial lighting) 32 Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes. Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power 33 transformers 34 Lead in cermet-based trimmer potentiometer elements. Cadmium in photoresistors for optocouplers applied in professional audio equipment until 31 Expired on 31 December 35 December 2009. 2009 Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg 36 Expired on 1 July 2010 per display until 1 July 2010. 37 Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body. 38 Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide. Cadmium in colour-converting II-VI LEDs (< 10 µg Cd per mm 2 of light-emitting area) for use in 39 solid state illumination or display systems.



Table B4 RoHS exemptions published in Annex IV of the new RoHS Directive 2011/65/EU which are specific to medical devices and monitoring and control instruments

Unique ID Authority == IPC Unique ID Identity == EL2011/65/EU_ANNEX_IV IPC Revision == 1.0

| Identity | Description | Expiry Date |
|----------|--|--|
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 02 January 2020 |
| 1 | Lead, cadmium and mercury in detectors for ionising radiation | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 06 January 2020 |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 17 January 2020 |
| 1a | Lead and cadmium in ion selective electrodes including glass of pH electrodes. | Remains valid for category 8 in vitro diagnostic medical devices due to renewal request on 19 January 2022 |
| | | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 17 January 2020 |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 1b | Lead anodes in electrochemical oxygen sensors. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 15 January 2020 Remains valid for categories 8 and 9 other than in vitro and |
| | | industrial due to renewal request on 22 November 2019 |
| 1c | Lead, cadmium and mercury in infra-red light detectors. | Remains valid for category 8 in vitro diagnostic medical devices due to renewal request on 15 January 2020 |
| | | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 23 December 2019 Expired on: 21 July 2021 for categories 8 and 9 other than in |
| | | vitro and industrial |
| 1d | Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 2 | Lead bearings in X-ray tubes. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 18 January 2020 |
| 3 | Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate. | Remains valid for category 8 in vitro diagnostic medical devices due to renewal request on 18 January 2020 |
| | | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 18 January 2020 |
| | Lead in glass frit of X-ray tubes and image intensifiers and | Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial |
| 4 | lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | 5.555.16. | Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 20 January 2023 |

Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 06 January 2020 Expired on: 21 July 2023 for category 8 in vitro diagnostic 5 Lead in shielding for ionising radiation. medical devices Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 06 January 2020 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro diagnostic 6 Lead in X-ray test objects. medical devices Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro diagnostic 7 Lead stearate X-ray diffraction crystals. medical devices Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Radioactive cadmium isotope source for portable X-ray Expired on: 21 July 2023 for category 8 in vitro diagnostic 8 fluorescence spectrometers. medical devices Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Expired on: 21 July 2023 for category 8 in vitro diagnostic 9 Cadmium in helium-cadmium lasers. medical devices Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 19 January 2023 Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial Lead and cadmium in atomic absorption spectroscopy Expired on: 21 July 2023 for category 8 in vitro diagnostic 10 medical devices Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 18 January 2023 Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 02 January 2020 Lead in alloys as a superconductor and thermal conductor Expired on: 21 July 2023 for category 8 in vitro diagnostic 11 in MRI medical devices Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 31 July 2019 Lead and cadmium in metallic bonds creating superconducting magnetic circuits in MRI, SQUID, NMR Expired on: 30 June 2021 for category 8 in vitro diagnostic 12 (Nuclear Magnetic Resonance) or FTMS (Fourier medical devices Transform Mass Spectrometer) detectors. Expires on 30 June 2021. Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 31 July 2019 Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 Expired on: 21 July 2023 for category 8 in vitro diagnostic 13 Lead in counterweights. medical devices Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments

| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 02 January 2020 |
|----|---|---|
| 14 | Lead in single crystal piezoelectric materials for ultrasonic transducers. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 15 | Lead in solders for bonding to ultrasonic transducers. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | Marsum in vary high accuracy consistence and less | Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial |
| 16 | Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | exceeding 20 mg of mercury per switch of relay. | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 17 | Lead in solders in portable emergency defibrillators. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 18 | Lead in solders of high performance infrared imaging modules to detect in the range 8-14 micrometre. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Expired on: 21 July 2021 for categories 8 and 9 other than in vitro and industrial |
| 19 | Lead in Liquid crystal on silicon (LCoS) displays. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| | | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 15 January 2020 |
| 20 | Cadmium in X-ray measurement filters. | Expired on: 21 July 2023 for category 8 in vitro diagnostic medical devices |
| | | Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |
| 21 | Cadmium in phosphor coatings in image intensifiers for X-ray images until 31 December 2019 and in spare parts for X-ray systems placed on the EU market before 1 January 2020. | Expired on 31 December 2019 |
| 22 | Lead acetate marker for use in stereotactic head frames for use with CT and MRI and in positioning systems for gamma beam and particle therapy equipment. Expires on 30 June 2021. | Expired on 30 June 2021 |
| 23 | Lead as an alloying element for bearings and wear surfaces in medical equipment exposed to ionising radiation. Expires on 30 June 2021. | Expired on 30 June 2021 |
| 24 | Lead enabling vacuum tight connections between aluminium and steel in X-ray image intensifiers. Expires on 31 December 2019. | Expired on 31 December 2019 |
| | | |



| 25 | Lead in the surface coatings of pin connector systems requiring nonmagnetic connectors which are used durably at a temperature below -20°C under normal operating and storage conditions. Expires on 30 June 2021. | Expired on 30 June 2021 |
|-----|--|--|
| 26 | Lead in solders on printed circuit boards, termination coatings of electrical and electronic components and coatings of printed circuit boards, solders for connecting wires and cables, solders connecting transducers and sensors, that are used durably at a temperature below - 20°C under normal operating and storage conditions. Expires on 30 June 2021. | |
| 26 | Lead in the following applications that are used durably at a temperature below - 20 °C under normal operating and storage conditions: (a) solders on printed circuit boards; (b) termination coatings of electrical and electronic components and coatings of printed circuit boards; (c) solders for connecting wires and cables; (d) solders connecting transducers and sensors. Lead in solders of electrical connections to temperature measurement sensors in devices which are designed to be used periodically at temperatures below - 150 °C. These exemptions expire on 30 June 2021. | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 11 December 2019 Expired on: 30 June 2021 for category 8 in vitro diagnostic medical devices Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 11 December 2019 |
| 27 | Lead in solders, termination coatings of electrical and electronic components and printed circuit boards, connections of electrical wires, shields and enclosed connectors, which are used in (a) magnetic fields within the sphere of 1 m radius around the isocenter of the magnet in medical magnetic resonance imaging equipment, including patient monitors designed to be used within this sphere, or (b) magnetic fields within 1 m distance from the external surfaces of cyclotron magnets, magnets for beam transport and beam direction control applied for particle therapy. Expires on 30 June 2020. | Expires on 30 June 2027 for categories 8 and 9 other than in vitro and industrial, category 8 in vitro diagnostic medical devices, and category 9 industrial monitoring and control instruments |
| 28 | Lead in solders for mounting cadmium telluride and cadmium zinc telluride digital array detectors to printed circuit boards. Expires on 31 December 2017. | Expired on 31 December 2017 |
| 29 | Lead in alloys, as a superconductor or thermal conductor, used in cryo-cooler cold heads and/or in cryo-cooled cold probes and/or in cryo-cooled equipotential bonding systems, in medical devices (category 8) and/or in industrial monitoring and control instruments. Expires on 30 June 2021. | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 20 December 2019 Expired on: 30 June 2021 for category 8 in vitro diagnostic medical devices Expired on: 30 June 2021 for category 9 industrial monitoring and control instruments |
| 30 | Hexavalent chromium in alkali dispensers used to create photocathodes in X-ray image intensifiers until 31 December 2019 and in spare parts for X-ray systems placed on the EU market before 1 January 2020. | Expired on 31 December 2019 |
| 31 | Lead, cadmium and hexavalent chromium in reused spare parts, recovered from medical devices placed on the market before 22 July 2014 and used in category 8 equipment placed on the market before 22 July 2021, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of parts is notified to the consumer. Expires on 21 July 2021. | Expired on 05 November 2017 |
| 31a | Lead, cadmium, hexavalent chromium, and polybrominated diphenyl ethers (PBDE) in spare parts recovered from and used for the repair or refurbishment of medical devices, including in vitro diagnostic medical devices, or electron microscopes and their accessories, provided that the reuse takes place in auditable closed-loop business-to-business return systems and that each reuse of parts is notified to the customer. Expires on: (a) 21 July 2021 for the use in medical devices other than in vitro diagnostic medical devices; (b) 21 July 2023 for the use in in vitro diagnostic medical devices; (c) 21 July 2024 for the use in electron microscopes and their accessories. | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 02 January 2020 Remains valid for category 8 in vitro diagnostic medical devices due to renewal request on 02 January 2020 Expired on: 21 July 2024 for category 9 industrial monitoring and control instruments |

| | 1 | |
|----|--|---|
| 32 | Lead in solders on printed circuit boards of detectors and data acquisition units for Positron Emission Tomographs which are integrated into Magnetic Resonance Imaging equipment. Expires on 31 December 2019. | Expired on 31 December 2019 |
| 33 | Lead in solders on populated printed circuit boards used in Directive 93/42/EEC class IIa and IIb mobile medical devices other than portable emergency defibrillators. Expires on 30 June 2016 for class IIa and on 31 December 2020 for class IIb. | Expired on 30 June 2016 for Class IIa Expired on 31 December 2020 for Class IIb |
| 34 | Lead as an activator in the fluorescent powder of discharge lamps when used for extracorporeal photopheresis lamps containing BSP (BaSi2O5:Pb) phosphors. Expires on 22 July 2021. | Expired on 21 July 2021 |
| 35 | Mercury in cold cathode fluorescent lamps for back-lighting liquid crystal displays, not exceeding 5 mg per lamp, used in industrial monitoring and control instruments placed on the market before 22 July 2017. Expires on 21 July 2024. | Expired on 21 July 2024 |
| 36 | Lead used in other than C-press compliant pin connector systems for industrial monitoring and control instruments. Expires on 31 December 2020. May be used after that date in spare parts for industrial monitoring and control instruments placed on the market before 1 January 2021. | Expired on 31 December 2020 |
| 37 | Lead in platinized platinum electrodes used for conductivity measurements where at least one of the following conditions applies: (a) wide-range measurements with a conductivity range covering more than 1 order of magnitude (e.g. range between 0.1 mS/m and 5 mS/m) in laboratory applications for unknown concentrations; (b) measurements of solutions where an accuracy of +/– 1 % of the sample range and where high corrosion resistance of the electrode are required for any of the following: (i) solutions with an acidity less than pH 1; (ii) solutions with an alkalinity greater than pH 13; (iii) corrosive solutions containing halogen gas; (c) measurements of conductivities above 100 mS/m that must be performed with portable instruments. Expires on 31 December 2025. | Expires on 31 December 2025 |
| 38 | Lead in solder in one interface of large area stacked die elements with more than 500 interconnects per interface which are used in X-ray detectors of computed tomography and X-ray systems. Expires on 31 December 2019. May be used after that date in spare parts for CT and X-ray systems placed on the market before 1 January 2020. | Expired on 31 December 2019 |
| 39 | Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present: (a) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of 3 mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6 mm in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable; (b) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the following applies: (i) a response time shorter than 25 ns; (ii) a sample detection area larger than 149 mm²; (iii) a multiplication factor larger than 1.3 × 10³. (c) a response time shorter than 5 ns for detecting electrons or ions; (d) a sample detection area larger than 314 mm2 for detecting electrons or ions; (e) a multiplication factor larger than 4.0 × 10³. | Remains valid for categories 8 and 9 other than in vitro and industrial due to renewal request on 18 January 2020 Remains valid for category 8 in vitro diagnostic medical devices due to renewal request on 18 January 2020 Remains valid for category 9 industrial monitoring and control instruments due to renewal request on 18 January 2020 |
| 40 | Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC for industrial monitoring and control instruments. Expires on 31 December 2020. May be used after that date in spare parts for industrial monitoring and control instruments placed on the market before 1 January 2021. | Expired on 31 December 2020 |



| 41 | Lead as a thermal stabiliser in polyvinyl chloride (PVC) used as base material in amperometric, potentiometric and conductometric electrochemical sensors which are used in in-vitro diagnostic medical devices for the analysis of blood and other body fluids and body gases. | Valid only for Product Category 8 In-Vitro Expired 31 March 2022 |
|-----|---|---|
| 41a | Lead as a thermal stabilizer in polyvinyl chloride (PVC) used as base material in amperometric, potentiometric and conductometric electrochemical sensors which are used in in vitro diagnostic medical devices for the analysis of creatinine and blood urea nitrogen in whole blood. | Valid only for Product Category 8 In-Vitro Expired 31 December 2023 |
| | Applies to category 8 and expires on 31 December 2023. | |
| 42 | Mercury in electric rotating connectors used in intravascular ultrasound imaging systems capable of high operating frequency (greater than 50 MHz) modes of | Valid only for Product Categories 8 & 9 other than In-Vitro and Industrial monitoring & control instruments. |
| | operation. Expires on 30 June 2026 | Remains valid due to renewal request on 1 November 2024 |
| 43 | Cadmium anodes in Hersch cells for oxygen sensors used in industrial monitoring and control instruments, where sensitivity below 10 ppm is required. Expires on 15 July 2023. | Expired on 15 July 2023 |
| 44 | Cadmium in radiation tolerant video camera tubes designed for cameras with a centre resolution greater than 450 TV lines which are used in environments with ionising radiation exposure exceeding 100 Gy/hour and a total dose in excess of 100kGy. | Valid only for Product Categories 8 & 9 other than In-Vitro and Industrial monitoring & control instruments, as well as Category 9 Industrial monitoring & controls instruments. Expires 31 March 2027 |
| 45 | Bis(2-ethylhexyl) phthalate (DEHP) in ion-selective electrodes applied in point of care analysis of ionic substances present in human body fluids and/or in dialysate fluids. | Valid only for Product Categories 8 medical devices Expires on 21 July 2028 |
| 46 | Bis(2-ethylhexyl) phthalate (DEHP) in plastic components in MRI detector coils. | Valid only for Product Categories 8 medical devices Remains valid due to renewal request on 10 June 2022 |
| 47 | Bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP) in spare parts recovered from and used for the repair or refurbishment of medical devices, including in vitro diagnostic medical devices, and their accessories, provided that the reuse takes place in auditable closed-loop business-to-business return systems and that each reuse of parts is notified to the customer. | Valid only for Product Categories 8 medical devices Expires on 21 July 2028 |
| 48 | Lead in bismuth strontium calcium copper oxide (BSCCO) superconductor cables and wires and lead in electrical connections to these wires | Expires on 30 June 2027 |
| 49 | Mercury in melt pressure transducers for capillary rheometers at temperatures over 300 °C and pressures over 1,000 bar | Applies to category 9 Remains valid due to renewal request on 8 April 2024 |



