Dynabook Inc.

# Standard Manual for Management of Chemical Substances Contained in Parts and Materials

Ver.1.00

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## Chapter 1: Survey of Chemical Substances Contained in Parts and Materials

### 1. Purpose

Dynabook Inc. (including the group companies, hereinafter referred to as Dynabook) actively promotes green procurement for environmental conservation activities together with our business partners to ensure environmental conservation at the time of product disposal and user safety.
Green procurement is carried out through a "green audit" to evaluate the environmental conservation efforts of the entire business partner company, and a "delivery product evaluation" to evaluate the environmental impact reduction of parts and materials (raw materials, general-purpose parts, finished products, semi-finished products, auxiliary materials, etc.) purchased from the business partner.
This standard document shows business partners the standards for chemical substances contained in products and the survey method for them in the "delivery product evaluation", and aims to reduce the environmental impact and ensure user safety as well as comply with laws and regulations.
In principle, delivery product evaluation is carried out in two forms: "Declaration of Use/Non-Use of Environment-Related Substances" and "EU-REACH SVHC Content Survey Document". However, due to the emergence of new laws and regulations or revisions to laws and regulations, additional surveys may be conducted.

| Survey | Description | Remarks |
|---|---|---|
| Declaration of Use/Non-Use of Environment-Related Substances | Dynabook-prescribed documents to be submitted regarding the content of prohibited substances | Posted on the Dynabook website below. https://dynabook.com/pc/env/eng/green/index.html |
| EU-REACH SVHC Content Survey | Dynabook-specified documents to be submitted regarding the content status of EU-REACH SVHC contained in products, semi-finished products, parts, and materials delivered to Dynabook | This information is only available to business partners. The response method is described in the "EU-REACH SVHC Content Survey Form." |

### 2. Applicable Scope

This survey applies to all products shipped by Dynabook [1] (hereinafter referred to as Dynabook products), all parts and materials used in Dynabook products, and their packaging materials [2]. Specifically, the survey covers the following:

1) Parts, materials, and units incorporated into Dynabook products
2) Auxiliary materials used in production and contained in Dynabook products (solder, oil, grease, tape, marking ink marker pens, etc.)
3) Finished products, options, supplies, etc. purchased for sale
4) Printed materials and accessories included with Dynabook products (instruction manuals, cables, remote controls, etc.) (Printed materials not used or included with Dynabook products (delivery and delivery slips, inspection reports, etc.) are not included.)
5) Packaging materials used to pack Dynabook products [2]
6) Packaging materials used by suppliers of parts and materials to transport and protect parts and materials [2]

* The packaging materials in 6) are excluded from the survey in the "Chemical Substance Report" and "Content Survey."

The following parts and materials may contain chemical substances that are subject to this survey. Check thoroughly whether they are present.

- Lubricants, such as grease
- Flame retardants in resin materials
- Polyvinyl chloride, flame retardants, and stabilizers in lead wire insulation
- Special metals (alloys) for lubrication of electrical contacts, etc.

[1] Includes products shipped between Dynabook Group companies.

[2] Packaging materials are used to transport, protect, and contain goods, and in principle become unnecessary as soon as the product is used. Printing on packaging and printed labels affixed to packaging are included in packaging.
[Example] Cardboard paper, plastic bags, cushioning materials, protective films, adhesive tapes, staples, bands for securing loads, and labels, paints, and inks for them.

## 3. Definition of Terms

| | |
|---|---|
| Chemical substance | An element or its compound that is formed naturally or can be obtained in any manufacturing process. (JIS Z 7201) |
| Mixture | Mixture can be obtained by mixing two or more chemical substances. (JIS Z 7201)<br>[Note] Examples of mixtures include paint/coating agent, ink, alloy ingot, solder, resin pellet, etc. |
| Article | Refers to an item with a specific shape, appearance or design that is given during production which substantially determines the functions of the item in final use rather than its chemical composition. (JIS Z 7201)<br>[Note] Examples of articles include paints, metal plates, gear wheels, integrated circuits, electrical products, transport machineries, etc. |
| Contain | Refers to a state where a chemical substance is contained in products, parts, materials, and ingredients used in them.<br>Regardless of intentional addition or non-intentional addition (including impurities, residuals/adhesion/contamination, etc. created in the process of manufacturing and transport), it is regarded as “contained” if the content rate of the chemical substance exceeds the Dynabook’s reference value (threshold). |
| Intentional addition | Refers to addition performed in the aim of providing a specific property to parts and materials.<br>For example, hexavalent chromium for rust-proofing, brominated flame retardants to improve fire retardancy of plastic cabinets, etc. are applicable. |
| Impurities | Refers to materials that are contained in natural materials and cannot technically be removed in the refining process, materials that are created in the synthesis reaction process and cannot technically be removed, and materials that are unintentionally contained in recycled materials. |
| Homogeneous material | Refers to one material of uniform composition throughout or a material, consisting of a combination of materials, that cannot be disjointed or separated into different materials by mechanical actions such as unscrewing, cutting, crushing, grinding and abrasive processes.<br>*Paint, planting, and chemically treated materials are not the Homogeneous material because they can be separated. |
| Delivery Prohibition Date | Refers to the day on which delivery to Dynabook is prohibited immediately: immediately prohibition of use.<br>(Designated date: Day_ Month_ Year_): Delivery after the designated date is prohibited. |
| RoHS<br>RoHS Directive | Refers to EU RoHS Directives 2011/65/EU and the related amended Directive. |

4. Dynabook Chemical Substance Management Categories

Chemical substances contained in parts and materials purchased by Dynabook are managed by categorizing them into Dynabook banned substances (Banned substances, Substances banned depending on the application, Candidate substances to be banned, and Managed substances), as shown in the table below.

| Chemical substance management category | Explanation | Remarks |
|---|---|---|
| 1) Banned substances | Substances that cannot be used for any purpose. If contained in a part or material, immediately discontinue and eliminate their use.<br><br>In principle, Dynabook will not purchase parts and materials containing these substances. | Substances whose inclusion in products is currently regulated or is expected to be regulated in the future under laws and regulations and on environmental labels in Japan or overseas.<br><br>Substances that Dynabook regulates on its own initiative in advance of global trends because it is widely known that their environmental impact is high and alternative substances exist. |
| 2) Substances banned depending on the application | Substances regarded as banned by Dynabook depending on the application (excluded applications).<br><br>In excluded applications, these substances shall be treated as Managed substances. | |
| 3) Candidate substances to be banned | Substances that are candidates for "Banned substances" in 1) or 2) above.<br>If it is contained, please promote substitution. | Substances that are expected to be banned in the near future under domestic and foreign laws and regulations.<br><br>Since the threshold value, prohibited date, regulated use (excluded use), etc. have not been determined in the laws and regulations, it cannot be specified as Dynabook's "Candidate substances to be banned" at this time, but in the future based on the trends of laws and regulations, etc. Specify for Dynabook's "Candidate substances to be banned".<br><br>Depending on the timing when laws and regulations are finalized, it may not be possible to set a grace period from the designation as Dynabook's "Banned substances" to the delivery prohibition date, so if it is contained, please proceed with the substitution as soon as possible. |
| 4) Managed substances | Substances for which it is necessary to ascertain whether the specified substance is present, the amount contained, and so on. | Substances for which disclosure of information on their usage status in products is required, or is expected to be required in the future, under laws and regulations and on environmental labels in Japan or overseas.<br><br>Substances for which customers have requested, or for which there is a possibility of being requested, that their usage status information in products be disclosed.<br><br>All Dynabook-specific survey-targeted chemical substances that do not fall under the category of “Dynabook-banned substances” shall be treated as Managed substances. |

