

Panasonic Group

**Chemical Substances Management
Rank Guidelines**

Version 6 (For Products)

Enforced on May 1, 2009
(Issued on March 30, 2009)

Corporate Environmental Affairs Division
Panasonic Corporation

Contents

| | |
|---|----|
| 1. Objective of These Guidelines..... | 1 |
| 2. Application | 1 |
| 3. Operations and Exemptions | 1 |
| 4. Establishment, Revision, and Abolition..... | 2 |
| 5. Definition of Terms..... | 2 |
| 6. Specified Managed Substances | 5 |
| (1) Level 1 Prohibited Substances..... | 5 |
| (2) Level 2 Prohibited Substances..... | 12 |
| (3) Managed Substances | 13 |
| (4) Applicable substances list specified by these guidelines..... | 15 |
| 7. Major Changes from Version 5.1 | 26 |

1. Objective of These Guidelines

The purpose of the "Chemical Substances Management Rank Guidelines (For Products)" is to improve environmental quality of the products produced and sold by the Panasonic Group companies by clarifying the chemical substances (environmentally impacting substances) that are prohibited or that require special management if contained in the components, devices, materials, etc. used and by advising the group's internal operations, and external suppliers of components, devices, and materials of this resolution.

2. Application

(1) Application to products

- 1) Products designed, manufactured, and sold by the Panasonic Group
- 2) Products outsourced to a third party by the Panasonic Group for design and manufacturing, and sold by the Panasonic Group with its trademark. This includes products purchased by the Panasonic Group from another company and sold as finished products.
- 3) Products contracted from a third party for design and manufacturing (excluding the components and materials specified by the third party)
- 4) Products used for sales promotion (giveaways, etc. provided to general consumers)
- 5) Packaging materials, including those used for product and for transportation (pallets, shrink packs etc.).

(2) Application to components and materials

This rule applies to the components, materials, and other items used for the products mentioned in Section 2. (1) "Application to products" above.

- Components/materials (include electrical components, mechanical components, electro-mechanical components, semiconductors, printed circuit boards, enclosure components, packaging materials/components)
- Assembled components such as functional unit/module/board assemblies
- Accessories (for using products such as remote controls, AC adaptors, etc.)
- Auxiliary materials, etc. (tape, solder material, adhesive, etc.)
- Operating instructions, warranty certificates, other printed matters enclosed in products
- Repair or service parts
- Packaging materials used for transport/protection by component suppliers (the packaging materials with no possibility of transfer or contamination of the subject substance to the components even after direct contact such as returnable packages to be collected and reused by the supplier are not subject to these guidelines.)

3. Operations and Exemptions

- (1) Although these guidelines have been developed in accordance with the principal laws and regulations, they do not necessarily refer to all relevant regulations. All products shall fully comply with the treaties, laws, ordinances, industry guidelines, and other requirements effective at the time of product introduction in addition to these guidelines.
- (2) Although these guidelines shall be applied to all suppliers as a rule, the use of a customer's standards is also tolerated as an exception, in the case no agreement is obtained with these guidelines and the business unit decides to handle them as an exception.
- (3) The following case is exempted from application of the Management rank.
 - Chemical substances used for research and development (but applicable when

commercialized)

4. Establishment, Revision, and Abolition

- (1) All items related to these guidelines are examined by the Rank Guidelines Working Group consisting of experts from domain companies, affiliated companies, and relevant departments, approved by the Product Chemical Substance Management Subcommittee and Technology Subcommittee, and authorized by the Director of Corporate Environmental Affairs Division.
- (2) In case a requirement arises for revision or abolishment of these guidelines, a request shall be submitted to the Product Chemical Substance Management Subcommittee and Technology Subcommittee or the secretariat of the Corporate Environmental Affairs Division.
- (3) These guidelines shall be discussed and reviewed periodically (once a year) by the Rank Guidelines Working Group. In the following cases, however, the secretariat will review and obtain approval from the Product Chemical Substance Management Subcommittee and Technology Subcommittee for revisions.
 - When the need arises for reflecting a change in social trends such as law amendments
 - When the need arises for reflecting a progress in technological trends (alternative technologies, assessment technologies), improvement of threat-related data, exposure data, and risk assessment data, etc.

5. Definition of Terms

The terms used in these guidelines are based on the following definitions.

- (1) Panasonic Group "Chemical Substances Management Rank Guidelines (For Products)"

These guidelines rank as Prohibited substances the substances currently prohibited for contamination in products, those to be prohibited in the near future, and those to be voluntarily restricted for use in the Panasonic Group. These guidelines also rank Managed substances as those that affect environmental preservation from the viewpoint of human health, safety and hygiene, and adequate treatment, thereby requiring to clarify actual usage data. These guidelines only apply to the substances actually contaminated in products.
- (2) Level 1 Prohibited Substances

The substances listed below and those that may currently be used in the Panasonic Group products are in this rank. Any use of such substances must be halted immediately.