Table B5 RoHS exemptions list which was referenced in the IPC-1752 v1.1 PDF form

Unique ID Authority == IPC Unique ID Identity == EL2006/690/EC IPC Revision == 1.0

This is the RoHS exemptions list which was referenced in the IPC-1752 v1.1 PDF. This list is included in the IPC 1752A standard to assist companies who want to import an IPC-1752 v1.1 XML file into their IPC 1752A software solution and to map any old RoHS exemptions declared in the IPC-1752 v1.1 XML file against the current list of valid RoHS exemptions.

| Identity | Description | |
|----------|---|--|
| 1 | Mercury in compact fluorescent lamps not exceeding 5 mg per lamp. | |
| 2a | Mercury in straight fluorescent lamps for general purposes not exceeding 10 mg in halophosphate lamps. | |
| 2b | Mercury in straight fluorescent lamps for general purposes not exceeding 5 mg in triphosphate lamps with a normal lifetime. | |
| 2c | Mercury in straight fluorescent lamps for general purposes not exceeding 8 mg in triphosphate lamps with long lifetime. | |
| 3 | Mercury in straight fluorescent lamps for special purposes. | |
| 4 | Mercury in other lamps not specifically mentioned in this Annex. | |
| 5 | Lead in glass of cathode ray tubes, electronic components and fluorescent tubes. | |
| 6a | Lead as an alloying element in steel containing up to 0.35 % lead by weight. | |
| 6b | Lead as an alloying element in aluminum containing up to 0.4 % lead by weight. | |
| 6c | Lead as an alloying element in copper containing up to 4 % lead by weight. | |
| 7a | Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85 % by weight or more lead). | |
| 7b | Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications. | |
| 7c | Lead in electronic ceramic parts (e.g. piezoelectronic devices). | |
| 8 | Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations. | |
| 9 | Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators. | |
| 9a | DecaBDE in polymeric applications. | |
| 9b | Lead in lead-bronze bearing shells and bushes. | |
| 11 | Lead used in compliant pin connector systems. | |
| 12 | Lead as a coating material for a thermal conduction module c-ring. | |
| 13a | Lead in optical and filter glass. | |
| 13b | Cadmium in optical and filter glass. | |
| 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. | |
| 15 | Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages. | |
| 16 | Lead in linear incandescent lamps with silicate coated tubes. | |
| 17 | Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications. | |
| 18 | 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 (BaSi2O5:Pb) as well as when used as specialty lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba)2MgSi2O7:Pb). | |
| 19 | Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact Energy Saving Lamps (ESL). | |
| 20 | Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD). | |
| 21 | Lead and cadmium in printing inks for the application of enamels on borosilicate glass. | |
| 22 | Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fiber optic communications systems. | |
| 23 | Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm or less with copper lead frames. | |
| 24 | Lead in solders for the soldering to machined through-hole discoidal and planar array ceramic multilayer capacitors. | |



| 25 | Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes. |
|----|---|
| 26 | Lead oxide in the glass envelope of Black Light Blue (BLB) lamps. |
| 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. |
| 28 | Hexavalent chromium in corrosion preventive coatings of unpainted metal sheetings and fasteners used for corrosion protection and Electromagnetic Interference Shielding in equipment falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Exemption granted until 1 July 2007. |
| 29 | Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC (*). |



Table B6 ELV exemptions listed in Commission Directive 2016/774 published 18 May 2016

Unique ID Authority == IPC Unique ID Identity == EL2016/774 IPC Revision == 1.0

The list of ELV exemptions in Commission Directive 2011/37/EU is divided into groups of exemptions which can be claimed for specific substance applications. For example, the following extract from Commission Directive 2011/37/EU states that exemptions 1(a) and 1(b) can be claimed for the substance application "Lead as an alloying element".

| Lead | Lead as an alloying element | | | | |
|-------|--|---|--|--|--|
| 1(a). | Steel for machining purposes and batch hot dip galvanised steel components containing up to 0,35 % lead by weight | | | | |
| 1(b). | Continuously galvanised steel sheet containing up to 0,35 % lead by weight | Vehicles type approved before 1 January 2016 and spare parts for these vehicles | | | |

For clarity, the substance application is included at the beginning of description text for each exemption, separated by a colon ":".

| Identity | Description | Scope and expiry date |
|----------|---|---|
| Lead | | |
| 1(a) | Lead as an alloying element: Steel for machining purposes and batch hot dip galvanised steel components containing up to 0,35% lead by weight | |
| 1(b) | Lead as an alloying element: Continuously galvanised steel sheet containing up to 0,35% lead by weight | Vehicles type-approved before 1 January 2016 and spare parts for these vehicles |
| 2(a) | Lead as an alloying element: Aluminium for machining purposes with a lead content up to 2% by weight | As spare parts for vehicles put on the market before 1 July 2005 |
| 2(b) | Lead as an alloying element: Aluminium with a lead content up to 1,5% by weight | As spare parts for vehicles put on the market before 1 July 2008 |
| 2(c) | Lead as an alloying element: Aluminium with a lead content up to 0,4% by weight | This exemption shall be reviewed in 2015. |
| 3 | Lead as an alloying element: Copper alloy containing up to 4% lead by weight | This exemption shall be reviewed in 2015. |
| 4(a) | Lead as an alloying element: Bearing shells and bushes | As spare parts for vehicles put on the market before 1 July 2008 |
| 4(b) | Lead as an alloying element: Bearing shells and bushes in engines, transmissions and air conditioning compressors | Spare parts for vehicles put on the market before 1 July 2011 |
| 5 | Lead and lead compounds in components: Batteries | This exemption shall be reviewed in 2015. |
| 6 | Lead and lead compounds in components: Vibration dampers | Vehicles type-approved before 1 January 2016 and spare parts for these vehicles |
| 7(a) | Lead and lead compounds in components: Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings | As spare parts for vehicles put on the market before 1 July 2005 |
| 7(b) | Lead and lead compounds in components: Vulcanising agents and stabilisers for elastomers in brake hoses, fuel hoses, air ventilation hoses, elastomer/metal parts in the chassis applications, and engine mountings containing up to 0,5% lead by weight | As spare parts for vehicles put on the market before 1 July 2006 |
| 7(c) | Lead and lead compounds in components: Bonding agents for elastomers in powertrain applications containing up to 0,5% lead by weight | As spare parts for vehicles put on the market before 1 July 2009 |
| 8(a) | Lead and lead compounds in components: Lead in solders to attach electrical and electronic components to electronic circuit boards and lead in finishes on terminations of components other than electrolyte aluminium capacitors, on component pins and on electronic circuit boards | Vehicles type-approved before 1 January 2016 and spare parts for these vehicles |



| | | _ | | | |
|-----------|---|---|--|--|--|
| 8(b) | Lead and lead compounds in components: Lead in solders in electrical applications other than soldering on electronic circuit boards or on glass | Vehicles type-approved before 1 January 2011 and spare parts for these vehicles | | | |
| 8(c) | Lead and lead compounds in components: Lead in finishes on terminals of electrolyte aluminium capacitors | Vehicles type-approved before 1 January 2013 and spare parts for these vehicles | | | |
| 8(d) | Lead and lead compounds in components: Lead used in soldering on glass in mass airflow sensors | Vehicles type-approved before 1 January 2015 and spare parts of such vehicles | | | |
| 8(e) | Lead and lead compounds in components: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead) | This exemption shall be reviewed in 2019. | | | |
| 8(f)(a) | Lead and lead compounds in components: Lead in compliant pin connector systems | Vehicles type-approved before 1 January 2017 and spare parts for these vehicles | | | |
| 8(f)(b) | Lead and lead compounds in components: Lead in compliant pin connector systems other than the mating area of vehicle harness connectors | This exemption shall be reviewed in 2019. | | | |
| 8(g) | Lead and lead compounds in components: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages | This exemption shall be reviewed in 2019 | | | |
| 8(h) | Lead and lead compounds in components: Lead in solder to attach heat spreaders to the heat sink in power semiconductor assemblies with a chip size of at least 1 cm2 of projection area and a nominal current density of at least 1 A/mm2 of silicon chip area | Vehicles type-approved before 1 January 2016 and spare parts for these vehicles | | | |
| 8(i) | Lead and lead compounds in components: Lead in solders in electrical glazing applications on glass except for soldering in laminated glazing | Vehicles type-approved before 1 January 2016 and spare parts for these vehicles | | | |
| 8(j) | Lead and lead compounds in components: Lead in solders for soldering in laminated glazing | Vehicles type-approved before 1 January 2020 and spare parts for these vehicles | | | |
| 9 | Lead and lead compounds in components: Valve seats | As spare parts for engine types developed before 1 July 2003 | | | |
| 10(a) | Lead and lead compounds in components: Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: - glass in bulbs and glaze of spark plugs, - dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d). | | | | |
| 10(b) | Lead and lead compounds in components: Lead in PZT based dielectric ceramic materials of capacitors being part of integrated circuits or discrete semiconductors | | | | |
| 10(c) | Lead and lead compounds in components: Lead in dielectric ceramic materials of capacitors with a rated voltage of less than 125 V AC or 250 V DC | Vehicles type approved before 1 January 2016 and spare parts for these vehicles | | | |
| 10(d) | Lead and lead compounds in components: Lead in the dielectric ceramic materials of capacitors compensating the temperature-related deviations of sensors in ultrasonic sonar systems | Vehicles type-approved before 1 January 2017 and spare parts for these vehicles | | | |
| 11 | Lead and lead compounds in components: Pyrotechnic initiators | Vehicles type approved before 1 July 2006 and spare parts for these vehicles | | | |
| 12 | Lead and lead compounds in components: Lead-containing thermoelectric materials in automotive electrical applications to reduce CO2 emissions by recuperation of exhaust heat | Vehicles type approved before 1 January 2019 and spare parts for these vehicles | | | |
| Hexavalen | Hexavalent chromium | | | | |
| 13(a) | Hexavalent chromium: Corrosion preventive coatings | As spare parts for vehicles put on the market before 1 July 2007 | | | |
| 13(b) | Hexavalent chromium: Corrosion preventive coatings related to bolt and nut assemblies for chassis applications | As spare parts for vehicles put on the market before 1 July 2008 | | | |
| 14 | Hexavalent chromium: As an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators in motor-caravans up to 0,75 weight-% in the cooling solution except where the use of other cooling technologies is practicable (i.e. available on the market for the application in motor caravans) and does not lead to negative environmental, health and/or consumer safety impacts | | | | |



Mercury

15(a) Mercury: Discharge lamps for headlight application

Vehicles type approved before 1 July 2012 and spare parts for these vehicles

Vehicles type approved before 1 July 2012 and spare parts for these vehicles

Vehicles type approved before 1 July 2012 and spare parts for these vehicles

Cadmium

Cadmium: Batteries for electrical vehicles

As spare parts for vehicles put on the market before 31 December 2008



Table B7 new substances added to Annex II of the RoHS Directive by Commission Delegated Directive 2015/863 published 4 June 2015

Unique ID Authority == IPC Unique ID Identity == EUROHS-1506 QueryList Revision == 2.0

On 4 June 2015 the European Commission published Delegated Directive 2015/863 which officially adds 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 from 22 July 2019, except for Medical Devices (Category 8) and Monitoring and Control Instruments (Category 9) which must comply with these additional substance restrictions from 22 July 2021. The IPC 1752A Committee Meeting on 23 February 2015 decided that this should be reported as a separate Substance Category List.

| Identity | Substance Category Name | Threshold | |
|----------|------------------------------------|--|--|
| 00001 | Bis(2-ethylhexyl) phthalate (DEHP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 00002 | Butyl benzyl phthalate (BBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 00003 | Dibutyl phthalate (DBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 00004 | Diisobutyl phthalate (DIBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |

Class A QueryList statements

| Identity | Statement |
|----------|---|
| 01 | Product(s) meets EU RoHS requirements |
| 02 | Product(s) is obsolete, no information is available |
| 03 | Product(s) is unknown, no information is available |
| 04 | Product(s) meets EU RoHS requirements by application of the selected exemption(s) |



Table B8 consolidated list of substances in Annex II of the RoHS Directive as provided in Commission Delegated Directive 2015/863 published 4 June 2015

Unique ID Authority == IPC
Unique ID Identity == EUROHS-1907
QueryList Revision == 1.0

On 4 June 2015 the European Commission published Delegated Directive 2015/863 which officially adds 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 (Category 8) and Monitoring and Control Instruments (Category 9) which must comply with these additional substance restrictions by 22 July 2021. The IPC 1752A Committee Meeting on 30 January 2019 decided that an additional consolidated list of all ten substances should be added to these Appendices for companies who want to report against all ten substances in one Substance Category List.

The existing EUROHS-0508 list remains as a separate list in these Appendices as this allows companies to collect data from their supply chains for the original 6 EU RoHS substances which are currently the only substances restricted under other global RoHS regulations in China, India, and other countries around the world where their legislation does not immediately synchronize with the EU regulations. The existing EUROHS-1506 list remains as a separate list in these Appendices as this allows companies in Categories 8 & 9 to continue collecting data on the 4 phthalate substances separately from EUROHS-0508 since the phthalate substances are not restricted for Categories 8 & 9 until July 2021.

| Identity | Substance Category Name | Threshold | |
|----------|--|---|--|
| 00001 | Cadmium/cadmium compounds | 0.01% by weight (100 ppm) of homogeneous materials | |
| 00002 | Polybrominated biphenyls (PBBs) | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| 00003 | Polybrominated diphenyl ethers (PBDEs) | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| 00004 | Chromium VI compounds | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| 00005 | Lead/lead compounds | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| 00006 | Mercury/mercury compounds | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| 00007 | Bis(2-ethylhexyl) phthalate (DEHP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 80000 | Butyl benzyl phthalate (BBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 00009 | Dibutyl phthalate (DBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |
| 00010 | Diisobutyl phthalate (DIBP) | 0.1% by weight (1 000 ppm) of homogenous materials | |

Class A QueryList statements

| Identity | Statement |
|----------|---|
| 01 | Product(s) meets EU RoHS requirements without any exemptions |
| 02 | Product(s) moets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may also apply) |
| 03 | Product(s) meets EU RoHS requirements by application of the selected exemption(s) |
| 04 | Product(s) does not meet EU RoHS requirements and is not under exemptions |
| 05 | Product(s) is obsolete, no information is available |
| 06 | Product(s) is unknown, no information is available |

Note – Due to EU RoHS Annex III Exemption #7(b) having fully expired as of July 21, 2024, the Class A Query Statement #02 is no longer valid and shall not be used in the context of IPC-1752A Class A declarations.