5. Documents to Be Submitted

List of Documents to Be Submitted

The table below specifies the documents to be submitted and the format for submission.

| Document | Format | Method of Submission | Chemical substances subject to the Survey [3] | Remarks |
|---|---|---|---|---|
| Report on Chemical Substances Contained in the Product | Declaration of Use/Non-Use of Environment-Related Substances [4] | Submit to the requester when new products are adopted or parts are changed that affect the substances contained. | Among the following Dynabook prohibited substances, there is a high risk of them being contained.<br>• Banned substances<br>• Substances banned depending on the application<br>• Candidate substances to be banned<br>And those substances that are deemed to require confirmation of their content among the managed substances. | Range of applicable packaging materials:<br>Also covers packaging materials at the time of parts and materials delivery. Also report chemical substances contained in packaging materials under the same criteria.<br>However, packaging materials that will clearly be disposed of at Dynabook bases [5] and for which there is no risk of migration or contamination by targeted substances from the packaging materials into parts or materials are not subject to the survey. |
| Content Survey | EU-REACH SVHC Content Survey Response Form | In response to a survey request from the materials department, fill out our format and submit it to the requesting party. | SVHC (Substances of Very High Concern) stipulated in the EU-REACH Regulation | - |
| Analysis Data of RoHS Target Substances | Actual measurement data (Documents that confirm RoHS compliance can be used instead.) [6] | Attach this to the specifications for newly adopted parts and materials and submit. | 10 substances subject to RoHS (lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, DBP, BBP, DIBP) | - |

[3] Chemical substances subject to the survey may change or be added depending on legal and regulatory trends, customer requests, etc.

[4] The declaration of use/non-use of environmentally-related substances is available on Dynabook Green Procurement website. (https://dynabook.com/pc/env/eng/green/index.html)

[5] "Bases" refers to Dynabook factories and service bases both in Japan and overseas.

[6] Refer to Dynabook Green Procurement website. (https://dynabook.com/pc/env/eng/green/index.html)

## Chapter 2: Chemical Substances Subject to the Survey, Criteria

1. List of Chemical Substances Subject to the Survey

Chemical substances contained in parts and materials purchased by the Dynabook are managed by classifying them into four categories: 1) Banned substances, 2) Substances banned depending on the application, 3) Candidate substances to be banned, and 4) Managed substances. [7]

1) Banned substances

The substances shown in Table 2-1-1 are banned at Dynabook and cannot be used for any purpose. If contained in a part or material, their use must be immediately discontinued. In principle, Dynabook will not purchase parts and materials containing these banned substances.

**Table 2-1-1: Banned substances**

| Category | No. | Substance (Group) | Criteria (Value) |
|---|---|---|---|
| RoHS-related chemical Substances | 1 | Hexavalent chromium compounds | See Table 2-2-1 |
| | 2 | Polybrominated biphenyls (PBBs) | |
| | 3 | Polybrominated diphenylethers (PBDEs) | |
| Other | 4 | Tributyl tin oxide (TBTO) | |
| | 5 | Tri-substituted organostannic compounds | |
| | 6 | Polychlorinated biphenyls (PCBs) and specific substitutes | |
| | 7 | Polychlorinated naphthalenes (having 1 to 8 chlorine atoms) | |
| | 8 | Short-chain chlorinated paraffins (SCCPs) (C10-C13) | |
| | 9 | Asbestos | |
| | 10 | Polychlorinated terphenyls (PCTs) | |
| | 11 | 2-(2H-1,2,3-benzotriazol-2-yl)-4, 6-di-tert-butylphenol | |
| | 12 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers | |
| | 13 | Cobalt dichloride | |
| | 14 | Dimethyl fumarate | |
| | 15 | Aluminosilicate, refractory ceramic fibers | |
| | 16 | Zirconia aluminosilicate, refractory ceramic fibers | |
| | 17 | Dibutyltin (DBT) compounds | |
| | 18 | Pentachlorothiophenol (PCTP) | |
| | 19 | Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances | |
| | 20 | Perfluorohexane-1-sulphonic acid (PFHxS), its salts and PFHxS-related substances | |
| | 21 | Perfluorooctane sulfonate (PFOS), its salts and PFOS-related substances | |
| | 22 | Dechlorane plus and its syn-isomer and anti-isomer | |
| | 23 | Ozone-depleting substances | |

[7] For information on chemical substance management categories, please refer to Chapter 1, " 4. Dynabook Chemical Substance Management Categories."

2) Substances Banned Depending on the Application

The substances shown in Table 2-1-2 are conditionally prohibited substances under the Dynabook. Use is permitted only for the excluded applications in the table, and the excluded applications are treated as managed substances.

**Table 2-1-2: Substances Banned Depending on the Application**

| Category | No. | Substance (Group) | Exempted Applications |
|---|---|---|---|
| RoHS-related chemical Substances | 1 | Cadmium and its compounds | See Table 2-2-2-1 |
| | 2 | Lead and its compounds | |
| | 3 | Mercury and its compounds | |
| | 4 | Bis(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), butylbenzylphthalate (BBP), Diisobutyl phthalate (DIBP) [8] | |
| Other | 5 | Beryllium and its compounds | See Table 2-2-2-2 |
| | 6 | Azo colorants and azo dyesthat | |
| | 7 | Polyvinyl chloride (PVC) and its copolymer [9] | |
| | 8 | Phthalate esters other than phthalates DEHP, DBP, BBP and DIBP (listed No.4 above) | |
| | 9 | Radioactive substances | |
| | 10 | Fluorinated greenhouse gases (HFC, PFC, SF6) | |
| | 11 | Formaldehyde | |
| | 12 | Perchlorates | |
| | 13 | Nickel and its compounds | |
| | 14 | Arsenic and its compounds | |
| | 15 | Boric acid | |
| | 16 | Disodium tetraborate, anhydrous | |
| | | Tetraboron disodium heptaoxide, hydrate | |
| | 17 | Dioctyltin (DOT) compounds | |
| | 18 | Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances | |
| | 19 | Chlorinated flame retardants | |
| | 20 | Halogenated compound (Halogenated flame retardant etc.) | |
| | 21 | Tris(2-chloroethyl) phosphate (TCEP) | |
| | 22 | Tris(2-chloro-1-methylethyl) phosphate (TCPP) | |
| | 23 | Tris(1,3-dichloro-2-propyl) phosphate (TDCPP) | |
| | 24 | Polycyclic aromatic hydrocarbons (PAHs) [10] | |
| | 25 | Red phosphorus [11] | |
| | 26 | Isopropylphenyl phosphate (PIP (3:1)) | |
| | 27 | Hexachlorobutadiene (HCBD) | |
| | 28 | 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP) | |
| | 29 | 4,4'-isopropylidenediphenol (Bisphenol A) | |
| | 30 | 4,4'-sulfonyldiphenol (Bisphenol S) | |
| | 31 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | |
| | 32 | Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances | |

[8] The four types of phthalates (DEHP, DBP, BBP and DIBP) are mainly used as plasticizers for soft resins, and have the property of being transferred from other products by contact (migration). Since there is a possibility of transfer from packaging to parts and materials, please report the substances containing in the packaging with the same standard (threshold).

[9] Please report the content status using the " Declaration of Use/Non-use of Environmentally Related Substances".

[10] Applies to all the following CAS RN®: 50-32-8, 192-97-2, 56-55-3, 218-01-9, 205-99-2, 205-82-3, 207-08-9, and 53-70-3.

[11] Please report the content status using the " Declaration of Use/Non-use of Environmentally Related Substances".

| Category | No. | Substance (Group) | Exempted Applications |
|---|---|---|---|
| Other | 33 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 1 to 7 aromatic rings) | See Table 2-2-2 |
| | 34 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 3 to 7 aromatic rings) | |
| | 35 | MOSH (Saturated hydrocarbons of mineral oil comprising from 16 to 35 carbon atoms) | |

3) Candidate substances to be banned

The substances shown in Table 2-1-3 are candidates for the Dynabook ban.
These substances are candidates for the above 1) Banned substances or 2) Substances banned depending on the application. They will be banned in the Dynabook in the future, considering legal and regulatory trends. If any of these substances are contained in products, please promote substitution.

**Table 2-1-3: Candidate substances to be banned**

| No. | Substance (Group) | Criteria (Value) |
|---|---|---|
| 1 | 1,2-Bis(2,3,4,5,6-pentabromophenyl) ethane (DBDPE) | See Table 2-2-3 |
| 2 | Tetrabromobisphenol A (TBBPA) | |
| 3 | Medium Chain Chlorinated paraffins (MCCPs, C14-17, chlorination levels at or exceeding 45% chlorine by weight) | |
| 4 | Perfluorocarboxylic acids containing 15 to 21 carbon atoms in the chain (C15-C21 PFCAs), their salts and C15-C21 PFCA-related substances | |
| 5 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), which is designated as a declarable substance in the latest version of chemSHERPA | |
| 6 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) other than No.5 above | |
| 7 | Bisphenols (excluding Bisphenol A and Bisphenol S) [12] | |

[12] Bisphenol A and bisphenol S are Substances banned depending on the application (Table 2-1-2. No. 29, 30).

4) Managed substances

Managed substances are all chemical substances (groups) that do not fall under the Dynabook prohibited substances and fall under the "chemSHERPA managed substances criteria (Table 2-1-4)". Please reduce or substitute.

**Table 2-1-4: chemSHERPA Management Criteria**

| Relevant Criteria ID | Covered Laws & Regulations, Industrial Criteria |
|---|---|
| LR01 | Japan Chemical Substances Control Act Class I specified chemical substance |
| LR02 | USA Toxic Substances Control Act (TSCA): Section 6; prohibited or restricted substances |
| LR03 | EU ELV Directive 2000 / 53 / EC |
| LR04 | EU RoHS Directive 2015/863/EU Annex II |
| LR05 | EU POPs Regulation (EC) No 2023/1608 Annex I |
| LR06 | EU REACH regulation (EC) No. 1907/2006<br>Candidate List of SVHC for Authorization and Annex XIV |
| LR07 | EU REACH Regulation (EC) No 2024/1328 Annex XVII (Restricted Substances) |
| LR08 | EU Medical Device Regulation (MDR) (EU) No 2017/745 Annex I 10.4 chemical substances |
| LR09 | China RoHS (China) Electronic Equipment Restriction and Management of the Use of Hazardous Substances in Electronic Equipment |
| IC01 | Global Automotive Declarable Substance List (GADSL) |
| IC02 | IEC 62474 DB Declarable substance groups and Declarable substances |

2. List of Criteria for Banned Substances

1) Banned substances

**Table 2-2-1: Criteria (Reference Values) of Banned substances**

| CAT | No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| RoHS-related chemical Substances | 1 | Hexavalent chromium compounds | (1) Pigments and dyesused in plastics (including rubber)<br>(2) Pigments, paints, inks<br>(3) Rust-preventive plating treatments<br>(4) Batteries<br>(5) All uses including catalysts | Content is 1,000 ppm or less. | Immediately |
| | | | (6) Leather products/materials that come into contact with the human skin | Less than 3 ppm per total dry weight of leather. | |
| | | | (7) Packaging materials, packaging materials | See Table 2-2-4. | |
| | 2 | Polybrominated biphenyls (PBBs) | (1) All uses including flame retardants for plastics | Content is 1,000 ppm or less. | Immediately |
| | 3 | Polybrominated diphenylethers (PBDEs) | (1) All uses including flame retardants for plastics | The following (1) and (2) are satisfied.<br>(1) Content is 1000ppm or less in all parts / materials.<br>(2) In the case of parts/materials used for products other than those regulated by the EU RoHS Directive, Content is less than 500ppm in the Mixture or Article. | Immediately |
| Other | 4 | Tributyl tin oxide (TBTO) | (1) All uses including paints, inks, preservatives, and mold inhibitors | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | 5 | Tri-substituted organostannic compounds | (1) All uses including paints, inks, preservatives, and mold inhibitors | Content of tin is 1,000 ppm or less. Not intentionally added. | Immediately |
| | 6 | Polychlorinated biphenyls (PCBs) and specific substitutes | (1) All uses including insulating oils and lubricating oils | Not intentionally added. | Immediately |
| | 7 | Polychlorinated naphthalenes | (1) All uses including lubricating oils and paints | Not intentionally added. (having 1 to 8 chlorine atoms) | Immediately |
| | 8 | Short-chain chlorinated paraffins (SCCPs) (C10-C13) | (1) All uses including pigments, paints, inks, lubricants, and plasticizers | Content is less than 1,000ppm in the Article and Not intentionally added. | Immediately |
| | 9 | Asbestos | (1) All uses including insulation materials and filling agents | Not intentionally added. | Immediately |