 - A substance contaminated in products that is prohibited by existing laws and regulations; or a substance where an upper limit of concentration is specified.
 - A substance that will be prohibited in product contamination by laws and regulations or where an upper limit of concentration will be specified within one year of the revision of these guidelines.
 - A substance that has been notified as prohibited in product contamination in Environmental Notices issued by the Panasonic Group.

Because this substance must not be contaminated in products, intentional use is prohibited; and if a regulated value exists, the concentration, including impurities, must be guaranteed to be below the regulated value (Intentional use is not permitted even if the contained quantity is less than the regulated value.).
- (3) Level 2 Prohibited Substances

Any of the substances shown below falls into this rank.

- Substances other than those specified as the Level 1 Prohibited Substances that will be prohibited in product contamination after a certain period by a treaty, law, or regulation.
 - Substances that are prohibited in product contamination by the Panasonic Group prior to the effective period specified by a treaty, law, or regulation.
 - Substances whose use is voluntarily restricted by the Panasonic Group. Any confirmed contamination of such substances must be remedied by means of an alternative based on the period or restricted condition specified by these guidelines.
- (4) **Managed Substances**
 This rank refers to substances whose consumption needs to be monitored and for which consideration needs to be given to human health, safety and hygiene, adequate treatment, etc. The intentional use of these substances is not restricted, but their use and contained concentration must be monitored. Of the applicable managed substances, when they are used "intentionally" or "inclusion is known", such substances need to be identified. In this case, the words "inclusion is known" refer to either "information that has been received from the material manufacturer indicating that the raw material contains the managed substance" or "data indicating that inclusion of the managed substances has been confirmed by some other means". Reporting the inclusion of "managed substances" in the packaging materials used by component manufacturers for transportation and protection is not necessary, except in cases required by law. (Nonuse of Level 1 Prohibited Substances requires reporting).
 *: Reporting is required when components subject to REACH regulations are exported to the EU along with packaging materials.
- (5) **Contained in Products**
 Refers to all cases of where the substances are contained in components and materials used in a product or packaging material. For example, the following conditions are included.
- Condition in which the subject substance is intentionally used
 - Condition in which the subject substance is contained as an impurity
 - Condition in which the subject substance is used in the manufacturing process and remains on or attached to the finished product or its components or materials (for example, if a product risks being contaminated by a mold, tool, or machine that directly contacts the product during the manufacturing process, contamination of such section needs to be regarded as prohibited).
- (6) **Intentional Use**
 Intentionally containing a certain substance during the process of manufacturing a product or component when continuous containment is desirable for obtaining certain characteristics, appearance, or quality.
- (7) **Impurity**
 A substance contained in natural materials but which cannot be fully eliminated during the refining process, or which is generated in a reaction process but cannot be eliminated technically.
- (8) **Regulated Value**
 Concentration of Prohibited substances not intentionally used but present as an impurity, and whose concentration shall be guaranteed in the components and materials delivered to the Panasonic Group and in the products shipped by the Panasonic Group.

(9) Controlled Value

Concentration of the Level 1 Prohibited Substances specified as never exceeded if there is no intentional use or contamination. If the contained concentration of the Prohibited substance as an impurity exceeds the controlled value, the supplier needs to be requested to carry out reanalysis, clarification of the reason for contamination, and reduction of the contained concentration to below the controlled value. The value is used for monitoring within the Panasonic Group (Controlled value is not intended for requesting the Non-use Warranty from the supplier).

(10) Contained Concentration

The contained concentration refers to the concentration expressed by the mass of homogeneous material placed in the denominator position. The homogeneous material refers to the material that cannot be disassembled mechanically into different materials. Examples of homogeneous materials are as follows.

- Chemical compound, polymer alloy, metal alloy, etc.
- Concerning raw materials, such as paints, adhesives, inks, pastes, resin polymers, glass powder, ceramic powder, etc., the final form of each presumed application (e.g., the dried or cured state for paints and adhesives, the molded state for resin polymers, and the formed or molded form for glass or ceramic materials)
- Single layer of painted, printed, or plated surface. In the case of multiple layers, the condition of each single layer.

6. Specified Managed Substances

(1) Level 1 Prohibited Substances

Level 1 Prohibited Substances have been determined in accordance with the following representative Japanese and foreign laws (Table 1). In the components, materials, and the products shipped by the Panasonic Group, these substances must not be used intentionally, and the contained concentration as an impurity must be guaranteed to be below the regulated value shown in Table 1.

If the contained concentration exceeds the controlled value* (the concentration considered not to be exceeded unless intentional use or contamination takes place) specified separately, intentional use or contamination is likely, and so the supplier is requested to reanalyze, clarify the reason for contamination, reduce the contained concentration to below the controlled value, and correct the issue.

*: "List of Controlled Values of Prohibited Substances"

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

The same requirement applies to recycled materials for contamination of Level 1 Prohibited Substances, and the impurity must be guaranteed to be less than the regulated value and limited to below the controlled value.