Appendix C

JIG-101 Material Composition Declaration for Electronic Products List

NOTE 1: For Class C and Class D reporting, the latest Joint Industry Guide list of substances / categories will be provided. This will be periodically updated as changes are made to this standard. As per the JIG-101 Edition 4.1 in Section 4:

"This Guide establishes three criteria that determine whether substances shall be declared. The resulting declarable substance list is based on these criteria which the industry has determined justify disclosure when these material/substances are present in electrotechnical products in amounts that exceed their specified threshold levels.

Criteria 1 – R (Regulated)

Substances that are subject to enacted legislation that (a) prohibits their use; or (b) restricts their use; or (c) requires reporting or results in other regulatory effects (e.g. labeling) and where the substance-specific effective date is currently in effect or scheduled to go into effect within the next 24 months.

<u>Criteria 2 – A (For Assessment Only)</u>

Substances that are likely to be subject to enacted legislation where the substance-specific effective dates of the regulatory requirements are uncertain.

Criteria 3 – I (For Information Only)

Substances that are not regulated but where there is a recognized market requirement for reporting their content in electrotechnical products. Reporting is used to facilitate company assessment regarding widely adopted industry environmental agreements or standards.

The criteria are listed in their order of priority. Substances that might be covered by more than one of these criteria will enter the declarable substance list only once, referring to the criteria with the highest order of priority and its requirements. The requirement to declare a substance in Annex A does not necessarily indicate a ban or restriction of that substance."

Further information on the JIG-101 can be found at http://www.ce.org/Standards/listings.asp.

In most cases, the import/export of IPC 1752A Class C and Class D XML files between different software systems (e.g. which may be in use at different companies, different divisions within the same company etc) relies on being able to match the alphanumeric string for the Substance Category Name which is used to identify the substances / categories listed in JIG-101 Edition 4.1. Wherever possible, the Substance Category Names in Table C1 are reproduced exactly as they are written in JIG-101 Edition 4.1. Where the same substance / category is listed multiple times in JIG-101, the substance category has been extended in Table C1 to produce unique Substance Category Names. For example, 'Cadmium/cadmium compounds' is listed twice in JIG-101 Edition 4.1 and in Table C1 this substance category is extended to produce the unique Substance Category Names 'Cadmium/cadmium compounds- All, except batteries' and 'Cadmium/cadmium compounds- Batteries'.

NOTE 2: In addition to including new substance groups (for example, new SVHCs added to the REACH Candidate List in December 2011), the JIG 4.1 published May 2012 also includes changes to the name and/or threshold for the following Substance/Category entries:

| JIG 4.0 Substance/Category | JIG 4.1 Substance/Category | JIG 4.0 Threshold Level (Reporting level) | JIG 4.1 Threshold Level (Reporting level) |
|--|--|--|---|
| Polyvinyl chloride (PVC) | Polyvinyl chloride (PVC) and PVC Copolymers | 0.1% by weight (1 000 ppm) of the product | 0.1% total chlorine content by weight (1 000 ppm) in the plastic material |
| Brominated flame retardants (other than PBBs, PBDEs, or HBCDD) | Brominated flame retardants (other than PBBs, PBDEs, or HBCDD) | 0.1% by weight (1 000 ppm) of plastic material | 0.1% total bromine content by weight (1 000 ppm) in the plastic material |

The JIG 4.1 name and/or threshold for these Substance/Category entries are included in Table C3 below.



Table C1 JIG-101 Edition 4.1, May, 2012 - Regulated

Unique ID Authority == IPC Unique ID Identity == JIG-101_Ed_4.1-R QueryList Revision == 1.0

| Substance Category Name | Threshold | |
|---|---|--|
| Asbestos | Intentionally added | |
| Azocolourants and azodyes which form certain aromatic amines | 0.003% by weight (30 ppm) of the finished textile/leather product | |
| 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) | 0.1% by weight (1 000 ppm) of the product | |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 0.1% by weight (1 000 ppm) of the product | |
| Bis(2-methoxyethyl) ether | 0.1% by weight (1 000 ppm) of the product | |
| Bis(2-methoxyethyl) phthalate | 0.1% by weight (1 000 ppm) of the product | |
| Boric acid | 0.1% by weight (1 000 ppm) of the product | |
| Cadmium/cadmium compounds- All, except batteries | 0.01% by weight (100 ppm) of homogeneous materials | |
| Cadmium/cadmium compounds- Batteries | 0.0005 % by weight (5 ppm) of battery | |
| Chromium VI compounds | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| Cobalt dichloride (CoCl2) | 0.1% by weight (1 000 ppm) of the product | |
| Diarsenic pentoxide | 0.1% by weight (1 000 ppm) of the product | |
| Diarsenic trioxide | 0.1% by weight (1 000 ppm) of the product | |
| Dibutyltin (DBT) compounds | 0.1% by weight (1 000 ppm) of tin in a material | |
| Dioctyltin (DOT) compounds | 0.1% by weight (1 000 ppm) of tin in a material | |
| 2,2'-dichloro-4,4'-methylenedianiline (MOCA) | 0.1% by weight (1 000 ppm) of the product | |
| N,N-dimethylacetamide (DMAC) | 0.1% by weight (1 000 ppm) of the product | |
| Dimethyl fumarate | 0.00001% by weight (0.1 ppm) in a material | |
| Disodium tetraborate, anhydrous | 0.1% by weight (1 000 ppm) of the product | |
| Fluorinated greenhouse gases (PFC, SF6, HFC) | Intentionally added | |
| Formaldehyde- Composite wood | Intentionally added | |
| Formaldehyde- Textiles | 0.0075% by weight (75 ppm) of textile product | |
| Hexabromocyclododecane (HBCDD) and all major diastereoisomers | 0.1% by weight (1 000 ppm) of the product | |
| Lead/lead compounds- All, except batteries | 0.1% by weight (1 000 ppm) of homogeneous materials | |
| Lead/lead compounds in consumer products designed or intended primarily for children 12 years of age or younger | 0.01% by weight (300 ppm) of children's product | |
| Lead/lead compounds in paint and similar surface coatings of toys and other articles intended for use by children | 0.009% by weight (90 ppm) of surface coating | |
| Lead/lead compounds in cables/cords with thermoset or thermoplastic coatings | 0.03% by weight (300 ppm) of surface coating | |
| Lead/lead compounds- Batteries | 0.004% by weight (40 ppm) of battery | |
| Lead chromate | 0.1% by weight (1 000 ppm) of the product | |
| Lead chromate molybdate sulfate red (C.I. Pigment Red 104) | 0.1% by weight (1 000 ppm) of the product | |
| Lead sulfochromate yellow (C.I. Pigment Yellow 34) | 0.1% by weight (1 000 ppm) of the product | |
| Mercury/mercury compounds- All, except batteries | Intentionally added or 0.1 % (1000 ppm) of homogeneous material | |
| ercury/mercury compounds- Batteries 0.0001% by weight (1 ppm) of battery | | |
| lickel, where prolonged skin contact is expected Intentionally added | | |
| Ozone depleting substances | Intentionally added | |
| Pentazinc chromate octahydroxide | 0.1% by weight (1 000 ppm) of the product | |
| Perchlorates | 0.0000006% by weight (0.006 ppm) of the product | |
| Perfluorooctane sulfonate (PFOS) | Intentionally added | |
| Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) | Intentionally added | |



| Bis (2-ethylhexyl) phthalate (DEHP) | 0.1% by weight (1 000 ppm) of the product |
|--|--|
| Dibutyl phthalate (DBP) | 0.1% by weight (1 000 ppm) of the product |
| Benzyl butyl phthalate (BBP) | 0.1% by weight (1 000 ppm) of the product |
| Diisobutyl phthalate (DIBP) | 0.1% by weight (1 000 ppm) of the product |
| Selected Phthalates Group 1 (BBP, DBP, DEHP) | 0.1% by weight (1 000 ppm) in plasticized material |
| Selected Phthalates Group 2 (DIDP, DINP, DNOP) | 0.1% by weight (1 000 ppm) in plasticized material |
| Polybrominated biphenyls (PBBs) | 0.1% by weight (1 000 ppm) in homogeneous material |
| Polybrominated diphenylethers (PBDEs) | 0.1% by weight (1 000 ppm) in homogeneous material |
| Polychlorinated biphenyls (PCBs) and specific substitutes | Intentionally added |
| Polychlorinated terphenyls (PCTs) | Intentionally added |
| Polychlorinated naphthalenes (more than 3 chlorine atoms) | Intentionally added |
| Potassium hydroxyoctaoxodizincate dichromate | 0.1% by weight (1 000 ppm) of the product |
| Radioactive substances | Intentionally added |
| Refractory Ceramic Fibres, Aluminosilicate | 0.1% by weight (1 000 ppm) of the product |
| Refractory Ceramic Fibres, Zirconia Aluminosilicate | 0.1% by weight (1 000 ppm) of the product |
| Shortchain chlorinated paraffins (C10 - C13) | 0.1% by weight (1 000 ppm) of the product |
| Strontium chromate | 0.1% by weight (1 000 ppm) of the product |
| Tetraboron disodium heptaoxide, hydrate | 0.1% by weight (1 000 ppm) of the product |
| 4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) | 0.1% by weight (1 000 ppm) of the product |
| Tri-substituted organnostannic compounds | 0.1% by weight (1 000 ppm) of tin in a material |
| Tributyl tin oxide (TBTO) Intentionally added or 0.1 % by weight (1 the product | |
| Tris (2-chloroethyl) phosphate (TCEP) | 0.1% by weight (1 000 ppm) of the product |
| | |

Table C2 JIG-101 Edition 4.1, May, 2012 - For Assessment Only

Unique ID Authority == IPC Unique ID Identity == JIG-101_Ed_4.1-A QueryList Revision == 1.0

| Substance Category Name | Threshold |
|---|---|
| 4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) | 0.1% by weight (1 000 ppm) of the product |

Table C3 JIG-101 Edition 4.1, May, 2012 - For Information Only

Unique ID Authority == IPC Unique ID Identity == JIG-101_Ed_4.1-I QueryList Revision == 1.0

| Substance Category Name | Threshold | |
|---|---|--|
| Beryllium oxide (BeO) | 0.1% by weight (1 000 ppm) of the product | |
| Brominated flame retardants (other than PBBs, PBDEs or HBCDD) | 0.1% total bromine content by weight (1 000 ppm) in the plastic material | |
| Brominated flame retardants (other than PBBs, PBDEs or HBCDD) - PWB | 0.09% total bromine content by weight (900 ppm) in the laminate | |
| Chlorinated flame retardants | 0.1% total chlorine content by weight (1 000 ppm) in the plastic material | |
| Chlorinated flame retardants – PWB | 0.09% total chlorine content by weight (900 ppm) in the laminate | |
| Polyvinyl chloride (PVC) and PVC Copolymers | 0.1% total chlorine content by weight (1 000 ppm) in the plastic material | |



Appendix D

REACH Candidate List Substances

D1 REACH Candidate List Substances, 21 January 2025

Unique ID Authority == IPC
Unique ID Identity == EUREACH-0125
QueryList Revision == 1.0

The REACH Candidate List is updated periodically by the European Chemicals Agency (ECHA). A list of these substances can be found at the ECHA website (at publication): http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

The process of the last of the

The Unique ID for each date issue of the REACH Candidate List is provided in the table below and includes all substance category names that were included in the Candidate List up to that date. For example, Unique ID == EUREACH-0310 includes the 30 substance category names that were included in the REACH Candidate List as at 30 March 2010.

NOTE 1: In the June 2012 update to the REACH Candidate List the ECHA consolidated the entries for Aluminosilicate Refractory Ceramic Fibres and Zirconia Aluminosilicate Refractory Ceramic Fibres which were included in the List in January 2010 and also in December 2011. The ECHA Press Release¹ notes that the scope of the more recent Aluminosilicate Refractory Ceramic Fibres and Zirconia Aluminosilicate Refractory Ceramic Fibres entries in the December 2011 List fully covers the earlier entries in the January 2010 List, and so these earlier entries are now consolidated into the December 2011 List. The REACH Candidate List published by ECHA now has only one entry for Aluminosilicate Refractory Ceramic Fibres and only one entry for Zirconia Aluminosilicate Refractory Ceramic Fibres, and these entries are included in the December 2011 List. The January 2010 List no longer includes Refractory Ceramic Fibres, Zirconia Aluminosilicate and Refractory Ceramic Fibres, Aluminosilicate.

NOTE 2: IPC-1752A with Amendment 1 was published November 2012 and supersedes IPC-1752A February 2010. Amendment 1 amends Section 7.2, Rule 29 and allows the use of a CAS number to uniquely identify a REACH Candidate List substance in a Class C XML. All CAS numbers published by ECHA for a REACH Candidate List substance are included in the table below to enable software systems to make use of this amended Rule 29, as required. Note that ECHA has not published CAS numbers for some REACH Candidate List Substances.