| CAT | No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| Other | 10 | Polychlorinated terphenyls (PCTs) | (1) All uses | Content is 50 ppm or less. Not intentionally added. | Immediately |
| | 11 | 2-(2H-1,2,3-benzotriazol-2-yl)-4, 6-di-tert-butylphenol | (1) All uses | Not intentionally added. | Immediately |
| | 12 | Hexabromocyclodod ecane (HBCDD) | (1) All uses | Content is 100 ppm or less. Not intentionally added. | Immediately |
| | 13 | Cobalt dichloride | (1) All uses | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | 14 | Dimethyl fumarate | (1) All uses | Content is 0.1 ppm or less. Not intentionally added. | Immediately |
| | 15 | Aluminosilicate, refractory ceramic fibers | (1) All uses | Not intentionally added. | Immediately |
| | 16 | Zirconia aluminosilicate, refractory ceramic fibers | (1) All uses | Not intentionally added. | Immediately |
| | 17 | Dibutyltin (DBT) compounds | (1) All uses | 1,000 ppm or less as elemental tin in material. | Immediately |
| | 18 | Pentachlorothiophenol (PCTP) | (1) All uses | Content is 1wt% or less. | Immediately |
| | 19 | Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances | (1) All uses | The following (1) and (2) are to be satisfied in the Mixture or Article.<br>(1) The sum of C9-C14 PFCAs and their salts: Content is less than 25ppb (0.025ppm).<br>(2) The sum of C9-C14 PFCA-related substances: Content is less than 260 ppb (0.26ppm). | Immediately |

| CAT | No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| Other | 20 | Perfluorohexane-1- sulphonic acid (PFHxS), its salts and PFHxS-related substances | (1) All uses | The following (1) and (2) are to be satisfied in the Mixture or Article.<br>(1) The sum of PFHxS and their salts: Content is 0.0000025% (25ppb) or less.<br>(2) The sum of PFHxS-related substances: Content is 0.0001% (1,000ppb) or less. | 1 Jan.2023 |
| | 21 | Perfluorooctane sulfonate (PFOS), its salts and PFOS-related substances | (1) All uses | The following (1) and (2) are to be satisfied in the Mixture or Article.<br>(1) The sum of PFOS and their salts: Content is 0.0000025% (25ppb) or less.<br>(2) The sum of PFOS - related substances: Content is 0.0001% (1,000ppb) or less. | Immediately |
| | 22 | Dechlorane plus and its syn-isomer and anti-isomer | (1) All uses | Not intentionally added. | Immediately |
| | 23 | Ozone-depleting substances | (1) All uses | Not intentionally added. | Immediately |

2) Substances Banned Depending on the Application

For RoHS-related chemical substances, the dates for the ban on delivery are set based on the following principles.

<How to determine the delivery ban date for Dynabook in relation to the EU RoHS exemption deadline>

1) In principle, the delivery ban date for Dynabook is six months before the RoHS exemption deadline.
   Example: If the RoHS exemption deadline is "July 21, 2025," the delivery ban date for Dynabook is "January 21, 2025."
2) If the legal exemption deadline has changed since the publication of this Management Standard, in principle, the delivery ban date for Dynabook will be six months before the changed deadline.
3) Based on the information on the EU RoHS exemption deadline at the time of publication of this Management Standard.

**Table 2-2-2-1: Exempted Applications for Substances Banned Depending on the Application and Their Criteria (Reference Values) [RoHS-related chemical Substances]**

| No. | Substance (Group) | Applications | RoHS Exemption [13] | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| 1 | Cadmium and its compounds | | | | |
| | Banned | (1) Stabilizers, pigments, and dyes used in plastics (including rubber)<br>(2) Pigments, paints, inks<br>(3) Surface treatments (plating, etc.), coatings<br>(4) Small fluorescent lamps, straight-tube fluorescent lamps<br>(5) All applications except those in the Declarable category | - | Content is 100ppm or less. | Immediately |
| | | (6) Packaging materials, packaging materials | - | See Table 2-2-4. | |
| | Declarable | (1) Used for electrical contacts<br>(a) Circuit breakers<br>(b) Thermal sensing controls<br>(c)Thermal motor protectors (excluding hermetic thermal motor protectors)<br>(d) AC switches rated at 6A and more at 250V AC and more, or 12A and more at 125V AC and more"<br>(e) DC switches rated at 20A and more at 18V DC and more"<br>(f) Switches for use at voltage supply frequency >= 200 Hz | 8(b)-I | - | (Under deliberation for exemption renewal in EU) [14] |
| | | (2) Used in striking optical filter glass types, excluding applications falling under point 39 of EU RoHS directive annex III. | 13(b)-(II) | - | |
| | | (3) Used in white glass used for an optical purpose. | 13(b)-(III) | - | |
| | | (4) Using exemptions listed in EU RoHS directive other than above and having permission from adoption decision. | - | - | * [15] |
| | | (5) Batteries | - | In compliance with EU battery regulation. | - |

[13] No. of the exempted applications in the RoHS Directive Annex III are shown.

[14] An application for extension of exemption was accepted in the EU, and it is under deliberation at the time of issuance of this Standard Manual for Management of Chemical Substances Contained in Parts and Materials. This exemption is valid during deliberation. When the deadline is decided, delivery prohibition date to Dynabook will be six months before the deadline.

[15] In principle, Dynabook set up delivery prohibition date as "six month" before the due date of EU RoHS exemption.