1) Laws in Japan

- Type 1 Specified Chemical Substances (Substances prohibited for manufacturing and importing) determined by the "Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances" (hereafter Chem-sub Law)
- Manufacturing-prohibited Hazardous Substances as determined by the "Law on Industrial Safety and Hygiene" Article 55 (Ind-safety Law)
- Specified Substances (excluding HCFC) as determined by the "Law Concerning the Protection of the Ozone Layer through Control of Specified Substances and Others Measures" (Ozone Layer Law)
- Requirement for indicating the included specified chemical substances as determined by the "Law for Promotion of Effective Utilization of Resources"

2) Laws in Foreign Countries

- Restriction of using the specified hazardous substances included in electrical and electronic equipment (hereafter called the RoHS Directive)
- "EU Hazardous Substances Regulations" – Includes the laws and ordinances enforced in the EU member states
- "EU Parliament and Commission Directive on Packaging and Packaging Waste"
- Germany: "ChemG" – Prohibiting the sale of the specified chemicals, mixture and products that contain these substances or their possible release for the specified uses and conditions.
- Germany: "Consumer Goods Ordinance"
- Denmark: "Formalin Act"
- State of California: "Proposition 65"
- State of California: "Regulations on the generation of formaldehyde by plywood"

Table 1 Substance Group List of Level 1 Prohibited Substances (substance Group)

It is required to guarantee that the substances are not intentionally used and the contained concentration as impurity is less than the regulated value.

Caution 1: The controlled value is determined separately from the regulated value for the purpose of control by the Panasonic Group. Refer to the "List of Controlled Values of Prohibited Substances" (URL below)

Caution 2: Some domain companies and affiliated companies of the Panasonic Group may set a value lower than a regulated value or controlled value according to the domain/affiliated companies' circumstances, such as on the request of a customer.

Caution 3: For the analysis method of the major substances, refer to the "Analysis Method of Level 1 Prohibited Substances" (URL below)

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

Caution 4: Any substances not included in this list must also fully be compliant if designated by a treaty, law, ordinance, industry guidelines, etc.

| No. *3 | Substance Group Name | | Regulated Value by Panasonic Group | Major Referenced Laws/Regulations |
|-----------|--|--|--|--|
| 1 | Polychlorinated biphenyls (PCBs) | | Intentional use prohibited*5 | Chem-sub Law, EU Hazardous Substances Reg., ChemG |
| 2 | Asbestos | | Intentional use prohibited and less than 1000 ppm*5 | EU Hazardous Substances Reg., ChemG, Ind-safety Law |
| 3 | Specified organic tin compounds*7 | | Intentional use prohibited*5 | EU Hazardous Substances Reg., ChemG, Chem-sub Law |
| 4 | Short-chain paraffin chloride (C10-13) | | Intentional use prohibited*5 | EU Hazardous Substances Reg. |
| 5 | Specified brominated flame-retardants (PBBs, PBDEs) (see Table 2-7) | | Intentional use prohibited and less than 1000 ppm*6 | RoHS Directive, EU Hazardous Substances Reg. |
| 7 | Azo dye and pigment forming specified amines*2 (see Table 2-1) | | Less than 30 mg/kg (30 ppm) (as specified amine) | German Consumer Goods Ordinance, ChemG, EU Hazardous Substances Reg. |
| 8 | Polychloronaphthalene (number of chlorine 3 or more) | | Intentional use prohibited*5 | Chem-sub Law |
| 19 | Cadmium and its compounds*2 (see Table 2-2) | Resin (incl. rubber, film), paint, ink, pigment, dye | Intentional use prohibited and less than 100 ppm (with no volatile components) | RoHS Directive, EU Hazardous Substances Reg., ChemG, Law for Promotion of Effective Utilization of Resources |
| | | Packaging material*1 | Intentional use prohibited and less than 100 ppm | EU Packaging Directive |
| | | Other than above | Intentional use prohibited and less than 100 ppm | RoHS Directive |

Continued

| | | | | |
|----|--|--|---|--|
| 20 | Lead and its compounds ^{*2} (see Table 2-3) | Resin (including rubber, film), paint, ink, pigment, dye | Intentional use prohibited and less than 300 ppm (with no volatile components) | Proposition 65 |
| | | Packaging material ^{*1} | Intentional use prohibited and less than 100 ppm | EU Packaging Directive |
| | | Other than above | Intentional use prohibited and less than 1000 ppm | RoHS Directive, ChemG, EU Hazardous Substances Reg., Law for Promotion of Effective Utilization of Resources |
| 21 | Hexavalent chromium compounds ^{*2} (see Table 2-4) | Packaging material ^{*1} | Intentional use prohibited and less than 100 ppm | EU Packaging Directive |
| | | Other than above | Intentional use prohibited and less than 1000 ppm | RoHS Directive, Law for Promotion of Effective Utilization of Resources |
| 22 | Mercury and its compounds ^{*2} (see Table 2-5) | Packaging material ^{*1} | Intentional use prohibited and less than 100 ppm | EU Packaging Directive |
| | | Other than above | Intentional use prohibited and less than 1000 ppm | RoHS Directive, Law for Promotion of Effective Utilization of Resources |
| 24 | Ozone-depleting substances (excluding HCFC) | | Intentional use prohibited | Ozone Layer Law, Montreal Protocol |
| 25 | Formaldehyde ^{*2} (see Table 2-6) | | Aerial concentration: Less than 0.1 ppm (ChemG) ^{*4} Aerial concentration: Less than 0.15 mg/m ³ (Formalin Act) ^{*4} Check the details of the regulations for regulated values in the state of California. | ChemG, Formalin Act (Denmark) State of California: Regulations on the generation of formaldehyde by plywood |
| 26 | Perfluorooctane sulfonate and its salts ^{*2} (see Table 2-8) | | Intentional use prohibited ^{*5} | EU Hazardous Substances Reg. |
| 27 | Specified benzotriazole 2-(2H-1,2,3-benzotriazole-2-yl)-4,6-di-tert-butylphenol (see Table 2-9) | | Intentional use prohibited ^{*5} | Chem-sub Law |