NOTE 3: On 10 September the European Court of Justice (ECJ) published their ruling on how notification obligations in REACH Article 7(2) and communication obligations in REACH Article 33 must be interpreted in the case of a complex product which contains several articles. The ECJ press release summarizing the ruling is published at http://curia.europa.eu/jcms/upload/docs/application/pdf/2015-09/cp150100en.pdf. On 17 December 2015 the ECHA published updated guidance on requirements for substances in articles which confirms that "the substance concentration threshold of 0.1% (w/w) applies to every article supplied. This threshold applies to each article of an object made up of more than one article, which are joined or assembled together." The ECHA guidance is published at http://echa.europa.eu/documents/10162/13632/articles_en.pdf. In view of this, the January 2016 update to these Appendices, and all subsequent updates, includes a new threshold of "0.1% by weight (1 000 ppm) of any article" in place of the old threshold previously used of "0.1% by weight (1 000 ppm) of the product".

http://echa.europa.eu/web/guest/view-article/-/journal_content/6fd1bfe8-8618-4b9b-b0ef-30234108c7f4



Table D1 REACH Candidate List Substances with CAS numbers as provided by ECHA

| Included 00001 00002 00003 | in REACH Candidate List on 28 October 2008: Unique Triethyl arsenate Sodium dichromate, dihydrate Lead hydrogen arsenate Hexabromocyclododecane (HBCDD) and all major | 15606-95-8 7789-12-0 10588-01-9 7784-40-9 | 0.1% by weight (1 000 ppm) of any article 0.1% by weight (1 000 ppm) of any article |
|--|--|--|---|
| 00002 | Sodium dichromate, dihydrate Lead hydrogen arsenate | 7789-12-0 10588-01-9 7784-40-9 | of any article 0.1% by weight (1 000 ppm) |
| | Lead hydrogen arsenate | 10588-01-9 7784-40-9 | |
| 00003 | | | |
| | Heyahromocyclododecane (HBCDD) and all major | 25627 00 4 | 0.1% by weight (1 000 ppm) of any article |
| 00004 | 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 |
| 00005 | Dibutyl phthalate (DBP) | 84-74-2 | 0.1% by weight (1 000 ppm) of any article |
| 00006 | Diarsenic trioxide | 1327-53-3 | 0.1% by weight (1 000 ppm) of any article |
| 00007 | Diarsenic pentoxide | 1303-28-2 | 0.1% by weight (1 000 ppm) of any article |
| 80000 | Tributyl tin oxide (TBTO) | 56-35-9 | 0.1% by weight (1 000 ppm) of any article |
| 00009 | Bis (2-ethylhexyl) phthalate (DEHP) | 117-81-7 | 0.1% by weight (1 000 ppm) of any article |
| 00010 | Benzyl butyl phthalate (BBP) | 85-68-7 | 0.1% by weight (1 000 ppm) of any article |
| 00011 | Anthracene | 120-12-7 | 0.1% by weight (1 000 ppm) of any article |
| 00012 | Shortchain Chlorinated Paraffins (C10 - C13) | 85535-84-8 | 0.1% by weight (1 000 ppm) of any article |
| 00013 | 5-tert-butyl-2,4,6-trinitro-m-xylene | 81-15-2 | 0.1% by weight (1 000 ppm) of any article |
| 00014 | 4,4'-Diaminodiphenylmethane | 101-77-9 | 0.1% by weight (1 000 ppm) of any article |
| 00015 | Cobalt dichloride (CoCl2) | 7646-79-9 | 0.1% by weight (1 000 ppm) of any article |
| Included | in REACH Candidate List on 13 January 2010: Unique | ID == EUREACH-0110 | |
| | Refractory Ceramic Fibres, Zirconia Aluminosilicate see NOTE 3 | | 0.1% by weight (1 000 ppm) of any article |
| | Refractory Ceramic Fibres, Aluminosilicate see NOTE 3 | | 0.1% by weight (1 000 ppm) of any article |
| 00016 | Tris (2-chloroethyl) phosphate (TCEP) | 115-96-8 | 0.1% by weight (1 000 ppm) of any article |
| 00017 | Coal tar pitch, high temperature | 65996-93-2 | 0.1% by weight (1 000 ppm) of any article |
| 00018 | Lead sulfochromate yellow (C.I. Pigment Yellow 34) | 1344-37-2 | 0.1% by weight (1 000 ppm) of any article |
| 00019 | Lead chromate molybdate sulfate red (C.I. Pigment Red 104) | 12656-85-8 | 0.1% by weight (1 000 ppm) of any article |
| 00020 | Lead chromate | 7758-97-6 | 0.1% by weight (1 000 ppm) of any article |
| 00021 | Diisobutyl phthalate (DIBP) | 84-69-5 | 0.1% by weight (1 000 ppm) of any article |
| 00022 | Anthracene oil,anthracene paste, distn. Lights | 91995-17-4 | 0.1% by weight (1 000 ppm) of any article |
| 00023 | Anthracene oil,anthracene paste,anthracene fraction | 91995-15-2 | 0.1% by weight (1 000 ppm) of any article |
| 00024 | Anthracene oil,anthracene paste | 90640-81-6 | 0.1% by weight (1 000 ppm) of any article |
| 00025 | Anthracene oil, anthracene-low | 90640-82-7 | 0.1% by weight (1 000 ppm) of any article |



0.1% by weight (1 000 ppm) 00026 Anthracene oil 90640-80-5 of any article 0.1% by weight (1 000 ppm) 00027 2.4-Dinitrotoluene 121-14-2 of any article Included in REACH Candidate List on 30 March 2010: Unique ID == EUREACH-0310 0.1% by weight (1 000 ppm) 00028 Acrylamide 79-06-1 of any article Included in REACH Candidate List on 18 June 2010: Unique ID == EUREACH-0610 Revision = 2.0 0.1% by weight (1 000 ppm) 00029 Sodium chromate 7775-11-3 of any article 0.1% by weight (1 000 ppm) 00030 Potassium chromate 7789-00-6 of any article 0.1% by weight (1 000 ppm) 00031 Ammonium dichromate 7789-09-5 of any article 0.1% by weight (1 000 ppm) 00032 Potassium dichromate 7778-50-9 of any article 0.1% by weight (1 000 ppm) 00033 Tetraboron disodium heptaoxide, hydrate 12267-73-1 of any article 1303-96-4 1330-43-4 0.1% by weight (1 000 ppm) 00034 Disodium tetraborate, anhydrous of any article 12179-04-3 12267-73-1 10043-35-3 0.1% by weight (1 000 ppm) 00035 Boric acid 11113-50-1 of any article 0.1% by weight (1 000 ppm) 00036 Trichloroethylene 79-01-6 of any article Included in REACH Candidate List on 15 December 2010: Unique ID == EUREACH-1210 0.1% by weight (1 000 ppm) 00037 Chromium Trioxide 1333-82-0 of any article 7738-94-5 0.1% by weight (1 000 ppm) 00038 Acids generated from chromium trioxide and their oligomers of any article 13530-68-2 0.1% by weight (1 000 ppm) 00039 110-80-5 2-Ethoxyethanol of any article 0.1% by weight (1 000 ppm) 00040 2-Methoxyethanol 109-86-4 of any article 0.1% by weight (1 000 ppm) 00041 Cobalt(II) Diacetate 71-48-7 of any article 0.1% by weight (1 000 ppm) 00042 Cobalt(II) Carbonate 513-79-1 of any article 0.1% by weight (1 000 ppm) 00043 Cobalt(II) Dinitrate 10141-05-6 of any article 0.1% by weight (1 000 ppm) 00044 Cobalt(II) Sulphate 10124-43-3 of any article Included in REACH Candidate List on 20 June 2011: Unique ID == EUREACH-0611 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear 0.1% by weight (1 000 ppm) 00045 68515-42-4 alkyl esters (DHNUP) of any article 0.1% by weight (1 000 ppm) 00046 1,2,3-Trichloropropane 96-18-4 of any article 0.1% by weight (1 000 ppm) 00047 872-50-4 1-Methyl-2-pyrrolidone of any article 302-01-2 0.1% by weight (1 000 ppm) 00048 Hydrazine of any article 7803-57-8 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, 0.1% by weight (1 000 ppm) 00049 71888-89-6 C7-rich (DIHP) of any article 0.1% by weight (1 000 ppm) 00050 Strontium chromate 7789-06-2 of any article 0.1% by weight (1 000 ppm) 00051 2-Ethoxyethyl acetate 111-15-9 of any article



| | | | 0.1% by weight (1 000 ppm) |
|---------|---|-------------------|--|
| 00052 | 2,2'-dichloro-4,4'-methylenedianiline | 101-14-4 | of any article |
| 00053 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 0.1% by weight (1 000 ppm of any article |
| 00054 | Bis(2-methoxyethyl) ether | 111-96-6 | 0.1% by weight (1 000 ppm of any article |
| 00055 | Calcium arsenate | 7778-44-1 | 0.1% by weight (1 000 ppm of any article |
| 00056 | Potassium hydroxyoctaoxodizincatedichromate | 11103-86-9 | 0.1% by weight (1 000 ppm of any article |
| 00057 | Lead dipicrate | 6477-64-1 | 0.1% by weight (1 000 ppm of any article |
| 00058 | N,N-dimethylacetamide | 127-19-5 | 0.1% by weight (1 000 ppm of any article |
| 00059 | Arsenic acid | 7778-39-4 | 0.1% by weight (1 000 ppm of any article |
| 00060 | 2-Methoxyaniline; o-Anisidine | 90-04-0 | 0.1% by weight (1 000 ppm of any article |
| 00061 | Trilead diarsenate | 3687-31-8 | 0.1% by weight (1 000 ppm of any article |
| 00062 | 1,2-dichloroethane | 107-06-2 | 0.1% by weight (1 000 ppm of any article |
| 00063 | Pentazinc chromate octahydroxide | 49663-84-5 | 0.1% by weight (1 000 ppm of any article |
| 00064 | Formaldehyde, oligomeric reaction products with aniline | 25214-70-4 | 0.1% by weight (1 000 ppm of any article |
| 00065 | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | 0.1% by weight (1 000 ppm of any article |
| 00066 | Lead diazide, Lead azide | 13424-46-9 | 0.1% by weight (1 000 ppm of any article |
| 00067 | Phenolphthalein | 77-09-8 | 0.1% by weight (1 000 ppm of any article |
| 00068 | Dichromium tris(chromate) | 24613-89-6 | 0.1% by weight (1 000 ppm of any article |
| 00069 | Lead styphnate | 15245-44-0 | 0.1% by weight (1 000 ppm of any article |
| 00070 | Zirconia Aluminosilicate Refractory Ceramic Fibres | (See Appendix D2) | 0.1% by weight (1 000 ppm of any article |
| 00071 | Aluminosilicate Refractory Ceramic Fibres | (See Appendix D2) | 0.1% by weight (1 000 ppm of any article |
| Include | d in REACH Candidate List on 18 June 2012: Unique ID = | = EUREACH-0612 | |
| 00072 | Diboron trioxide | 1303-86-2 | 0.1% by weight (1 000 ppm of any article |
| 00073 | Lead(II) bis(methanesulfonate) | 17570-76-2 | 0.1% by weight (1 000 ppm of any article |
| 00074 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) | 112-49-2 | 0.1% by weight (1 000 ppm of any article |
| 00075 | 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 0.1% by weight (1 000 ppm of any article |
| 00076 | Formamide | 75-12-7 | 0.1% by weight (1 000 ppm of any article |
| 00077 | 1,3,5-tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) | 2451-62-9 | 0.1% by weight (1 000 ppm of any article |
| 00078 | 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (B-TGIC) | 59653-74-6 | 0.1% by weight (1 000 ppm of any article |
| 00079 | 4,4'-bis(dimethylamino)benzophenone (Michler's ketone) | 90-94-8 | 0.1% by weight (1 000 ppm of any article |



0.1% by weight (1 000 ppm) 08000 N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) 101-61-1 of any article [4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-0.1% by weight (1 000 ppm) 00081 ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with 2580-56-5 of any article greater than or equal to 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] a,a-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with greater than or equal to 0.1% by weight (1 000 ppm) 00082 6786-83-0 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base of any article (EC No. 202-959-2)] [4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-0.1% by weight (1 000 ppm) dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) 00083 548-62-9 [with greater than or equal to 0.1% of Michler's ketone (EC No. of any article 202-027-5) or Michler's base (EC No. 202-959-2)] 4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol [with 0.1% by weight (1 000 ppm) greater than or equal to 0.1% of Michler's ketone (EC No. 202-00084 561-41-1 of any article 027-5) or Michler's base (EC No. 202-959-2)] Included in REACH Candidate List on 19 December 2012: Unique ID == EUREACH-1212 0.1% by weight (1 000 ppm) 00085 8012-00-8 Pyrochlore, antimony lead yellow of any article 0.1% by weight (1 000 ppm) 00086 6-methoxy-m-toluidine (p-cresidine) 120-71-8 of any article 0.1% by weight (1 000 ppm) 00087 2058-94-8 Henicosafluoroundecanoic acid of any article Hexahydromethylphthalic anhydride [1], Hexahydro-4-25550-51-0 methylphthalic anhydride [2], Hexahydro-1-methylphthalic 19438-60-9 anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The 0.1% by weight (1 000 ppm) 00088 48122-14-1 individual isomers [2], [3] and [4] (including their cis- and transof any article 57110-29-9 stereo isomeric forms) and all possible combinations of the 34090-76-1 isomers [1] are covered by this entry] Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-85-42-7 0.1% by weight (1 000 ppm) 00089 dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] 13149-00-3 of any article isomer substances and all possible combinations of the cis- and 14166-21-3 trans-isomers [1] are covered by this entry] 0.1% by weight (1 000 ppm) 00090 Dibutyltin dichloride (DBTC) 683-18-1 of any article 0.1% by weight (1 000 ppm) 00091 Lead bis(tetrafluoroborate) 13814-96-5 of any article 0.1% by weight (1 000 ppm) 00092 I ead dinitrate 10099-74-8 of any article 0.1% by weight (1 000 ppm) 00093 Silicic acid, lead salt 11120-22-2 of any article 0.1% by weight (1 000 ppm) 00094 4-Aminoazobenzene 60-09-3 of any article 0.1% by weight (1 000 ppm) 00095 Lead titanium zirconium oxide 12626-81-2 of any article 0.1% by weight (1 000 ppm) 00096 Lead monoxide (lead oxide) 1317-36-8 of any article 0.1% by weight (1 000 ppm) 00097 o-Toluidine 95-53-4 of any article 0.1% by weight (1 000 ppm) 00098 143860-04-2 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine of any article Silicic acid (H2Si2O5), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); 0.1% by weight (1 000 ppm) 00099 68784-75-8 the substance is a member of the group entry of lead of any article compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008] 0.1% by weight (1 000 ppm) 00100 Trilead bis(carbonate)dihydroxide 1319-46-6 of any article 0.1% by weight (1 000 ppm) 00101 Furan 110-00-9 of any article 0.1% by weight (1 000 ppm) 00102 68-12-2 N,N-dimethylformamide of any article 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-0.1% by weight (1 000 ppm) 00103 defined substances and UVCB substances, polymers and (See Appendix D2) of any article homologues]