| No. | Substance (Group) | Applications | RoHS Exemption | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| 2 | Lead and its compounds | | | | |
| | Banned | (1) Stabilizers, pigments, and dyes used in plastics (including rubber) (AC adapters, power cords, connection cables, etc.)<br>(2) Pigments, paints, inks<br>(3) Balancer weights<br>(4) Solder (solder for component mounting, terminal plating, etc.)<br>(5) Consumer products designed or intended primarily for children age 12 and younger and used at 0.01 wt% or more in exterior parts<br>(6) Parts and materials for toy applications, 0.009% or more used per unit in surface coatings such as paint<br>(7) All applications except those in the Declarable category | - | Contained at less than below:<br>(1) In resins: 300 ppm<br>(2) Other: 1,000 ppm | Immediately |
| | | (8) Packaging materials, packaging materials | - | See Table 2-2-4 | |
| | Declarable | (1) Used in high-melting point solder (lead-based alloys containing 85 wt% or more lead) | 7(a) | - | (Under deliberation for exemption renewal in EU) [14] |
| | | (2) Used in electrical and electronic materials in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound | 7(c)-I | - | |
| | | (3) Used less than 0.2wt% in glass of fluorescent tubes | 5(b) | - | |
| | | (4) Contained as an alloying element.<br>(a) Used less than 0.35wt% in steel alloy for machining purposes | 6(a)-I | - | |
| | | (b) Used less than 0.4wt% in aluminum alloy for machining purposes | 6(b)-II | - | |
| | | (c) Used less than 4wt% in copper alloy | 6(c) | - | |
| | | (5) 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 criteria applies<br>(a) A semiconductor technology node of 90 nm or larger<br>(b) A single die of 300 mm2 or larger in any semiconductor technology node<br>(c) Stacked die packages with die of 300 mm2 or larger, or silicon interposers of 300 mm2 or larger | 15(a) | - | |
| | | (6) Used in white glass used for an optical purpose | 13(a) | - | |
| | | (7) Used in ion coloured optical filter glass types | 13(b)-(I) | - | |
| | | (8) Used in glazes used for reflectance standards | 13(b)-(III) | - | |
| | | (9) Used in dielectric ceramic used in a capacitor with rated voltage of 125V AC or 250V DC or larger | 7(c)-II | - | |
| | | (10) Using exemptions listed in EU RoHS directive other than (1) to (9) above and having permission from adoption decision | - | - | * [16] |
| | | (11) Batteries | - | In compliance with EU battery regulation | - |

[16] In principle, Dynabook set up delivery prohibition date as "six month" before the due date of EU RoHS exemption.

| No. | Substance (Group) | Applications | RoHS Exemption | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| 3 | Mercury and its compounds | | | | |
| | Banned | (1) Stabilizers, pigments, and dyes used in plastics (including rubber)<br>(2) Pigments, paints, inks<br>(3) Mercury batteries<br>(4) Relays, switches, and sensors using mercury<br>(5) All applications except those in the Declarable category | - | Content is 1,000 ppm or less. | Immediately |
| | | (6) Packaging materials, packaging materials | - | See Table 2-2-4 | |
| | Declarable | (1) Used in halogenated metal halide lamps (MH) | 4(e) | - | 24 Aug. 2026 |
| | | (2) Used in other discharge lamps for special purposes not specifically mentioned above | 4(f)-I | - | (Under deliberation for exemption renewal in EU) [17] |
| | | (3) Mercury in high pressure mercury vapour lamps used in projectors where an output >= 2000 lumen ANSI is required | 4(f)-II | - | 24 Aug. 2026 |
| | | (4) Mercury in lamps emitting light in the ultraviolet spectrum | 4(f)-IV | - | |
| | | (5) Exempted applications specified under the EU RoHS Directive other than (1) to (4) above, and permission obtained from the adopting department | - | - | - |
| | | (6) Batteries | - | In compliance with EU battery regulation | |
| 4 | Bis(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), butylbenzylphthalate (BBP), Diisobutyl phthalate (DIBP) | | | | |
| | Banned | (1) Used in the case of parts/materials used in the product that is "Not subject to regulated EU RoHS Directive"or " Children's toy or child care article".<br><br>(2) All applications other than above (1) (Used in the case of parts/materials used in the product that is both "regulated EU RoHS Directive" and "other than Children's toy or child care article".) | - | (1) Total content of 4 substances is 1,000ppm or less.<br>(2) Content of DEHP, DBP, BBP and DIBP is 1,000ppm or less respectively. | Immediately |
| | Declarable | (1) All applications except those in the Banned category | - | - | - |

[17] An application for extension of exemption was accepted in the EU, and it is under deliberation at the time of issuance of this standard manual. This exemption is valid during deliberation. When the deadline is decided, delivery prohibition date to Dynabook will be six months before the deadline.

**Table 2-2-2-2: Exempted Applications for Substances Banned Depending on the Application and Their Criteria (Reference Values) [Other]**

| No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|
| 5 | Beryllium and its compounds | | | |
| | Banned | (1) Use of Beryllium oxide<br>(2) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | Declarable | (1) Alloys, ceramics, glass, and semiconductors | - | - |
| 6 | Azo colorants and azo dyes | | | |
| | Banned | (1) Used in a part of a product* in direct human body contact manufactured based on the premise that the product will be in continuous contact with the human body and which may produce amines when decomposed<br>*Products such as electric carpets, electric blankets, earphones, headphones, straps, and the like. | - Not produce carcinogenic amine over 30ppm when discomposed. | Immediately |
| | Declarable | (1) All applications except those in the Banned category (used for parts not in continuous contact with the human body) | - | - |
| 7 | Polyvinyl chloride (PVC) and its copolymer | | | |
| | Banned | (1) Packaging materials used by suppliers of parts and materials to transport and protect parts and materials, and packaging materials and parts for Dynabook products | Not intentionally added. | Immediately |
| | Declarable | (1) All applications except those in the Banned category such as Insulating coating of electrical wires | - | - |
| 8 | Phthalate esters other than phthalates DEHP, DBP, BBP and DIBP (No.4 above) | | | |
| | Banned | (1) Diisononyl Phthalate: DINP, Diisodecyl phthalate: DIDP or Di-n-octyl phthalate: DNOP is used in parts/materials that is used in products that are children's toy or child care article that can be placed in a child's mouth. | Total content of three substances 1,000 ppm or less | Immediately |
| | Declarable | (1) All applications except those in the Banned category | - | - |
| 9 | Radioactive substances | | | |
| | Banned | (1) All applications other than those in the Declarable category | Not intentionally added. | Immediately |
| | Declarable | (1) Thorium used in the magnetron of a microwave oven<br>(2) Krypton 85 used in the electric bulb of an LCD projector | - | - |
| 10 | Fluorinated greenhouse gases (HFC, PFC, SF6) | | | |
| | Banned | (1) All applications except those in the Declarable category | Not intentionally added. | Immediately |
| | Declarable | (1) Used as refrigerant and/or thermal insulator (HFC only) and meets the conditions and deadlines for each product and GWP (global warming potential) set in the EU F-gas regulation (2024/573) | - | - |