- *1: Requires to reduce total weight of heavy metals (lead, cadmium, mercury, and hexavalent chromium) in each homogeneous material (for example, resin, ink, paint) constructing the packaging materials to less than 100 ppm by weight.
- *2: The substances with limited use as Level 1, as listed in Table 2. In the case of the lead used intentionally for electroless nickel plating, application of the condition, "Intentional use prohibited", is postponed for the time being and the maximum allowable lead concentration for electroless nickel plating shall be restricted to less than 800ppm.
- *3: No. 6, Nos. 9 to 18, and No. 23 are vacant due to abolition.
- *4: Test methods shall comply with individual laws.
- *5: If no intentional use is verified by tracing back the supply chain, the analysis for checking non-use of the subject substance is not required. If an impurity contamination is detected, the response needs to be determined separately."
- *6: The regulated value 1000 ppm indicates the concentration of each substance of PBB and PBDE.
- *7: Prohibited substance is "bis (tributyl tin)=oxide (CAS No. 56-35-9)"

Table 2 Level 1 Prohibited Substances Regulated Items

Table 2-1

| | |
|--|---|
| Substance Name: Azo dye and pigment forming specified amines | |
| Regulated items | |
| <ul style="list-style-type: none"> Items that can possibly have direct contact with human skin or oral cavities for an extended period of time Examples: Clothing, bedding, towels, hairpieces, wigs, caps, and other hygiene items, sleeping bags, footwear, gloves, wristwatch bands, earphones, headphones, straps, shoulder belts, etc. <p>No. 7 of the azo dye and pigment, the specified amines that must not be generated by reduction or decomposition are listed below.</p> | |
| Specified amines that must not be generated | |
| CAS No. | Substance name |
| 60-09-3 | 4-aminoazobenzene |
| 90-04-0 | o-anisidine |
| 91-59-8 | 2-naphthylamine |
| 91-94-1 | 3,3-dichlorobenzidine |
| 92-67-1 | 4-aminodiphenyl |
| 92-87-5 | Benzidine |
| 95-53-4 | ortho-toluidine |
| 95-69-2 | 4-chloro-o-toluidine |
| 95-80-7 | 2,4-toluenediamine |
| 97-56-3 | ortho-Aminoazotoluene |
| 99-55-8 | 5-nitro-o-toluidine |
| 101-14-4 | 4,4-methylene-bis-(2-chloroaniline) |
| 101-77-9 | 4,4-diaminodiphenylmethane |
| 101-80-4 | 4,4-oxydianiline |
| 106-47-8 | p-chloroaniline |
| 119-90-4 | 3,3-dimethoxybenzidine |
| 119-93-7 | 3,3-dimethylbenzidine |
| 120-71-8 | p-cresidine |
| 137-17-7 | 2,4,5-trimethylaniline |
| 139-65-1 | 4,4-thiodianiline |
| 615-05-4 | 2,4-diaminoanisole |
| 838-88-0 | 3,3-dimethyl-4,4-diaminodiphenylmethane |

Table 2-2

| | |
|---|---|
| Substance Name: Cadmium and its compounds | |
| Regulated items | |
| <ul style="list-style-type: none"> • Prohibited in all applications except those in the exemptions shown below. For example, <ul style="list-style-type: none"> • Stabilizer, pigment, dye, paint, ink used for plastics (including rubber, film) • Phosphor, alloy, packaging materials, etc. | |
| Exemptions | <ul style="list-style-type: none"> • Items listed in the Panasonic Group Exempted Items List ^{*1} • Uses as battery elements ^{*2} (by EU Battery Directive) |

*1: The latest version of the Panasonic Group Exempted Items List is posted on the website of Panasonic Corporation.

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

*2: Batteries having no design as a finished product on the jacket or circuit component

Table 2-3

| | |
|--|---|
| Substance Name: Lead and its compounds | |
| Regulated items | |
| <ul style="list-style-type: none"> • Prohibited in all applications except those in the exemptions shown below. For example, <ul style="list-style-type: none"> • Paint, pigment, dye, ink • Stabilizer in plastic (including rubber) material • Solder coating on and packaging material of component external electrode, lead terminal, etc. | |
| Exemptions | <ul style="list-style-type: none"> • Items listed in the Panasonic Group Exempted Items List ^{*1} • Uses as battery elements ^{*2} (by EU Battery Directive) |

*1: The latest version of the Panasonic Group Exempted Items List is posted on the website of Panasonic Corporation.