4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 0.1% by weight (1 000 ppm) 00104 covalently bound in position 4 to phenol, covering also UVCB-(See Appendix D2) of any article and well-defined substances which include any of the individual isomers or a combination thereof] 0.1% by weight (1 000 ppm) 00105 4,4'-methylenedi-o-toluidine 838-88-0 of any article 0.1% by weight (1 000 ppm) 00106 Diethyl sulphate 64-67-5 of any article 0.1% by weight (1 000 ppm) 00107 Dimethyl sulphate 77-78-1 of any article 0.1% by weight (1 000 ppm) 00108 Lead oxide sulfate 12036-76-9 of any article 0.1% by weight (1 000 ppm) 00109 Lead titanium trioxide 12060-00-3 of any article 0.1% by weight (1 000 ppm) 00110 Acetic acid, lead salt, basic 51404-69-4 of any article 0.1% by weight (1 000 ppm) 00111 [Phthalato(2-)]dioxotrilead 69011-06-9 of any article Bis(pentabromophenyl) ether (decabromodiphenyl ether; 0.1% by weight (1 000 ppm) 00112 1163-19-5 DecaBDE) of any article 0.1% by weight (1 000 ppm) 00113 N-methylacetamide 79-16-3 of any article 0.1% by weight (1 000 ppm) 00114 Dinoseb (6-sec-butyl-2,4-dinitrophenol) 88-85-7 of any article 0.1% by weight (1 000 ppm) 00115 629-14-1 1,2-Diethoxyethane of any article 0.1% by weight (1 000 ppm) 00116 Tetralead trioxide sulphate 12202-17-4 of any article 0.1% by weight (1 000 ppm) 00117 N-pentyl-isopentylphthalate 776297-69-9 of any article 0.1% by weight (1 000 ppm) 00118 Dioxobis(stearato)trilead 12578-12-0 of any article 0.1% by weight (1 000 ppm) 00119 Tetraethyllead 78-00-2 of any article 0.1% by weight (1 000 ppm) 00120 Pentalead tetraoxide sulphate 12065-90-6 of any article 0.1% by weight (1 000 ppm) 00121 Pentacosafluorotridecanoic acid 72629-94-8 of any article 0.1% by weight (1 000 ppm) 00122 Tricosafluorododecanoic acid 307-55-1 of any article 0.1% by weight (1 000 ppm) 00123 Heptacosafluorotetradecanoic acid 376-06-7 of any article 0.1% by weight (1 000 ppm) 00124 1-bromopropane (n-propyl bromide) 106-94-5 of any article 0.1% by weight (1 000 ppm) 00125 625-45-6 Methoxyacetic acid of any article 0.1% by weight (1 000 ppm) 00126 4-methyl-m-phenylenediamine (toluene-2,4-diamine) 95-80-7 of any article 0.1% by weight (1 000 ppm) 00127 75-56-9 Methyloxirane (Propylene oxide) of any article 0.1% by weight (1 000 ppm) 00128 12141-20-7 Trilead dioxide phosphonate of any article 0.1% by weight (1 000 ppm) 00129 97-56-3 o-aminoazotoluene of any article 1,2-Benzenedicarboxylic acid, dipentylester, branched and 0.1% by weight (1 000 ppm) 00130 84777-06-0 linear of any article 0.1% by weight (1 000 ppm) 00131 4,4'-oxydianiline and its salts 101-80-4 of any article 0.1% by weight (1 000 ppm) 00132 Orange lead (lead tetroxide) 1314-41-6 of any article 0.1% by weight (1 000 ppm) 00133 Biphenyl-4-ylamine 92-67-1 of any article 0.1% by weight (1 000 ppm) 00134 605-50-5 Diisopentylphthalate of any article 0.1% by weight (1 000 ppm) 00135 Fatty acids, C16-18, lead salts 91031-62-8 of any article 0.1% by weight (1 000 ppm) 00136 Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) 123-77-3 of any article 0.1% by weight (1 000 ppm) 00137 Sulfurous acid, lead salt, dibasic 62229-08-7 of any article



0.1% by weight (1 000 ppm) 20837-86-9 00138 Lead cyanamidate of any article Included in REACH Candidate List on 20 June 2013: Unique ID == EUREACH-0613 0.1% by weight (1 000 ppm) 00139 Cadmium 7440-43-9 of any article 0.1% by weight (1 000 ppm) 00140 Cadmium oxide (See Appendix D2) of any article 0.1% by weight (1 000 ppm) 00141 Pentadecafluorooctanoic acid (PFOA) 335-67-1 of any article 0.1% by weight (1 000 ppm) 00142 Ammonium pentadecafluorooctanoate (APFO) 3825-26-1 of any article 0.1% by weight (1 000 ppm) 00143 Dipentyl phthalate (DPP) 131-18-0 of any article 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated 0.1% by weight (1 000 ppm) 00144 (See Appendix D2) covering UVCB- and well-defined substances, polymers and of any article homologues, which include any of the individual isomers and/or combinations thereof] Included in REACH Candidate List on 16 December 2013: Unique ID == EUREACH-1213 Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-0.1% by weight (1 000 ppm) biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-00145 1937-37-7 of any article disulphonate (C.I. Direct Black 38) 0.1% by weight (1 000 ppm) 00146 Trixylyl phosphate 25155-23-1 of any article Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-0.1% by weight (1 000 ppm) 00147 573-58-0 aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) of any article 0.1% by weight (1 000 ppm) 00148 84-75-3 Dihexyl phthalate of any article 0.1% by weight (1 000 ppm) 00149 Imidazolidine-2-thione; (2-imidazoline-2-thiol) 96-45-7 of any article 0.1% by weight (1 000 ppm) 00150 Cadmium sulphide 1306-23-6 of any article 0.1% by weight (1 000 ppm) 00151 Lead di(acetate) 301-04-2 of any article Included in REACH Candidate List on 16 June 2014: Unique ID == EUREACH-0614 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and 0.1% by weight (1 000 ppm) 00152 68515-50-4 of any article linear 0.1% by weight (1 000 ppm) 00153 Cadmium chloride (See Appendix D2) of any article 0.1% by weight (1 000 ppm) 00154 (See Appendix D2) Sodium perborate; perboric acid, sodium salt of any article 0.1% by weight (1 000 ppm) 00155 Sodium peroxometaborate 7632-04-4 of any article Included in REACH Candidate List on 17 December 2014: Unique ID == EUREACH-1214 0.1% by weight (1 000 ppm) 00156 2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) 3846-71-7 of any article 0.1% by weight (1 000 ppm) 00157 2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) 25973-55-1 of any article 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-0.1% by weight (1 000 ppm) 00158 15571-58-1 stannatetradecanoate (DOTE) 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-4-0.1% by weight (1 000 ppm) 00159 [[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-(See Appendix D2) of any article dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) 0.1% by weight (1 000 ppm) 00160 Cadmium fluoride 7790-79-6 of any article 0.1% by weight (1 000 ppm) 00161 Cadmium sulphate (See Appendix D2) of any article Included in REACH Candidate List on 15 June 2015: Unique ID == EUREACH-0615 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2benzenedicarboxylic acid, mixed decyl and hexyl and octyl 68515-51-5 0.1% by weight (1 000 ppm) 00162 diesters with greater than or equal to 0.3% of dihexyl phthalate 68648-93-1 of any article (EC No. 201-559-5) 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-0.1% by weight (1 000 ppm) 00163 (See Appendix D2) methyl-1,3-dioxane [2] [covering any of the individual of any article stereoisomers of [1] and [2] or any combination thereof]



| | d in REACH Candidate List on 17 December 2015: Uniqu | 375-95-1 | | |
|---------|---|-------------------------------------|---|--|
| 00164 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | 21049-39-8 4149-60-4 | 0.1% by weight (1 000 ppm) of any article | |
| 00165 | 1,3-propanesultone | 1120-71-4 | 0.1% by weight (1 000 ppm of any article | |
| 00166 | 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 | |
| 00167 | 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 | |
| 00168 | Nitrobenzene | 98-95-3 | 0.1% by weight (1 000 ppm of any article | |
| Include | d in REACH Candidate List on 20 June 2016: Unique ID = | = EUREACH-0616 | | |
| 00169 | Benzo[def]chrysene | 50-32-8 | 0.1% by weight (1 000 ppm of any article | |
| Include | d in REACH Candidate List on 12 January 2017: Unique | ID == EUREACH-0117 | | |
| 00170 | 4,4'-isopropylidenediphenol [Bisphenol A; BPA] | 80-05-7 | 0.1% by weight (1 000 ppm) o any article | |
| 00171 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | 335-76-2 3108-42-7 3830-45-3 | 0.1% by weight (1 000 ppm) o any article | |
| 00172 | p-(1,1-dimethylpropyl)phenol | 80-46-6 | 0.1% by weight (1 000 ppm) o | |
| 00173 | 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article | |
| Include | d in REACH Candidate List on 7 July 2017: Unique ID == | EUREACH-0717 | | |
| 00174 | Perfluorohexane-1-sulphonic acid and its salts [PFHxS] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article | |
| Include | d in REACH Candidate List on 15 January 2018: Unique | ID == EUREACH-0118 I | | |
| 00175 | Benz[a]anthracene | 56-55-3 | 0.1% by weight (1 000 ppm) of any article | |
| 00176 | Cadmium carbonate | 513-78-0 | 0.1% by weight (1 000 ppm) of any article | |
| 00177 | Cadmium hydroxide | 21041-95-2 | 0.1% by weight (1 000 ppm) of any article | |
| 00178 | Cadmium nitrate | 10022-68-1 10325-94-7 | 0.1% by weight (1 000 ppm) of any article | |
| 00179 | Chrysene | 218-01-9 | 0.1% by weight (1 000 ppm) of any article | |
| 00180 | 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"TM) [covering any of its individual anti- and syn-isomers or any combination thereof] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article | |
| 00181 | Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)[with greater than or equal to 0.1% w/w 4-heptylphenol, branched and linear (4-HPbl)] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article | |
| Include | d in REACH Candidate List on 27 June 2018: Unique ID = | = EUREACH-0618 | | |
| 00182 | Benzo[ghi]perylene | 191-24-2 | 0.1% by weight (1 000 ppm) of any article | |
| 00183 | Octamethylcyclotetrasiloxane [D4] | 556-67-2 | 0.1% by weight (1 000 ppm) of any article | |
| 00184 | Decamethylcyclopentasiloxane [D5] | 541-02-6 | 0.1% by weight (1 000 ppm) of any article | |
| 00185 | Dodecamethylcyclohexasiloxane [D6] | 540-97-6 | 0.1% by weight (1 000 ppm) of any article | |
| 00186 | Terphenyl, hydrogenated | 61788-32-7 | 0.1% by weight (1 000 ppm) of any article | |
| | • | 1 | 0.1% by weight (1 000 ppm) of | |
| 00187 | Disodium octaborate | 12008-41-2 | any article | |
| | Disodium octaborate Lead | 12008-41-2 7439-92-1 | | |
| 00187 | | | any article 0.1% by weight (1 000 ppm | |



| | | | any article |
|----------|--|----------------------|---|
| | | | - |
| 00190 | Ethylenediamine [EDA] | 107-15-3 | 0.1% by weight (1 000 ppm) of any article |
| 00191 | Benzene-1,2,4-tricarboxylic acid 1,2 anhydride [trimellitic anhydride; TMA] | 552-30-7 | 0.1% by weight (1 000 ppm) of any article |
| Included | l in REACH Candidate List on 15 January 2019: Unique I | D == EUREACH-0119 Re | evision = 2.0 |
| 00192 | Benzo[k]fluoranthene | 207-08-9 | 0.1% by weight (1 000 ppm) of any article |
| 00193 | Fluoranthene | 206-44-0 | 0.1% by weight (1 000 ppm) of any article |
| 00194 | Phenanthrene | 85-01-8 | 0.1% by weight (1 000 ppm) of any article |
| 00195 | Pyrene | 129-00-0 | 0.1% by weight (1 000 ppm) of any article |
| 00196 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 0.1% by weight (1 000 ppm) of any article |
| 00197 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one [3-benzylidene camphor; 3-BC] | 15087-24-8 | 0.1% by weight (1 000 ppm) of any article |
| Included | in REACH Candidate List on 16 July 2019: Unique ID == | EUREACH-0719 | |
| 00198 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with greater than or equal to 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00199 | 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides [covering any of their individual isomers and combinations thereof] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00200 | 2-methoxyethyl acetate | 110-49-6 | 0.1% by weight (1 000 ppm) of any article |
| 00201 | 4-tert-butylphenol | 98-54-4 | 0.1% by weight (1 000 ppm) of any article |
| Included | l in REACH Candidate List on 16 January 2020: Unique I | D == EUREACH-0120 | |
| 00202 | Diisohexyl phthalate | 71850-09-4 | 0.1% by weight (1 000 ppm) of any article |
| 00203 | Perfluorobutane sulfonic acid (PFBS) and its salts | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00204 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 0.1% by weight (1 000 ppm) of any article |
| 00205 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 0.1% by weight (1 000 ppm) of any article |
| Included | I in REACH Candidate List on 25 June 2020: Unique ID = | = EUREACH-0620 | |
| 00206 | Dibutylbis(pentane-2,4-dionato-O,O')tin | 22673-19-4 | 0.1% by weight (1 000 ppm) of any article |
| 00207 | butyl 4-hydroxybenzoate | 94-26-8 | 0.1% by weight (1 000 ppm) of any article |
| 00208 | 2-methylimidazole | 693-98-1 | 0.1% by weight (1 000 ppm) of any article |
| 00209 | 1-vinylimidazole | 1072-63-5 | 0.1% by weight (1 000 ppm) of any article |
| | | | |