| No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|
| 11 | Formaldehyde | | | |
| | Banned | (1) Wooden parts<br>(2) Used in a fabric part of a product* in direct human body contact manufactured based on the premise that the product will be in continuous contact with the human body<br><br>*Products such as electric carpets, electric blankets, earphones, headphones, straps, and the like. | (1) Atmospheric concentration of 0.1 ppm or less in an airtight test chamber having a volume of at least 10 m3 (chamber method)<br>(2) According to the Japanese Act on Control of Household Products Containing Harmful Substances (75 ppm or less) | Immediately |
| | Declarable | (1) All applications except those in the Banned category | - | - |
| 12 | Perchlorates | | | |
| | Banned | (1) All applications to batteries except those in the Declarable category | Not intentionally added to batteries | Immediately |
| | Declarable | (1) Contained above 6ppb by weight per battery<br>(2) Contained less than 6ppb by weight per battery | - | - |
| 13 | Nickel and its compounds | | | |
| | Banned | (1) Applications with prolonged contact with human skin<br>Example: Glasses or watches (with the decorations or plated screws which directly contact with the skin) | Not intentionally added. | Immediately |
| | Declarable | (1) All applications except those in the Banned category | - | - |
| 14 | Arsenic and its compounds | | | |
| | Banned | (1) Use of Diarsenic Pentoxide<br>(2) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | Declarable | (1) Used in the lamp of LCD projector (Diarsenic trioxide)<br>(2) Exempted materials*<br>*Semiconductors, photosensitizers, magnet filters, copper foil, and batteries | - | - |
| 15 | Boric acid | | | |
| | Banned | (1) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | Declarable | (1) Polarizers (made of PVA)<br>(2) Glass<br>(3) Adhesives | - | - |

| No. | Substance (Group) | | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| 16 | Disodium tetraborate, anhydrous; Tetraboron disodium heptaoxide, hydrate | | | | |
| | | Banned | (1) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | | Declarable | (1) Polarizers (made of PVA)<br>(2) Glass<br>(3) Adhesives<br>(4) Fiber | - | - |
| 17 | Dioctyltin (DOT) compounds | | | | |
| | | Banned | (1) Two-component room temperature vulcanization molding kits (RTV-2 molding kits) | 1,000 ppm or less as elemental tin in material. | Immediately |
| | | Declarable | (1) All applications except those in the Banned category | - | - |
| 18 | Perfluorooctanoic acid (PFOA) and its salts and esters | | | | |
| | | Banned | (1) All applications except those in the Declarable category | The following (1) and (2) are to be satisfied in the Mixture or Article. [18]<br>(1) PFOA (including its salt): Content is 25ppb or less.<br>(2) Combination of one or multiple PFOA-related substances: Total content is 1,000ppb (1ppm) or less. | Immediately |
| | | Declarable | (1) Photo-lithography processes for semiconductors or in etching processes for compound semiconductors.<br>(2) Photo coating used in printing plates, film, and documents.<br>(3) Exemptions listed in EU POPs regulation Annex I Part A other than above and having permission from adoption decision. | - | - |
| 19 | Chlorinated flame retardants | | | | |
| | | Banned | (1) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | - |
| | | Declarable | (1) Difficult to substitute, and permission obtained from the adoption decision department within Dynabook | - | - |
| 20 | Halogenated compound (Halogenated flame retardant etc.) | | | | |
| | | Banned | (1) Used in enclosure and stand of electronic displays including televisions, monitors and digital signage displays with a screen area over 100cm2. | Total content of all halogen elements in the homogeneous material is 0.1wt% or less. | Immediately |
| | | Declarable | (1) All applications except those in the Banned category<br>(2) Although it falls under the "prohibited use category", it is used in products with limited destinations and having permission from adoption decision. | - | - |

[18] Total of the substances having these CAS RN®.:
335-67-1, 3825-26-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 376-27-2, 3108-24-5

| No. | Substance (Group) | | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|---|
| 21 | Tris (2-chloroethyl) phosphate (TCEP) | | | | |
| | | Banned | (1) Products for children age 12 and younger, and home furnishings covered with fiber, etc.<br>(2) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | | Declarable | (1) Used in motor vehicles or replacement parts or replacement equipment for motor vehicles.<br>(2) Used in commercial or residential building insulation or wiring<br>(3) Used in desktop and laptop computers, audio and video equipment, calculators, wireless telephones, game consoles, handheld devices incorporating a screen that are used to access interactive software and their associated peripherals, and cables, adaptors, and other similar connecting devices; or.<br>(4) Used in storage media, such as compact discs, for interactive software, such as computer games. | - | - |
| 22 | Tris (2-chloro-1-methylethyl) phosphate (TCPP) | | | | |
| | | Banned | (1) Products for children age 12 and younger, and home furnishings covered with fiber, etc. | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | | Declarable | (1) All applications except those in the Banned category | - | - |
| 23 | Tris (1,3-dichloro-2-propyl) phosphate (TDCPP) | | | | |
| | | Banned | (1) Products for children age 12 and younger, and home furnishings covered with fiber, etc.<br>(2) All applications except those in the Declarable category | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | | Declarable | (1) Used in motor vehicles or replacement parts or replacement equipment for motor vehicles.<br>(2) Used in commercial or residential building insulation or wiring<br>(3) Used in desktop and laptop computers, audio and video equipment, calculators, wireless telephones, game consoles, handheld devices incorporating a screen that are used to access interactive software and their associated peripherals, and cables, adaptors, and other similar connecting devices; or.<br>(4) Used in storage media, such as compact discs, for interactive software, such as computer games. | - | - |
| 24 | Polycyclic aromatic hydrocarbons (PAHs) [19] | | | | |
| | | Banned | (1) Rubber or plastic materials that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity | Content concentration of less than 1 ppm for each targeted PAH. | Immediately |
| | | Declarable | (1) All applications except those in the Banned category | - | - |
| 25 | Red phosphorus | | | | |
| | | Banned | (1) Resin or rubber | Content is 1,000 ppm or less. Not intentionally added. | Immediately |
| | | Declarable | (1) All applications except those in the Banned category<br>(2) Falls under the category of Banned, but is difficult to substitute and permission obtained from the adoption decision department within Dynabook | - | - |

[19] Substances having these CAS RN®.: 50-32-8, 192-97-2, 56-55-3, 218-01-9, 205-99-2, 205-82-3, 207-08-9, 53-70-3