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

*2: Batteries having no design as a finished product on the jacket or circuit component

Table 2-4

| | |
|---|---|
| Substance Name: Hexavalent chromium compounds | |
| Regulated items | |
| <ul style="list-style-type: none"> • Prohibited in all applications except those in the exemptions shown below. For example, <ul style="list-style-type: none"> • Rust-proof treatment • Plastics, paint/pigment/ink • Packaging material, etc. | |
| Exemptions | <ul style="list-style-type: none"> • Items listed in the Panasonic Group Exempted Items List ^{*1} • Uses as battery elements ^{*2} (by EU Battery Directive) |

*1: The latest version of the Panasonic Group Exempted Items List is posted on the website of Panasonic Corporation.

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

*2: Batteries having no design as a finished product on the jacket or circuit component

Table 2-5

| | |
|--|---|
| Substance Name: Mercury and its compounds | |
| Regulated items | |
| <ul style="list-style-type: none"> Prohibited in all applications except those shown in the exemptions. For example, <ul style="list-style-type: none"> Pigment, dye, paint, ink Indicator such as hour meter Relay, switch, sensor using mercury for electrical contact Harmonizer in plastics, packaging material, etc. | |
| Exemptions | <ul style="list-style-type: none"> Items listed in the Panasonic Group Exempted Items List ^{*1} Uses as battery elements ^{*2} excluding mercury batteries (by EU Battery Directive) |

*1: The latest version of the Panasonic Group Exempted Items List is posted on the website of Panasonic Corporation.

Japanese ... <http://panasonic.co.jp/eco/topics/suppliers/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

*2: Batteries having no design as a finished product on the jacket or circuit component

Table 2-6

| | |
|---|--|
| Substance Name: Formaldehyde | |
| Regulated items | |
| Wood products and parts using materials such as particle boards and MDF (medium density fiberboard) shall satisfy the following conditions (Ex. Speaker box, rack). <ul style="list-style-type: none"> Less than the regulated values of Table 1 shall be met, not banning intentional use. However, for products destined for regions other than those regulated by law, the application of less than 0.5 mg/L (JIS: desiccator method) may also be possible. The regulated values in building products and housing equipment shall be determined by the applicable domain company or affiliated company. | |

Table 2-7

| | |
|--|--|
| Substance Name: Specified Brominated Flame-retardant (PBB, PBDE) | |
| Regulated items | |
| <ul style="list-style-type: none"> All types of PBB and PBDE (Deca BDE (deca-bromo-diphenyl-ether) is subject to prohibition) | |

Table 2-8

| | |
|--|--|
| Substance Name: Perfluorooctane sulfonate and its salts Molecular formula C ₈ F ₁₇ SO ₂ X (X = other derivatives including OH, metallic salts, halogen compounds, amides, or polymers) | |
| Regulated items | |
| <ul style="list-style-type: none"> Prohibited in all applications other than those shown in the Exemptions below (Prohibited in products shipped from the Panasonic Group on a global basis after June 27, 2008) Note: Use of "surface treatment less than 1 µg/m ² " permitted by the EU Hazardous Substances Regulations is not acceptable, since it is regarded as intentional use. | |
| Exemptions | <ul style="list-style-type: none"> Photoresist for photolithography processes or reflection-prevention coating material Photo-coating material for printing originals on film or paper Mist-prevention agent and moisturizer for non-decorative hard chromium plating used with an electric plating system controlled to minimize the emission of perfluorooctane sulfonate by using the most advanced technology available |

Table 2-9

| |
|--|
| Substance name: Specified benzotriazole (2- (2H-1,2,3-benzotriazole-2-yl) -4, 6-di-tert-butylphenol) |
| Regulated items |
| <ul style="list-style-type: none">• Prohibited in all applications For example, <ul style="list-style-type: none">• UV absorption agent for plastic resin• Plastic building materials• Sublimation transfer type photo-coating resin |

(2) Level 2 Prohibited Substances

Refer to substances other than those specified as the Level 1 Prohibited Substances, substances whose use is being progressively prohibited at a certain period by a treaty, law, or regulation, substances prohibited to be used in products by the Panasonic Group prior to a period specified by a treaty, law, or regulation, and substances restricted for use on a voluntary basis by the Panasonic Group. If detected, the use of the substances must be substituted based on the period or restriction conditions specified by these guidelines.

Table 3 Level 2 Prohibited Substances List (Substance Group)

| No. *1 | JGPSSI Substance Group No.*2 | Substance Group | Applicable Law | Use Prohibited Date |
|-----------|------------------------------------|---|---|--|
| 16 | B07 | Poly-vinyl chloride (PVC), its mixtures, its copolymers | Panasonic Group's voluntary restriction | Uses restricted in new products to be put on market in and after April 2006 *3 |

*1: No. 1 to No. 15 have been deleted due to abolition.