| Include | d in REACH Candidate List on 19 January 2021: Unique I | D == EUREACH-0121 | |
|---------|--|-------------------|---|
| 00210 | Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00211 | Bis(2-(2-methoxyethoxy)ethyl)ether | 143-24-8 | 0.1% by weight (1 000 ppm) of any article |
| Include | d in REACH Candidate List on 8 July 2021: Unique ID == | EUREACH-0721 | - 1 |
| 00212 | 4,4'-(1-methylpropylidene)bisphenol | 77-40-7 | 0.1% by weight (1 000 ppm) of any article |
| 00213 | Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17] | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00214 | Orthoboric acid, sodium salt | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00215 | Phenol, alkylation products (mainly in para position) with C12- rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00216 | 1,4-dioxane | 123-91-1 | 0.1% by weight (1 000 ppm) of any article |
| 00217 | 2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA) | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00218 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00219 | Glutaral | 111-30-8 | 0.1% by weight (1 000 ppm) of any article |
| Include | d in REACH Candidate List on 17 January 2022: Unique I | D == EUREACH-0122 | l |
| 00220 | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol | 119-47-1 | 0.1% by weight (1 000 ppm) of any article |
| 00221 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) | (See Appendix D2) | 0.1% by weight (1 000 ppm) of any article |
| 00222 | S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate | 255881-94-8 | 0.1% by weight (1 000 ppm) of any article |
| 00223 | tris(2-methoxyethoxy)vinylsilane | 1067-53-4 | 0.1% by weight (1 000 ppm) of any article |
| Include | d in REACH Candidate List on 10 June 2022: Unique ID = | = EUREACH-0622 | 1 |
| 00224 | N-(hydroxymethyl)acrylamide | 924-42-5 | 0.1% by weight (1 000 ppm) of any article |
| Include | d in REACH Candidate List on 17 January 2023: Unique I | D == EUREACH-0123 | |
| 00225 | 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] | 37853-59-1 | 0.1% by weight (1 000 ppm) of any article |
| 00226 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol | 79-94-7 | 0.1% by weight (1 000 ppm) of any article |
| 00227 | 4,4'-sulphonyldiphenol | 80-09-1 | 0.1% by weight (1 000 ppm) of any article |
| | | 13701-59-2 | 0.1% by weight (1 000 ppm) of |

| | bis(2-ethylhexyl) tetrabromophthalate covering any of the | | 0.1% by weight (1 000 ppm) of |
|----------|---|---|---|
| 00229 | individual isomers and/or combinations thereof | 26040-51-7 | any article |
| 00230 | Isobutyl 4-hydroxybenzoate | 4247-02-3 | 0.1% by weight (1 000 ppm) of any article |
| 00231 | Melamine | 108-78-1 | 0.1% by weight (1 000 ppm) of any article |
| 00232 | Perfluoroheptanoic acid and its salts | 6130-43-4 21049-36-5 375-85-9 20109-59-5 | 0.1% by weight (1 000 ppm) of any article |
| 00233 | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine | No CAS Number EC Number: 473-390-7 | 0.1% by weight (1 000 ppm) of any article |
| Included | in REACH Candidate List on 14 June 2023: Unique ID = | = EUREACH-0623 | |
| 00234 | bis(4-chlorophenyl) sulphone | 80-07-9 | 0.1% by weight (1 000 ppm) of any article |
| 00235 | diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide | 75980-60-8 | 0.1% by weight (1 000 ppm) of any article |
| Included | I in REACH Candidate List on 23 January 2024: Unique I | D == EUREACH-0124 | |
| 00236 | 2,4,6-tri-tert-butylphenol | 732-26-3 | 0.1% by weight (1 000 ppm) of any article |
| 00237 | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) | 3147-75-9 | 0.1% by weight (1 000 ppm) of any article |
| 00238 | 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one | 119344-86-4 | 0.1% by weight (1 000 ppm) of any article |
| 00239 | Bumetrizole (UV-326) | 3896-11-5 | 0.1% by weight (1 000 ppm) of any article |
| 00240 | Oligomerisation and alkylation reaction products of 2- phenylpropene and phenol | (See Appendix D2) EC Number: 700-960-7 | 0.1% by weight (1 000 ppm) of any article |
| Included | in REACH Candidate List on 27 June 2024: Unique ID = | = EUREACH-0624 | |
| 00241 | Bis(α,α-dimethylbenzyl) peroxide | 80-43-3 | 0.1% by weight (1 000 ppm) of any article |
| Included | I in REACH Candidate List on 07 November 2024: Unique | e ID == EUREACH-1124 | |
| 00242 | Triphenyl phosphate | 115-86-6 | 0.1% by weight (1 000 ppm) of any article |
| Included | I in REACH Candidate List on 21 January 2025: Unique I | D == EUREACH-0125 | |
| 00243 | 6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid | 2156592-54-8 | 0.1% by weight (1 000 ppm) of any article |
| 00244 | O,O,O-triphenyl phosphorothioate | 597-82-0 | 0.1% by weight (1 000 ppm) of any article |
| 00245 | Octamethyltrisiloxane | 107-51-7 | 0.1% by weight (1 000 ppm) of any article |
| 00246 | Perfluamine | 338-83-0 | 0.1% by weight (1 000 ppm) of any article |
| | | | I |



oncolor of the color of the col

192268-65-8

0.1% by weight (1 000 ppm) of any article

D2 Non-exhaustive list of CAS numbers which are published in the ECHA support documents for some substance groups

For some substance groups on the Candidate List, the ECHA does not provide a complete list of CAS numbers in the main Candidate List, but does publish a non-exhaustive list of CAS numbers in a Support Document which can be found in the Details for the substance group on the ECHA website. The REACH Candidate List in Appendix D1 states 'No CAS numbers provided' for these substance groups. The February 2017 meeting of the 2-18b Committee decided to add Appendix D2 to provide these non-exhaustive lists of CAS numbers which are published in the Support Documents, subject to the following disclaimer statement that ECHA publishes in the Support Documents. https://echa.europa.eu/candidate-list-table

"These non-exhaustive lists of CAS numbers do not constitute a comprehensive record of all relevant CAS numbers available for a Candidate List entry in this table. Please note that a substance identified by a CAS number other than those specified in this table may still be covered by a Candidate List entry. Similarly, a substance for which no CAS number is available may also be covered by this Candidate List entry. There may be generic CAS numbers covering at the same time substances within the scope of the Candidate List entry and substances which are outside the scope of this entry. Such other CAS numbers are not listed in this note."

| Substance Category Name | CAS number(s) published by ECHA | | | |
|---|--|--|--|--|
| Included in REACH Candidate List on 19 December 2011: Unique ID == EUREACH-1211 | | | | |
| Zirconia Aluminosilicate Refractory Ceramic Fibres | No CAS number(s) provided in Support Document | | | |
| Aluminosilicate Refractory Ceramic Fibres | No CAS number(s) provided in Support Document | | | |
| Included in REACH Candidate List on 19 December | r 2012: Unique ID == EUREACH-1212 | | | |
| 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] | 2315-67-5, 2315-61-9, 9002-93-1, 2497-59-8, 9036-19-5 | | | |
| 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | 84852-15-3, 26543-97-5, 104-40-5, 17404-66-9, 30784-30-6, 52427-13-1, 186825-36-5, 142731-63-3, 90481-04-2, 25154-52-3, 186825-39-8, 521947-27-3, 11066-49-2 | | | |
| Included in REACH Candidate List on 20 June 2013 | 3: Unique ID == EUREACH-0613 | | | |
| 4-Nonylphenol, branched and linear, ethoxylated [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] | 26027-38-3, 7311-27-5, 20427-84-3, 34166-38-6, 27942-27-4, 14409-72-4, 9016-45-9, 68412-54-4, 1119449-37-4, 1119449-38-5, 127087-87-0, 37205-87-1, 104-35-8, 20636-48-0, 156609-10-8, 27177-05-5, 26571-11-9, 26264-02-8 | | | |
| Cadmium Oxide | 1306-19-0 | | | |
| - Monteponite (CdO) | 12139-21-8 | | | |
| Included in REACH Candidate List on 16 June 2014 | | | | |
| Sodium perborate; perboric acid, sodium salt | 11138-47-9, 15120-21-5, 10332-33-9, 13517-20-9, 10486-00-7, 37244-98-7, 90568-23-3, 125022-34-6 | | | |
| Cadmium chloride | 10108-64-2 | | | |
| - Cadmium chloride (CdCl2), hydrate (2:5) | 7790-78-5 | | | |
| Included in REACH Candidate List on 17 December | r 2014: Unique ID == EUREACH-1214 | | | |
| 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) | 15571-58-1, 27107-89-7 | | | |
| Cadmium Sulphate | 10124-36-4, 31119-53-6 | | | |
| - Sulfuric acid, cadmium salt, hydrate (3:3:8) - Sulfuric acid, cadmium salt (1:1), hydrate Included in REACH Candidate List on 15 June 2015 | 7790-84-3 15244-35-6 5: Unique ID == FURFACH-0615 | | | |
| miciaded in NEACH Candidate List on 13 June 2013. Unique ID EUNEACH-0013 | | | | |



5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-117933-89-8, 343934-04-3, 343934-05-4, 676367-02-5, 676367-03-6, 676367-04-7, 676367-05-8, 676367-06-9, 676367-07-0, 676367-08-1, 1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination 676367-09-2, 186309-28-4 thereofl Included in REACH Candidate List on 12 January 2017: Unique ID == EUREACH-0117 4-heptylphenol, branched and linear [substances with a 6465-71-0, 6465-74-3, 6863-24-7, 1987-50-4, 72624-02-3, 1824346-00-0, linear and/or branched alkyl chain with a carbon number of 1139800-98-8, 911371-07-8, 911371-06-7, 911370-98-4, 861011-60-1, 7 covalently bound predominantly in position 4 to phenol, 861010-65-3, 857629-71-1, 854904-93-1, 854904-92-0, 102570-52-5, covering also UVCB- and well-defined substances which 100532-36-3, 72861-06-4, 71945-81-8, 37872-24-5, 33104-11-9, include any of the individual isomers or a combination 30784-32-8, 30784-31-7, 30784-27-1 thereof] Included in REACH Candidate List on 7 July 2017: Unique ID == EUREACH-0717 355-46-4, 3871-99-6, 41184-65-0, 41242-12-0, 55120-77-9, 68259-08-5, 70136-72-0, 70225-16-0, 72033-41-1, 82382-12-5, 92011-17-1, 108427-54-9, 108427-55-0, 144116-10-9, 153443-35-7, 189274-31-5, 202189-84-2, 213740-81-9, 341035-71-0, 341548-85-4, 350836-93-0, Perfluorohexane-1-sulphonic acid and its salts [PFHxS] 421555-73-9, 421555-74-0, 425670-70-8, 866621-50-3, 910606-39-2, 911027-68-4, 911027-69-5, 928049-42-7, 1000597-52-3, 1187817-57-7, 1310480-24-0, 1310480-27-3, 1310480-28-4, 1329995-45-0, 1329995-69-8, 1462414-59-0 Included in REACH Candidate List on 15 January 2018: Unique ID == EUREACH-0118 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16.9.02.13.05.10]octadeca-13560-89-9, 135821-74-8, 135821-03-3 7,15-diene ("Dechlorane Plus"TM) [covering any of its individual anti- and syn-isomers or any combination thereof] Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear 93925-00-9 (RP-HP)[with greater than or equal to 0.1% w/w 4heptylphenol, branched and linear (4-HPbl)] Included in REACH Candidate List on 16 July 2019: Unique ID == EUREACH-0719 Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) 26523-78-4, 3050-88-2, 31631-13-7, 106599-06-8 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its 62037-80-3, 13252-13-6, 67118-55-2, 2062-98-8, 122499-17-6, salts and its acyl halides (covering any of their individual 75579-40-7, 75579-39-4 isomers and combinations thereof) Included in REACH Candidate List on 16 January 2020: Unique ID == EUREACH-0120 375-73-5, 29420-49-3, 25628-08-4, 220689-12-3, 144317-44-2 220133-51-7, 68259-10-9, 131651-65-5, 507453-86-3, 503155-89-3, Perfluorobutane sulfonic acid (PFBS) and its salts Bis(4-t-butylphenyl) iodonium perfluorobutane sulfonate, 1-(4-Butoxy-1-naphthalenyl)tetrahydrothiophenium 1,1,2,2,3,3,4,4,4nonafluoro-1-butanesulfonate Included in REACH Candidate List on 19 January 2021: Unique ID == EUREACH-0121 Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) 91648-39-4, 3648-18-8 derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety Included in REACH Candidate List on 8 July 2021: Unique ID == EUREACH-0721 Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear 85535-85-9, 198840-65-2, 1372804-76-6, chloroalkanes with carbon chain lengths within the range di-, tri- and tetrachlorotetradecane from C14 to C17] 25747-83-5, 22454-04-2, 14312-40-4, 1333-73-9, 13840-56-7, Orthoboric acid, sodium salt 14890-53-0 Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, 210555-94-5, 27459-10-5, 57427-55-1, 104-43-8, 74499-35-7, covering any individual isomers and/ or combinations 27147-75-7, 27193-86-8, 121158-58-5 thereof (PDDP) 2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-3296-90-0, 36483-57-5, 1522-92-5, 96-13-9 bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1propanol (2,3-DBPA) 2-(4-tert-butylbenzyl)propionaldehyde and its individual 80-54-6, 75166-31-3, 75166-30-2 stereoisomers Included in REACH Candidate List on 17 January 2022: Unique ID == EUREACH-0122 (±)-1,7,7-trimethyl-3-[(4methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one 1782069-81-1, 852541-30-1, 95342-41-9, 852541-21-0, 852541-25-4, covering any of the individual isomers and/or combinations 741687-98-9, 36861-47-9 thereof (4-MBC)



| Included in REACH Candidate List on 23 January 2 | 024: Unique ID == EUREACH-0124 |
|--|--------------------------------|
| Oligomerisation and alkylation reaction products of 2- phenylpropene and phenol | 68512-30-1 |

Class A QueryList statements

| Identity | Statement |
|----------|---|
| 01 | Product(s) does not contain EU REACH Candidate List substances above the thresholds specified in the REACH Regulation |
| 02 | Product(s) is obsolete, no information is available |
| 03 | Product(s) is unknown, no information is available |



Appendix E

REACH Substance Restrictions

E1 REACH Article 67 Substance Restrictions listed in Annex XVII, as amended latest by Commission Regulation 2024/2462 of 20 September 2024

Unique ID Authority == IPC

Unique ID Identity == EUREACH-ARTICLE67-2024/2462

QueryList Revision == 1.0

REACH Article 67 requires articles which are placed on the European Union market to comply with certain substance restrictions, which are listed in Annex XVII of the REACH Regulation. The substance restrictions in Annex XVII are amended by the Commission from time to time. On 3 May 2023 the European Commission published Regulation 2023/923 which states that "shall not be placed on the market or used in articles produced from polymers or copolymers of vinyl chloride (PVC), if the concentration of Lead is equal to or greater than 0.1% by weight of the PVC material". In addition, on 14 July 2023 the European Commission published Regulation 2023/1464 which states that "shall not be placed on the market in articles, after 6 August 2026, if, ..., the concentration of formaldehyde released from those articles exceeds: (a) 0.062 mg/m³ for furniture and wood-based articles".