| No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|
| 26 | Isopropylphenyl phosphate (PIP (3:1)) | | | |
| | Banned | (1) All applications except those in the Declarable category | Not intentionally added. | Immediately |
| | Declarable | (1) Used in lubricants or greases.<br>(2) Used in products or articles made of plastic recycled from products or articles containing PIP (3:1), where no new PIP (3:1) was added during the production of the products or articles made of recycled plastic.<br>(3) Using exemptions listed in USA TSCA SECTION 6 PBT- chemicals other than above and having permission from adoption decision. | - | |
| | Declarable | (1) All applications except those in the Banned category | - | - |
| 27 | Hexachlorobutadiene (HCBD) | | | |
| | Banned | (1) All applications except those in the Declarable category | Not intentionally added. | Immediately |
| | Declarable | (1) Unintentional production of HCBD as a by product in the production of chlorinated solvents | - | - |
| 28 | 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP) | | | |
| | Banned | (1) All applications except those in the Declarable category | Not intentionally added. | Immediately |
| | Declarable | (1) Used in articles | - | - |
| 29 | 4,4'-isopropylidenediphenol (Bisphenol A) | | | |
| | Banned | (1) Used in thermal paper | Used less than 0.02wt% | Immediately |
| 30 | 4,4'-sulfonyldiphenol (Bisphenol S) | | | |
| | Banned | (1) All applications except those in the Declarable category | Used less than 0.02wt% | Immediately |
| | Declarable | (1) Used for other than thermal paper<br>(2) Used in thermal paper and used for products with a limited destination, having permission from adoption decision. | - | - |
| 31 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | | | |
| | Banned | (1) All applications except those in the Declarable category | Content is 1ppm (0.0001%) or less in the Mixture or Article. | Immediately |
| | Declarable | (1) Used in Tri-acetyl cellulose (TAC) film in polarizers and obtained permission from the adoption decision department within Dynabook<br>(2) Used in parts for Motor vehicles, having permission from the adoption decision department within Dynabook | - | - |
| 32 | Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances | | | |
| | Banned | (1) Used for applications below:<br>Textiles<br>Leather, Furs and Hides | The following (1) and (2) are to be satisfied in the Mixture or Article.<br>(1) The sum of PFHxA and their salts: Content is less than 0.0000025% (25ppb)<br>(2) The sum of PFHxA- related substances and their combinations: Content is less than 0.0001% (1000ppb). | Immediately |
| | Declarable | (1) All applications except those in the Banned category | - | - |

| No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|
| 33 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 1 to 7 aromatic rings) | | | |
| | Banned | (1) All applications except those in the Declarable category | Total content in the ink is 0.1% or less for packaging [20] and printing [21]. | Immediately |
| | Declarable | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Used for products with a limited destination other than France, having permission from adoption decision. | - | - |
| | | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Clearly to be discarded at Dynabook site outside France | - | - |
| 34 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 3 to 7 aromatic rings) | | | |
| | Banned | (1) All applications except those in the Declarable category | Total content in the ink is 0.1% or less for packaging [20] and printing [21]. | Immediately |
| | Declarable | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Used for products with a limited destination other than France, having permission from adoption decision. | - | - |
| | | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Clearly to be discarded at Dynabook site outside France | - | - |
| 35 | MOSH (Saturated hydrocarbons of mineral oil comprising from 16 to 35 carbon atoms) | | | |
| | Banned | (1) All applications except those in the Declarable category | Total content in the ink is 0.1% or less for packaging [20] and printing [21]. | Immediately |
| | Declarable | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Used for products with a limited destination other than France, having permission from adoption decision. | - | - |
| | | Packaging for parts/materials that meet all of the following conditions<br>Not for delivery to France<br>Clearly to be discarded at Dynabook site outside France | - | - |

[20] Packaging materials are used to transport, protect, and contain goods, and in principle become unnecessary as soon as the goods are put into use. Printing on packaging materials and printed labels affixed to packaging materials are included in packaging materials.

[Examples of packaging materials] Cardboard, plastic bags, cushioning materials, protective films, adhesive tape, staples, straps for securing cargo, and labels, paints, and inks for these.

[21] This does not include printed materials that are not used or included with Dynabook products (delivery/shipping slips, inspection reports, etc.). Printing directly onto the Dynabook product itself (logos, etc.) is not included in the printed materials in this section.

3) Candidate substances to be banned

**Table 2-2-3: Criteria (Reference Values) of Candidate substances to be banned**

| No. | Substance (Group) | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|---|
| 1 | 1,2-Bis (2,3,4,5,6-pentabromophenyl) ethane (DBDPE) | (1) All uses | Not intentionally added. | Based on trends such as laws and regulations, Dynabook will ban its use in the future. [22] |
| 2 | Tetrabromobisphenol A (TBBPA) | | | |
| 3 | Medium Chain Chlorinated paraffins (MCCPs, C14-17, chlorination levels at or exceeding 45% chlorine by weight) | | | |
| 4 | Perfluorocarboxylic acids containing 15 to 21 carbon atoms in the chain (C15-C21 PFCAs), their salts and C15-C21 PFCA-related Substances | | | |
| 5 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), which is designated as a declarable substance in the latest version of chemSHERPA | | | |
| 6 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) other than No.5 above | | | |
| 7 | Bisphenols (excluding Bisphenol A and Bisphenol S) [23] | | | |

[22] Depending on the timing when laws and regulations are finalized, it may not be possible to set a grace period from the designation as Dynabook's "Banned substances" to the delivery prohibition date, so if it is contained, please proceed with the substitution as soon as possible. Refer to Chapter 1 "4. Dynabook Chemical Substance Management Categories in the "Manual for Survey of Chemical Substances Contained in Parts and Materials".

[23] Bisphenol A and bisphenol S are Substances Banned Depending on the Application (Table 2-1-2 and Table 2-2-2-2 No. 29, 30).

**Table 2-2-4: Criteria for Content of Heavy Metals (Cadmium, Lead, Mercury, Hexavalent Chromium) in Packaging Materials and Materials**

| Categories | Applications | Criteria (Value) | Date of Abolition |
|---|---|---|---|
| Banned | (1) Materials and materials for product packaging (cardboard, bags, cushioning materials, sheeting, tape, staples, binding bands, labels, cushions, paint, ink, etc.)<br>(2) Packaging materials for servicing parts (cardboard, bags, cushioning materials, sheeting, tape, staples, binding bands, labels, cushions, paint, ink, etc.) | Total content 100 ppm or less in each materials, ink, or paint that makes up the package. | Immediately |
| Declarable | (1) Packaging materials and materials used for delivered parts and materials | - | - |