*2: JGPSSI substance group number has been determined by JGPSSI and listed for reference purposes.

*3: The use restriction of polyvinylchloride, its mixtures, and its copolymers is based on Table 4.

Table 4 Major Uses of Level 2 Prohibited Substances

| Substance: Polyvinylchloride (PVC), its mixtures, its copolymers | |
|---|--|
| Regulated Items | |
| Use of vinyl chloride resin in new products is regulated as follows. (1) Internal wiring in electrical and electronic products. Complete the material substitution: <ul style="list-style-type: none"> • For domestic new products in Japan by the end of March 2009 • For global new products by the end of March 2011. (2) Promote material substitution for applications other than internal wiring (power cords, etc.). The method of handling restricted individual components and materials shall comply with the request by each business unit of our company. The substitute PVC material shall be halogen-free (excluding fluorine) and shall not contain red phosphorus as a rule. | |
| Exemptions | <ul style="list-style-type: none"> • Applications impossible to maintain quality or safety without it, materials specified by law or regulation, materials specified by customer, etc. • Resin binder containing PVC-vinyl acetate copolymer (paint, ink, etc.) (Until a substitute technology is established) |

(3) Managed Substances

This rank refers to substances whose consumption needs to be monitored and for which consideration needs to be given to human health, safety and hygiene, adequate treatment, etc. The intentional use of these substances is not restricted, but their use and contained concentration must be monitored. Of the applicable managed substances, when they are used "intentionally" or "inclusion is known", such substances need to be identified. In this case, the words "inclusion is known" refers to either "information that has been received from the material manufacturer indicating that the raw material contains the managed substance" or "data indicating that inclusion of the managed substances has been confirmed by some other means". Reporting the inclusion of "managed substances" in the packaging materials used by component manufacturers for transportation and protection is not necessary, except in cases* required by law. (Nonuse of Level 1 Prohibited Substances requires reporting).

*: Reporting is required when components subject to REACH regulations are exported to the EU along with packaging materials.

The managed substances in these guidelines are equivalent to the substances listed in the legal regulations, industry standards etc. shown in Table 5. These substances are equivalent to the applicable substances in the "JAMP Declarable Substance Ver. (latest version)"* specified by the Joint Article Management Promotion Consortium (JAMP), excluding the prohibited substances specified by these guidelines.

Table 5. Legal regulations, industry standards etc. relating to the managed substances

| Target regulations | Remarks |
|--|---|
| Japan Chemical Substances Control Law (Class 1 specified substances) | Excluding the prohibited substances specified in these guidelines |
| Japan Industrial Safety and Health Law (Substances that are prohibited from manufacture) | Excluding the prohibited substances specified in these guidelines |
| Japan Poisonous and Deleterious Substances Control Law (Specified toxic substances) | |
| EU 67/548/EEC (Annex I, CMR-Cat 1 & 2) (EU Council Directive relating to the classification, packaging and labeling of dangerous substances) | |
| EU 76/769/EEC (excluding 67/548/EEC Annex I, CMR-Cat 1 & 2) (EU Council Directive relating to restrictions on the marketing and use of certain dangerous substances and preparations) | Excluding the prohibited substances specified in these guidelines |
| EU REACH Regulation Candidate substances for authorization (Substances of Very High Concern (SVHC)) | |
| ESIS PBT (Substances that fulfill determination criteria for PBT) (European Chemical Substances Information System) | |
| GADSL (Automotive industry) Global Automobile Declarable Substances List | Excluding the prohibited substances specified in these guidelines |
| JIG (Electrical & electronic industry) Joint Industry Guide | Excluding the prohibited substances specified in these guidelines |

(4) Applicable substances list specified by these guidelines

- A list of sample substances considered "prohibited substances" is shown in Table 6. Because this list only shows examples of applicable substances, any substance not included in this list but classified as a "prohibited substance" shall be reported.
- Refer to the following document and list for sample substances considered "prohibited substances" and "managed substances" as specified in these guidelines, in accordance with legal regulations and industry standards.

"JAMP List of Target Substances under Management: Instruction Manual"

"JAMP Declarable Substances Reference List Ver.2.0"

* Reference addresses of the materials and list:

Japanese ... <http://www.jamp-info.com/gllist/>

English, Chinese ...

http://panasonic.net/eco/topics/suppliers/standards_and_guidelines.html

(5) Reference

- In order to check the applicability of the "managed substances", the following search software may be used. However, this software is only considered an auxiliary means of checking the applicability of the substance. Even if the input supporting tool does not indicate applicability, the substance still needs to be reported if it is known to be subject to legal regulations.