Table E1 REACH Article 67 Substance Restrictions listed in Annex XVII, as amended by Commission Regulations 2023/923, 2023/1464 & 2024/2462

| Identity | Substance Category Name | Threshold | |
|----------|---|--|--|
| 00001 | 1,2,4-Trichlorobenzene | Concentration must be less than 0.1% w/w | |
| 00002 | Asbestos fibres | Intentionally added | |
| 00003 | Azocolourants and azodyes which form certain aromatic amines | 0.003% by weight (30 ppm) of the finished textile/leather product | |
| 00004 | Benzene | Content must be less than 0.0005% w/w in toys and less than 0.1% w/w in any substance or preparation | |
| 00005 | Dibutyltin (DBT) compounds | 0.1% by weight (1 000 ppm) of tin in a material | |
| 00007 | Dioctyltin (DOT) compounds | 0.1% by weight (1 000 ppm) of tin in a material | |
| 80000 | Monomethyl-dibromo-diphenyl methane | No content permitted | |
| 00009 | Monomethyl-dichloro-diphenyl methane | No content permitted | |
| 00010 | Monomethyl-tetrachlorodiphenyl methane | No content permitted | |
| 00011 | Nickel, where prolonged skin contact is expected | Intentionally added | |
| 00012 | Nonylphenol and nonylphenol ethoxylates in Substances or Preparations | Concentration must be less than 0.1% w/w | |
| 00028 | Nonylphenol and nonylphenol ethoxylates in Textile Articles that can be washed in water during normal lifecycle | Concentration must be less than 0.01% w/w | |
| 00013 | Pentachlorophenol (PCP) and its salts | 0.1% w/w in any substance or preparation | |
| 00014 | Polychlorinated terphenyls (PCTs) | Intentionally added | |
| 00015 | Selected Phthalates Group 1 (BBP, DBP, DEHP) | 0.1% by weight (1 000 ppm) in plasticized material | |
| 00016 | Selected Phthalates Group 2 (DIDP, DINP, DNOP) | 0.1% by weight (1 000 ppm) in plasticized material | |
| 00017 | Tar oils and creosotes | No content permitted in wood and wooden materials | |
| 00018 | Tris (2,3 dibromo propyl) phosphate | Not permitted in textile articles which may come into contact with skin | |



| Identity | Substance Category Name | Threshold | |
|----------|--|--|--|
| 00019 | Tris(aziridinyl)phosphinoxide | Not permitted in textile articles which may come into contact with skin | |
| 00020 | Tri-substituted organostannic compounds | 0.1% by weight (1 000 ppm) of tin in a material | |
| 00021 | 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 | |
| 00022 | 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 | |
| 00023 | Perfluorooctanoic acid and its salts | 0.0000025% by weight (25 ppb) of any article | |
| 00024 | Dimethyl fumarate | 0.00001% by weight (0.1ppm) in a material | |
| 00025 | Sum of Selected Phthalates Group 1 (DIBP, BBP, DBP, DEHP) | 0.1% by weight (1 000 ppm) in plasticized material | |
| 00026 | Bisphenol A in thermal paper | 0.02% by weight (200 ppm) in thermal paper | |
| 00027 | Sum of perfluorocarboxylic acids containing 9 to 14 carbon atoms | 0.0000025% by weight (25ppb) of any article | |
| 00029 | Lead and its compounds in PVC | 0.1% by weight of the PVC material | |
| 00030 | formaldehyde and formaldehyde releasers | The concentration of formaldehyde released must not exceed 0.080 mg/m3 | |
| 00031 | Undecafluorohexanoic acid (PFHxA) and its salts | 25 ppb for the sum of PFHxA and its salts measured in the homogeneous material in footwear, textiles, leather, furs and hides | |
| 00032 | Undecafluorohexanoic acid (PFHxA) related substances | 1 000 ppb for the sum of PFHxA-related substances measured in the homogeneous material in footwear, textiles, leather, furs and hides | |

Class A QueryList statements

| Identity | Statement |
|----------|---|
| 01 | Product(s) meets EU REACH substance restrictions |
| 02 | Product(s) is obsolete, no information is available |
| 03 | Product(s) is unknown, no information is available |



Appendix F

IEC 62474 - Material Declaration for Products of and for the Electrotechnical Industry

The Substance Category Names, Reportable Applications and Thresholds for the IEC 62474 Material Declaration list are defined by the IEC 62474 database which is published at http://std.iec.ch/iec62474. When the IEC 62474 Material Declaration substance categories are used then the Reportable Application field is *mandatory*.

This PDF document contains the latest published version of the IEC 62474 database. Any revisions past version 7 are available as XML files in the consolidated zip file published under 'other documents' at http://www.ipc.org/CommitteeDetail.aspx?Committee=2-18B.

Unique ID Authority == IEC_62474 Unique ID Identity == D30.00 QueryList Revision == 1.0

Table F1 IEC 62474 Material Declaration list Version D30.00

| Identity | Substance Category Name | Reportable Application | Threshold | Reporting Requirement |
|----------|--|---|---|--------------------------|
| 00001 | Diarsenic pentoxide | All | 0.1 mass% of article | Mandatory |
| 00002 | Diarsenic trioxide | All | 0.1 mass% of article | Mandatory |
| 00003 | Asbestos | All | Intentionally added | Mandatory |
| 00004 | Azocolourants and Azodyes which form certain aromatic amines | Textiles and Leather | Intentionally added | Mandatory |
| 00005 | Beryllium Oxide | All | 0.1 mass% | Optional |
| 00007 | Boric acid | All | 0.1 mass% of article | Mandatory |
| 80000 | Brominated flame retardants (other than PBBs, PBDEs, or HBCDD) | Printed wiring board laminate | 0.09 mass% total bromine content in laminate | Optional |
| 00009 | Brominated flame retardants (other than PBBs, PBDEs, or HBCDD) | Plastic materials except printed wiring board laminates | 0.1 mass% of bromine in plastic materials | Optional |
| 00010 | Cadmium/Cadmium compounds | All, except batteries | 0.01 mass% of total Cd in homogenous material | Mandatory |
| 00011 | Cadmium/Cadmium compounds | Batteries | 0.001% by weight of battery | Mandatory |
| 00166 | Cadmium/Cadmium compounds | Video display devices, with a screen size of greater than four inches | 0.01 mass% of total Cd in homogenous material | Mandatory |
| 00012 | Chromium (VI) Compounds | All | 0.1 mass% of total Cr+6 in homogenous material | Mandatory |
| 00167 | Chromium (VI) Compounds | Video display devices, with a screen size of greater than four inches | 0.1 mass% of total Cr+6 in homogenous material | Mandatory |
| 00013 | Cobalt dichloride | All | 0.1 mass% of article | Mandatory |
| 00014 | Dibutyltin (DBT) compounds | All | 0.1 mass% of tin in the part | Mandatory |



| 00015 | Dioctyltin (DOT) compounds | (a) textile and leather articles intended to come into contact with the skin, (b) childcare articles, (c) two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits) | 0.1 mass% of tin in the part | Mandatory |
|-------|--|---|---|-----------|
| 00016 | Dimethylfumarate (DMF) | All | 0.00001 mass% of the part | Mandatory |
| 00017 | Disodium tetraborate, anhydrous | All | 0.1 mass% of article | Mandatory |
| 00018 | Fluorinated Greenhouse Gases (PFC, SF6, HFC) | All | Intentionally Added | Mandatory |
| 00019 | Formaldehyde | (a) clothing or related accessories, (b) textiles other than clothing which, under normal or reasonably foreseeable conditions of use, come into contact with human skin to an extent similar to clothing, (c) footwear | 0.0075 mass% in homogenous material | Mandatory |
| 00020 | Hexabromocyclododecane (HBCDD) | All | Intentionally added or 0.01 mass% of article | Mandatory |
| 00021 | Lead/Lead Compounds | All, except batteries | 0.1 mass% of total Pb in homogenous material | Mandatory |
| 00022 | Lead/Lead Compounds | Consumer products designed or intended primarily for children 12 years of age or younger | 0.01 mass% | Mandatory |
| 00023 | Lead/Lead Compounds | Paint and similar surface coatings of toys and other articles intended for use by children | 0.009 mass% of surface coating material | Mandatory |
| 00024 | Lead/Lead Compounds | Cables/cords with thermoset or thermoplastic coatings | 0.03 mass% of surface coating material | Mandatory |
| 00025 | Lead/Lead Compounds | Batteries | 0.004 mass% of battery | Mandatory |
| 00168 | Lead/Lead Compounds | Video display devices, with a screen size of greater than four inches | 0.1 mass% of total Pb in homogenous material | Mandatory |
| 00026 | Lead chromate | All | 0.1 mass% of article | Mandatory |
| 00027 | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) | All | 0.1 mass% of article | Mandatory |
| 00028 | Lead sulfochromate yellow (C.I. Pigment Yellow 34) | All | 0.1 mass% of article | Mandatory |
| 00029 | Mercury/Mercury Compounds | All, except batteries | Intentionally Added or 0.1 mass% of total Hg in homogenous material | Mandatory |
| 00030 | Mercury/Mercury Compounds | Batteries | Intentionally added or 0.0001 mass% of battery | Mandatory |
| 00132 | Mercury/Mercury Compounds | Batteries | 0.0005 mass% of total Hg in homogenous material | Mandatory |
| 00169 | Mercury/Mercury Compounds | Video display devices, with a screen size of greater than four inches | 0.1 mass% of total Hg in homogenous material | Mandatory |
| 00031 | Nickel/Nickel Compounds | All, where prolonged skin contact is expected | Intentionally Added | Mandatory |
| 00032 | Ozone Depleting Substances (CFC, Halon, HBFC, HCFC & others) | All | Intentionally Added | Mandatory |
| 00033 | Perchlorates | All | 6 x 10 ^-7 mass% of battery or product part | Mandatory |
| 00035 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | All | Intentionally added or 0.1 mass% of article | Mandatory |

0.1 mass% as the sum of the 00036 Phthalates, Selected Group 1 (DEHP, DBP, BBP, DIBP) Children's toy or child care article phthalate Mandatory concentrations in plasticized material 0.1 mass% as the Children's toy or child care article sum of the 00037 Phthalates, Selected Group 2 (DIDP, DINP, DNOP) that can be placed in a child's phthalate Mandatory mouth concentrations in plasticized material 0.1 mass% in 00038 ΑII Bis (2-ethylhexyl)phthalate (DEHP) Mandatory homogenous material 0.1 mass% in 00039 Dibutyl phthalate (DBP) ΑII homogenous Mandatory material 0.1 mass% in 00040 Benzyl butyl phthalate (BBP) ΑII homogenous Mandatory material 0.1 mass% in 00041 Diisobutyl phthalate ΑII Mandatory homogenous material 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl 0.1 mass% of 00042 ΑII Mandatory esters, C7-rich article 1,2-Benzenedicarboxylic acid, di-C7-11-branched and 0.1 mass% of 00043 ΑII Mandatory linear alkyl esters article 0.1 mass% in 00044 ΑII Polybrominated biphenyls (PBB) homogenous Mandatory material 0.1 mass% in homogenous 00045 Polybrominated diphenyl ethers (PBDE) ΑII Mandatory material or Intentionally added 00046 Polychlorinated Biphenyls (PCBs) and specific substitutes ΑII Intentionally added Mandatory 0.005 mass% in 00047 Polychlorinated Terphenyls (PCTs) ΑII Mandatory material 00048 Polychlorinated naphthalenes ΑII Intentionally added Mandatory 00049 Radioactive substances ΑII Intentionally added Mandatory 0.1 mass% of 00050 Aluminosilicate Refractory Ceramic Fibres ΑII Mandatory article 0.1 mass% of 00051 Zirconia Aluminosilicate Refractory Ceramic Fibres ΑII Mandatory article Intentionally added Alkanes, C10-13, chloro (Short Chain Chlorinated 00052 ΑII or 0.1 mass% of Mandatory Paraffins) article 0.1 mass% of 00053 Strontium chromate ΑII Mandatory article Intentionally added 00054 Bis(tributyltin) oxide (TBTO) ΑII Mandatory or 0.1 mass% of article Intentionally added 00055 Tri-substituted organostannic compounds ΑII or 0.1 mass% of tin Mandatory in the part 0.1 mass% of 00056 Tris(2-chloroethyl) phosphate ΑII Mandatory article 0.1 mass% of Mandatory 00057 4-(1,1,3,3-tetramethylbutyl)phenol ΑII article 0.1 mass% of 00058 Bis(2-methoxyethyl) ether ΑII Mandatory article 0.1 mass% of 00059 ΑII Bis(2-methoxyethyl) phthalate Mandatory article 0.1 mass% of 00060 ΑII Pentazinc chromate octahydroxide Mandatory article 0.1 mass% of 00061 Potassium hydroxyoctaoxodizincatedichromate Mandatory article Plastic materials except printed 0.1 mass% chlorine 00062 Chlorinated Flame Retardants (CFR) Optional wiring board laminates in plastic materials 0.09 mass% total Printed Wiring Board (PWB) 00063 Chlorinated Flame Retardants (CFR) chlorine content in Optional Laminates laminate