3. List of main reference laws

Presence of banned substances in the product

| Category | No. | Substances | Main reference laws etc. |
|---|---|---|---|
| RoHS-related chemical Substances | 1 | Hexavalent chromium compounds | EU RoHS directive, EU REACH regulation Annex XVII |
| | 2 | Polybrominated biphenyls (PBBs) | EU RoHS directive, EU REACH regulation Annex XVII |
| | 3 | Polybrominated diphenylethers (PBDEs) | Japan CSCL, EU RoHS directive, EU REACH regulation Annex XVII, USA TSCA, EU POPs regulation Annex I |
| Other | 4 | Tributyl Tin Oxide (TBTO) | Japan CSCL |
| | 5 | Tri-substituted organostannic compounds | Japan CSCL, EU REACH regulation Annex XVII |
| | 6 | Polychlorinated biphenyls (PCBs) and specific substitutes | Japan CSCL, EU POPs regulation Annex I |
| | 7 | Polychlorinated naphthalenes | Japan CSCL, EU POPsregulation Annex I |
| | 8 | Short-chain chlorinated paraffins (SCCPs) (C10-C13) | EU POPs regulation Annex I |
| | 9 | Asbestos | Japan Industrial Safety and Health Act, EU REACH regulation Annex XVII |
| | 10 | Polychlorinated Terphenyls (PCTs) | EU REACH regulation Annex XVII |
| | 11 | 2-(2H-1,2,3-benzotriazol-2-yl)-4, 6-di-tert-butylphenol | Japan CSCL |
| | 12 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers | Japan CSCL, EU POPs regulation |
| | 13 | Cobalt dichloride | (EU REACH regulation) [24] |
| | 14 | Dimethyl fumarate | EU REACH regulation Annex XVII |
| | 15 | Aluminosilicate, refractory ceramic fibers | (EU REACH regulation) |
| | 16 | Zirconia aluminosilicate, refractory ceramic fibers | (EU REACH regulation) |
| | 17 | Dibutyltin (DBT) compounds | EU REACH regulation Annex XVII |
| | 18 | Pentachlorothiophenol (PCTP) | USA TSCA |
| | 19 | Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances | EU REACH regulation Annex XVII |
| | 20 | Perfluorohexane-1-sulphonic acid (PFHxS), its salts and PFHxS-related substances | Swiss Chemical Risk Reduction Ordinance, POPs Convention |
| | 21 | Perfluorooctane sulfonate (PFOS) | Japan CSCL, EU POPs regulation (Draft), Canadian Environmental Protection Act |
| | 22 | Dechlorane plus and its syn-isomer and anti-isomer | EU POPs regulation (Draft) |
| | 23 | Ozone-depleting substances | Montreal Protocol, USA Chlorofluorocarbon tax Regulation (EU) 2024/590 |

[24] "(EU REACH regulation)" means the substance which was listed in Authorization List of SVHC.

Presence of banned substances depending on application

| Category | No. | Substances | Main reference laws etc. |
|---|---|---|---|
| RoHS-related chemical Substances | 1 | Cadmium and its compounds | EU RoHS directive, EU REACH regulation Annex XVII |
| | 2 | Lead and its compounds | EU RoHS directive, EU REACH regulation Annex XVII, USA CPSIA |
| | 3 | Mercury and its compounds | EU RoHS directive, EU REACH regulation Annex XVII |
| | 4 | Bis(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), butylbenzylphthalate (BBP), Diisobutyl phthalate (DIBP) | EU RoHS directive (EU COMMISSION DELEGATED DIRECTIVE 2015/863), EU REACH regulation Annex XVII, USA CPSIA |
| Other | 5 | Beryllium and its compounds | <Dynabook ban substance> |
| | 6 | Azo colorants and azo dyesthat | EU REACH regulation Annex XVII |
| | 7 | Polyvinyl chloride (PVC) and its copolymer | <Dynabook ban substance> |
| | 8 | Phthalate esters other than phthalates DEHP, DBP, BBP and DIBP (listed No.4 above) | EU REACH regulation Annex XVII, USA CPSIA |
| | 9 | Radioactive substances | Act on Prevention of Radiation Hazards due to Radioisotopes, etc., Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors |
| | 10 | Fluorinated greenhouse gases (HFC, PFC, SF6) | EU F-Gas Regulation (2024/573) |
| | 11 | Formaldehyde | Germany Chem Verbots V, Denmark formaldehyde regulations |
| | 12 | Perchlorates | USA CA Perchlorate management rules |
| | 13 | Nickel and its compounds | EU REACH regulation Annex XVII |
| | 14 | Arsenic and its compounds | (EU REACH regulation) |
| | 15 | Boric acid | (EU REACH regulation) |
| | 16 | Disodium tetraborate, anhydrous, Tetraboron disodium heptaoxide, hydrate | (EU REACH regulation) |
| | 17 | Dioctyltin (DOT) compounds | EU REACH regulation Annex XVII |
| | 18 | Perfluorooctanoic acid (PFOA) and its salts and PFOA-related substances | EU POPs regulation |
| | 19 | Chlorinated flame retardants | <Dynabook ban substance> |
| | 20 | Halogenated compound (Halogenated flame retardant etc.) | EU 2019/2021 (ecodesign requirements for electronic displays), USA Washington state law |
| | 21 | Tris(2-chloroethyl) phosphate (TCEP) | USA VT Act85, (EU REACH regulation) |
| | 22 | Tris(2-chloro-1-methylethyl) phosphate (TCPP) | USA VT Act85 |
| | 23 | Tris(1,3-dichloro-2-propyl) phosphate (TDCPP) | USA VT Act85 |
| | 24 | Polycyclic aromatic hydrocarbons (PAHs) | EU REACH regulation Annex XVII |
| | 25 | Red phosphorus | <Dynabook ban substance> |
| | 26 | Isopropylphenyl phosphate (PIP (3:1)) | USA TSCA |
| | 27 | Hexachlorobutadiene (HCBD) | USA TSCA |
| | 28 | 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP) | USA TSCA |
| | 29 | 4,4'-isopropylidenediphenol (Bisphenol A) | EU REACH regulation Annex XVII, Swiss Chemicals Ordinance, USA CT state law |
| | 30 | 4,4'-sulfonyldiphenol (Bisphenol S) | Swiss Chemical Risk Reduction Ordinance |
| | 31 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | POPs Convention (Draft) |
| | 32 | Perfluorohexanoic acid (PFHxA), its salts and PFHxA-related substances | EU REACH regulation Annex XVII (Draft) |

| | | | |
|---|---|---|---|
| | 33 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 1 to 7 aromatic rings) | French decree |
| | 34 | MOAH (Aromatic hydrocarbons of mineral oil comprising from 3 to 7 aromatic rings) | French decree |
| | 35 | MOSH (Saturated hydrocarbons of mineral oil comprising from 16 to 35 carbon atoms) | French decree |

Candidate substances to be banned

| No. | Substances | Main reference laws etc. |
|---|---|---|
| 1 | 1,2-Bis(2,3,4,5,6-pentabromophenyl) ethane (DBDPE) | CEPA 1999 |
| 2 | Tetrabromobisphenol A (TBBPA) | EU RoHS directive |
| 3 | Medium Chain Chlorinated paraffins (MCCPs, C14-17, chlorination levels at or exceeding 45% chlorine by weight) | EU RoHS directive |
| 4 | Perfluorocarboxylic acids containing 15 to 21 carbon atoms in the chain (C15-C21 PFCAs), their salts and C15-C21 PFCA- related substances | POPs Convention, CEPA 1999 |
| 5 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), which is designated as a declarable substance in the latest version of chemSHERPA | US Specified State TIP |
| 6 | Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) other than No.5 above | |
| 7 | Bisphenols (excluding Bisphenol A and Bisphenol S) | Regulations in Europe, USA and Canada |

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**Dynabook Inc.**

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