"JAMP AIS Input Supporting Tool (Latest version)"*

"JAMP MSDSplus Input Supporting Tool (Latest version)"*

* Acquisition of the materials and tools:

Japanese ... <http://www.jamp-info.com/>

English, Chinese ... <http://panasonic.net/eco/e-learning/>

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | | |
|------------------------|-----------|------------------------|-----------|---|---|-------------------------|-------------------------------|-------------------------------|---|---|-----------------|-------|---------------------------------|------------|--|------------|--|---------|------|------------------|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | | RoHS | JGPSSI Sub Gr No |
| | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Use limited | Threshold | Applicable | | Use limited and its threshold | Applicable | | | | | | |
| Yes | 24 | | | Others | ozon depleting substnces | 29255-31-0 2238-46-4 | Tetrachlorotetrafluoropropane | C3F4Cl4 | CFC-214 | | | Yes | | | | | | C04 | | |
| Yes | 24 | | | Others | ozon depleting substnces | 1599-41-3 1652-81-9 | Trichloropentafluoropropane | C3F5Cl3 | CFC-215 | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 661-97-2 | Dichlorohexafluoropropane | C3F6Cl2 | CFC-216 | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 422-86-6 | Heptafluoropropyl chloride | C3F7Cl | CFC-217 | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 1511-62-2 | Bromodifluoromethane | CHF2Br | HBFC-22B1 | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 1868-53-7 | Dibromodifluoromethane | CHFB2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 373-52-4 | Bromofluoromethane | CHFBr | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 306-80-9 | Tetrabromofluoroethane | C2HFBr4 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tribromodifluoroethane | C2HF2Br3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 354-04-1 | Dibromotrifluoroethane | C2HF3Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 124-72-1 | Bromotetrafluoroethane | C2HF4Br | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tribromofluoroethane | C2HF2Br3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 75-82-1 | Dibromodifluoroethane | C2H2F2Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 421-06-7 | 1,1,1-Trifluoro-2-bromoethane | | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 358-97-4 | Dibromofluoroethane | C2H3FBr2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Bromodifluoroethane | C2H3F2Br | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 762-49-2 | Bromofluoroethane | C2H4FBr | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Hexabromofluoropropane | C3HFBr6 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tribromotetrafluoropropane | C3HF4Br3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tribromotrifluoropropane | C3H2F3Br3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 431-78-7 | Dibromopentafluoropropane | C3HF5Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 2252-79-1 | Bromohexafluoropropane | C3HF6Br | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Pentabromodifluoropropane | C3HF2Br5 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tetrabromotrifluoropropane | C3HF3Br4 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Pentabromofluoropropane | C3H2FBr5 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tetrabromodifluoropropane | C3H2F2Br4 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Dibromotetrafluoropropane | C3H2F4Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 460-88-8 | Bromopentafluoropropane | C3H2F5Br | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Tetrabromofluoropropane | C3H3FBr4 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 70192-80-2 | Tribromodifluoropropane | C3H3F2Br3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 70192-83-5 | Dibromotrifluoropropane | C3H3F3Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 679-84-5 | Bromotetrafluoropropane | C3H3F4Br | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 75372-14-4 | Tribromofluoropropane | C3H4FBr3 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 460-25-3 | Dibromodifluoropropane | C3H4F2Br2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 51584-26-0 | Dibromofluoropropane | C3H5FBr2 | | | | Yes | | | | | | | C04 | |
| Yes | 24 | | | Others | ozon depleting substnces | 421-46-5 | bromotrifluoropropane | C3H4F3Br | | | | Yes | | | | | | | C04 | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | Overseas Laws | | | | | Remarks | | |
|------------------------|-----------|------------------------|-----------|--|---------------------------|------------|------------------------------|---|---|---|--|--|---------------------------------|-------------|--|------------|-------------------------------|------------|------------------|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | RoHS | JGPSSI Sub Gr No |
| | | | | This list shows examples of applicable substances. Any substance not included in this list but classified as a "prohibited substance" shall be reported. | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | |
| Yes | 24 | | | Others | ozon depleting substnces | 353-59-3 | Bromochlorodifluoromethane | CF2BrCl | halon-1211 | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 74-97-5 | Bromochloromethane | CH2BrCl | | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 75-63-8 | Bromotrifluoromethane | CF3Br | halon-1301 | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | ---- | Bromodifluoropropane | C3H5F2Br | | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 352-91-0 | Bromofluoropropane | C3H6FBr | | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 124-73-2 | 1,2-Dibromotetrafluoroethane | C2F4Br2 | halon-2402 | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 56-23-5 | Carbon tetrachloride | | | | | | | | | | | | C04 |
| Yes | 24 | | | Others | ozon depleting substnces | 71-55-6 | 1,1,1-trichloroethane | | | | | | | | | | | | C04 |
| Yes | 25 | | | Others | formaldehyde | 50-00-0 | formaldehyde | | | | Yes | Wooden products or furniture discharging 0.1 ppm or more gas | | | | | | | |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 7440-43-9 | Cadmium | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 10108-64-2 | Cadmium chloride | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 1306-19-0 | Cadmium oxide | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 10325-94-7 | Cadmium Nitrate | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 513-78-0 | Cadmium carbonate | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 1306-23-6 | Cadmium sulfide | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 10124-36-4 | Cadmium sulfate | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 12214-12-9 | Cadmium selenide sulfide | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 1306-24-7 | Cadmium Selenide | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 1306-25-8 | Cadmium Telluride | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 21041-95-2 | Cadmium Hydroxide | | | | | | | | | | | Yes | A05 |