| | Birth and all and a share of the same distance of the same share and all and | | Intentionally added | |
|-------|--|-----|---|---------------|
| 00064 | Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE) | All | or 0.1 mass% of article | Mandatory |
| 00065 | Sulfurous acid, lead salt, dibasic | All | 0.1 mass% of article | Mandatory |
| 00066 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) | All | 0.1 mass% of article | Mandatory |
| 00067 | Trilead dioxide phosphonate | All | 0.1 mass% of article | Mandatory |
| 00068 | 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | All | 0.1 mass% of article | Mandatory |
| 00069 | 4-aminoazobenzene | All | 0.1 mass% of article | Mandatory |
| 00070 | Tetralead trioxide sulphate | All | 0.1 mass% of article | Mandatory |
| 00071 | Orange lead (lead tetroxide) | All | 0.1 mass% of article | Mandatory |
| 00072 | Pyrochlore, antimony lead yellow | All | 0.1 mass% of article | Mandatory |
| 00073 | Pentalead tetraoxide sulphate | All | 0.1 mass% of article | Mandatory |
| 00074 | 1,2-diethoxyethane | All | 0.1 mass% of article | Mandatory |
| 00075 | Diboron trioxide | All | 0.1 mass% of article | Mandatory |
| 00076 | Dibutyltin dichloride (DBTC) | All | 0.1 mass% of article | Mandatory |
| 00077 | Lead cyanamidate | All | 0.1 mass% of article | Mandatory |
| 00078 | N,N-dimethylformamide | All | 0.1 mass% of article | Mandatory |
| 00079 | Silicic acid (H2Si2O5), barium salt (1:1), lead-doped | All | 0.1 mass% of article | Mandatory |
| 00080 | 1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear | All | 0.1 mass% of article | Mandatory |
| 00081 | Diisopentyl phthalate | All | 0.1 mass% of article | Mandatory |
| 00082 | N-pentyl-isopentylphthalate | All | 0.1 mass% of article | Mandatory |
| 00083 | Lead titanium trioxide | All | 0.1 mass% of article | Mandatory |
| 00084 | Lead titanium zirconium oxide | All | 0.1 mass% of article | Mandatory |
| 00085 | Lead oxide sulfate | All | 0.1 mass% of article | Mandatory |
| 00086 | [Phthalato(2-)]dioxotrilead | All | 0.1 mass% of article | Mandatory |
| 00087 | Dioxobis(stearato)trilead | All | 0.1 mass% of article | Mandatory |
| 00088 | Fatty acids, C16-18, lead salts | All | 0.1 mass% of article | Mandatory |
| 00089 | Lead dinitrate | All | 0.1 mass% of article | Mandatory |
| 00090 | Di-isodecyl phthalate (DIDP) | All | Intentionally added | Mandatory |
| 00091 | Di-n-hexyl phthalate (DnHP) | All | Intentionally added or 0.1 mass% of article | Mandatory |
| 00092 | Hexahydromethylphthalic anhydride | All | 0.1 mass% of article | Mandatory |
| 00093 | Cadmium | All | 0.1 mass% of article | Mandatory |
| 00094 | Cadmium oxide | All | 0.1 mass% of article | Mandatory |
| 00095 | Dipentyl phthalate (DPP) | All | 0.1 mass% of article | Mandatory |
| 00096 | Pentadecafluorooctanoic acid (PFOA) | All | 0.1 mass% of article | Mandatory |
| 00097 | Ammonium pentadecafluorooctanoate (APFO) | All | 0.1 mass% of article | Mandatory |
| 00098 | 4-Nonylphenol, branched and linear, ethoxylated | All | 0.1 mass% of | Mandatory |
| 55555 | 1 Honyiphonoi, branonou and illiour, ethoxylated | , w | article | ivialidatol y |



0.1 mass% of 00099 Cadmium sulphide ΑII Mandatory article 0.1 mass% of 00100 ΑII Trixylyl phosphate Mandatory article Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-0.1 mass% of 00102 ΑII Mandatory aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) article Textiles, photographic coatings 1 microgram/m2 Removed in applied to films, paper or printing Perfluorooctanoic acid (PFOA) and individual salts and 00103 (as the sum of D24.00 - no esters of PFOA plates and other coated consumer PFOA) longer in use products. All except textiles, photographic 0.1 mass% of the Removed in Perfluorooctanoic acid (PFOA) and individual salts and coatings applied to films, paper or 00104 part (as the sum of D24.00 - no esters of PFOA printing plates and other coated PFOA) longer in use consumer products. 0.1 mass% of 00105 Imidazolidine-2-thione (2-imidazoline-2-thiol) ΑII Mandatory article 1,2-Benzenedicarboxylic acid, dihexyl ester, branched 0.1 mass% of 00106 ΑII Mandatory article and linear 00107 Diisononyl phthalate (DINP) ΑII Intentionally added Mandatory Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00108 Benzo[a]pyrene (BaP) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00109 Benzo[e]pyrene (BeP) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00110 Benzo[a]anthracene (BaA) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00111 Chrysen (CHR) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00112 the plastic or Benzo[b]fluoranthene (BbFA) Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00113 Benzo[j]fluoranthene (BjFA) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00114 Benzo[k]fluoranthene (BkFA) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts that come 0.0001 mass% of into direct, prolonged or repetitive 00115 Dibenzo[a,h]anthracene (DBAhA) the plastic or Mandatory skin or oral cavity contact except rubber part those for toys or childcare articles Rubber or plastic parts of toys and 0.00005 mass% of childcare articles that come into 00116 Benzo[a]pyrene (BaP) the plastic or Mandatory direct, prolonged or repetitive skin rubber part or oral cavity contact Rubber or plastic parts of toys and 0.00005 mass% of childcare articles that come into 00117 Benzo[e]pyrene (BeP) the plastic or Mandatory direct, prolonged or repetitive skin rubber part or oral cavity contact Rubber or plastic parts of toys and 0.00005 mass% of childcare articles that come into 00118 Benzo[a]anthracene (BaA) the plastic or Mandatory direct, prolonged or repetitive skin rubber part or oral cavity contact Rubber or plastic parts of toys and 0.00005 mass% of childcare articles that come into 00119 Chrysen (CHR) the plastic or Mandatory direct, prolonged or repetitive skin rubber part or oral cavity contact Rubber or plastic parts of toys and 0.00005 mass% of childcare articles that come into Benzo[b]fluoranthene (BbFA) 00120 the plastic or Mandatory direct, prolonged or repetitive skin rubber part or oral cavity contact



| 00121 | Benzo[j]fluoranthene (BjFA) | Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact | 0.00005 mass% of the plastic or rubber part | Mandatory |
|-------|--|---|--|-----------|
| 00122 | Benzo[k]fluoranthene (BkFA) | Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact | 0.00005 mass% of the plastic or rubber part | Mandatory |
| 00123 | Dibenzo[a,h]anthracene (DBAhA) | Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact | 0.00005 mass% of the plastic or rubber part | Mandatory |
| 00124 | Perfluorooctane sulfonates (PFOS) | Textiles or other coated materials. | Intentionally added or 1 microgram/m2 of coated material | Mandatory |
| 00125 | Perfluorooctane sulfonates (PFOS) | All except textiles or other coated materials. | Intentionally added or 0.1 mass% of the part (as the sum of PFOS) | Mandatory |
| 00126 | 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) | All | 0.1 mass% of article | Mandatory |
| 00128 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) | All | 0.1 mass% of article | Mandatory |
| 00129 | 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) | All | 0.1 mass% of article | Mandatory |
| 00130 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | All | 0.1 mass% of article | Mandatory |
| 00131 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters | All | 0.1 mass% of article | Mandatory |
| 00133 | 1,3-propanesultone | All | 0.1 mass% of article | Mandatory |
| 00134 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | All | 0.1 mass% of article | Mandatory |
| 00135 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | All | 0.1 mass% of article | Mandatory |
| 00140 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | All | 0.1 mass% of article | Mandatory |
| 00138 | Benzo[def]chrysene (Benzo[a]pyrene) | All | 0.1 mass% of article | Mandatory |
| 00141 | 4,4'-isopropylidenediphenol | All | Intentionally added or 0.1 mass% of article | Mandatory |
| 00142 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | All | 0.1 mass% of article | Mandatory |
| 00143 | Perfluorohexane-1-sulphonic acid and its salts | All | Intentionally added or 0.0000025 mass% of PFHxS or any of its salts in article | Mandatory |
| 00144 | Chrysene | All | 0.1 mass% of article | Mandatory |
| 00145 | Benz[a]anthracene | All | 0.1 mass% of article | Mandatory |
| 00146 | Cadmium hydroxide | All | 0.1 mass% of article | Mandatory |
| 00147 | 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" TM) | All | 0.1 mass% of article | Mandatory |
| 00148 | Benzo[ghi]perylene | All | 0.1 mass% of article | Mandatory |
| 00149 | Octamethylcyclotetrasiloxane | All | 0.1 mass% of article | Mandatory |
| 00150 | Decamethylcyclopentasiloxane | All | 0.1 mass% of article | Mandatory |
| 00151 | Dodecamethylcyclohexasiloxane | All | 0.1 mass% of article | Mandatory |
| 00152 | Disodium octaborate | All | 0.1 mass% of | Mandatory |

| | | | article | |
|-------|--|--|---|-----------|
| 00153 | Terphenyl, hydrogenated | All | 0.1 mass% of article | Mandatory |
| 00154 | Lead | All | 0.1 mass% of article | Mandatory |
| 00139 | Dicyclohexyl phthalate | All | 0.1 mass% of article | Mandatory |
| 00155 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | All | 0.1 mass% of article | Mandatory |
| 00156 | Benzo[k]fluoranthene | All | 0.1 mass% of article | Mandatory |
| 00157 | Fluoranthene | All | 0.1 mass% of article | Mandatory |
| 00158 | Phenanthrene | All | 0.1 mass% of article | Mandatory |
| 00159 | Pyrene | All | 0.1 mass% of article | Mandatory |
| 00160 | Perfluorooctanoic acid and its salts | All | Intentionally added or 0.0000025 mass% of PFOA including its salts in article or mixture | Mandatory |
| 00161 | PFOA-related compounds | All | 0.0001 mass% of one or a combination of PFOA-related substances, in article or mixture | Mandatory |
| 00162 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | All | 0.1 mass% of article | Mandatory |
| 00163 | Tetraboron disodium heptaoxide, hydrate | All | 0.1 mass% of article | Mandatory |
| 00164 | Diisohexyl phthalate | All | 0.1 mass% of article | Mandatory |
| 00165 | Perfluorobutane sulfonic acid (PFBS) and its salts | All | 0.1 mass% of article | Mandatory |
| 00170 | Dibutylbis(pentane-2,4-dionato-O,O')tin | All | 0.1 mass% of article | Mandatory |
| 00171 | Halogenated Flame Retardants | enclosure and stand of electronic displays, including televisions, monitors and digital signage displays with a screen area greater than 100 square centimetres | 0.1 mass% of halogen content in homogeneous material | Mandatory |
| 00172 | Bis(2-(2-methoxyethoxy)ethyl)ether | All | 0.1 mass% of article | Mandatory |
| 00173 | Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety | All | 0.1 mass% of article | Mandatory |
| 00174 | Phenol, Isopropylated Phosphate (3:1) (PIP (3:1)) | All | Intentionally Added | Mandatory |
| 00175 | Cobalt/Cobalt compounds | batteries used in computer servers and online data storage products | Intentionally Added | Mandatory |
| 00176 | Neodymium/Neodymium compounds | HDDs used in computer servers and online data storage products | Intentionally Added | Mandatory |
| 00177 | 4,4'-(1-methylpropylidene)bisphenol | All | 0.1 mass% of article | Mandatory |
| 00178 | Medium-chain chlorinated paraffins (MCCP) | All | 0.1 mass% of article | Mandatory |
| 00179 | orthoboric acid, sodium salt | All | 0.1 mass% of article | Mandatory |
| 00180 | 4-Nonylphenol, branched and linear | All | 0.1 mass% of article | Mandatory |
| 00181 | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol | All | 0.1 mass% of article | Mandatory |
| 00182 | C9-C14 PFCAs and their salts | All | 0.0000025 mass% for the sum of C9- C14 PFCAs and their salts in Article | Mandatory |



| | | | or Mixture | |
|-------|--|-----|---|-----------|
| 00183 | C9-C14 PFCA-related substances | All | 0.000026 mass% for the sum of C9- C14 PFCA-related substances in Article or Mixture | Mandatory |
| 00184 | 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene] | All | 0.1 mass% of article | Mandatory |
| 00185 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol | All | 0.1 mass% of article | Mandatory |
| 00186 | 4,4'-sulphonyldiphenol | All | 0.1 mass% of article | Mandatory |
| 00187 | Barium diboron tetraoxide | All | 0.1 mass% of article | Mandatory |
| 00188 | Bis(2-ethylhexyl) tetrabromophthalate | All | 0.1 mass% of article | Mandatory |
| 00189 | Isobutyl 4-hydroxybenzoate | All | 0.1 mass% of article | Mandatory |
| 00190 | Melamine | All | 0.1 mass% of article | Mandatory |
| 00191 | Perfluoroheptanoic acid and its salts | All | 0.1 mass% of article | Mandatory |
| 00192 | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4- (1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4- (heptafluoropropyl)morpholine | All | 0.1 mass% of article | Mandatory |
| 00193 | Per- and poly-fluoroalkyl substances (PFAS) | All | Intentionally added | Mandatory |
| 00194 | bis(4-chlorophenyl) sulphone | All | 0.1 mass% of article | Mandatory |
| 00195 | diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide | All | 0.1 mass% of article | Mandatory |
| 00196 | 2,4,6-tri-tert-butylphenol | All | 0.1 mass% of article | Mandatory |
| 00197 | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3- tetramethylbutyl)phenol (UV-329) | All | 0.1 mass% of article | Mandatory |
| 00198 | 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4- (morpholin-4-yl)phenyl]butan-1-one | All | 0.1 mass% of article | Mandatory |
| 00199 | Bumetrizole (UV-326) | All | 0.1 mass% of article | Mandatory |
| 00200 | Oligomerisation and alkylation reaction products of 2- phenylpropene and phenol | All | 0.1 mass% of article | Mandatory |
| 00201 | Pentachlorophenol and its salts and esters | All | 0.1 mass% of article | Mandatory |
| 00202 | Bis(α,α-dimethylbenzyl) peroxide | All | 0.1 mass% of article | Mandatory |
| 00203 | Diisooctyl phthalate (DIOP) | All | 0.1 mass% of article or mixture | Mandatory |
| 00204 | Colecalciferol | All | 0.1 mass% of article or mixture | Mandatory |
| 00205 | PFHxS-related compounds | All | Intentionally added or 0.0001 mass% of one or a combination of PFHxS-related compounds in article | Mandatory |
| 00206 | Triphenyl phosphate | All | 0.1 mass% of article | Mandatory |
| 00207 | 6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid | All | 0.1 mass% of article or mixture | Mandatory |
| 00208 | O,O,O-triphenyl phosphorothioate | All | 0.1 mass% of article or mixture | Mandatory |
| 00209 | Octamethyltrisiloxane | All | 0.1 mass% of article or mixture | Mandatory |
| 00210 | Perfluamine | All | 0.1 mass% of article or mixture | Mandatory |
| 00211 | reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives | All | 0.1 mass% of article or mixture | Mandatory |

March 2025 Update

| Identity | Statement |
|----------|---|
| 01 | Product(s) does not contain Declarable Substances or Declarable Substance Groups above the thresholds specified in the IEC 62474 declarable substances list |
| 02 | Product(s) is obsolete, no information is available |
| 03 | Product(s) is unknown, no information is available |