| Yes | 19 | | | Metal and its compounds | Cadmium and its compounds | 2223-93-0 | Cadmium Stearate | | | | | | | | | | | Yes | A05 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 7439-92-1 | Lead | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 6080-56-4 | Lead(II) acetate trihydrate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 7446-27-7 | Lead(II) phosphate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 12069-00-0 | Lead selenide | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1309-60-0 | Lead(IV) oxide | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1314-41-6 | Lead oxide | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1344-36-1 | Lead subcarbonate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 7758-97-6 | Lead(II) chromate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 12202-17-4 | Lead oxide sulfate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1319-46-6 | Lead(II) carbonate, basic | | | Yes | Prohibited to intentionally be used for paints | | | Yes | Prohibited to intentionally be used for paints | Yes | Yes | A09 | |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 598-63-0 | Lead carbonate | | | Yes | Prohibited to intentionally be used for paints | | | Yes | Prohibited to intentionally be used for paints | Yes | Yes | A09 | |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 7446-14-2 | Lead (II) Sulfate | | | Yes | Prohibited to intentionally be used for paints | | | Yes | Prohibited to intentionally be used for paints | Yes | Yes | A09 | |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1072-35-1 | Lead stearate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 12060-00-3 | lead titanate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 12060-01-4 | Lead (II) zirconate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1311-11-1 | Lead Hydroxide | | | | | | | | | | | Yes | A09 |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | |
|------------------------|-----------|------------------------|-----------|---|---|------------|---|---|---|---|-----------------|-------------------------------|---------------------------------|-------------|-----------|---|-------------------------------|------------|------|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | | RoHS |
| | | | | This list shows examples of applicable substances. Any substance not included in this list but classified as a "prohibited substance" shall be reported. | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1317-36-8 | Lead (II) oxide | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 301-04-2 | Lead acetate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 10099-74-8 | Lead (II) nitrate | | | | | | | | | | | Yes | A09 |
| Yes | 20 | | | Metal and its compounds | Lead and its compounds | 1314-87-0 | Lead (II) Sulfide | | | | | | | | | | | Yes | A09 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 1344-38-3 | basic lead chromate | Pigment Orange 21 | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 1344-37-2 | Lead Chromate | Pigment Yellow 34 | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 13530-68-2 | Dichromic acid | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 7778-50-9 | Potassium dichromate | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 10588-01-9 | Sodium dichromate | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 1333-82-0 | Chromium trioxide | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 10294-40-3 | Barium Chromate | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 12053-18-8 | Copper chromite | | | | | | | | | | | Yes | A07 |
| Yes | 21 | | | Metal and its compounds | Hexavalent chromium compounds | 7789-06-2 | strontium chromate | | | | | | | | | | | Yes | A07 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 7439-97-6 | Mercury | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 7487-94-7 | mercury bichloride | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 21908-53-2 | Mercury (II) oxide | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 15829-53-5 | Mercurous Oxide | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 593-74-8 | Dimethyl mercury | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 10112-91-1 | Mercury chloride | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 33631-63-9 | Mercury(II) chloride | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 7783-35-9 | Mercury(II) sulfate | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 10045-94-0 | Mercuric nitrate | | | | | | | | | | | Yes | A10 |
| Yes | 22 | | | Metal and its compounds | Mercury and its compounds | 1344-48-5 | Mercuric sulfide | | | | | | | | | | | Yes | A10 |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 307-35-7 | 1-Octanesulphonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 376-14-7 | 2-Propenoic acid, 2-methyl-, 2-[[ethyl]heptadecafluorooctyl]sulphonyl]amino]ethyl ester | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 383-07-3 | 2-Propenoic acid, 2-[[butyl]heptadecafluorooctyl]sulphonyl]amino]ethyl ester | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 423-82-5 | 2-Propenoic acid, 2-[[ethyl]heptadecafluorooctyl]sulphonyl]amino]ethyl ester | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 423-86-9 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-2-propenyl- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 754-91-6 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 1652-63-7 | 1-Propanaminium, 3-[[heptadecafluorooctyl]sulphonyl]amino]-N,N,N-trimethyl-, iodide | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 1691-99-2 | 1-Octanesulphonamide, N-ethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 1763-23-1 | 1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | Sub G/No Level 1 | Sub G/No Level 2 | Sub G/No | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | | |
|--|---------------------|---------------------|----------|----------|---|------------|---|----------|---|--|-----------------|------------|---------------------------------|-----------|------------|-------------------------------|------------|---|------|------------------|
| | | | | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Prohibition Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | | RoHS | JGPSSI Sub Gr No |
| | | | | | | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | | | |
| This list shows examples of applicable substances. Any substance not included in this list but classified as a "prohibited substance" shall be reported. | | | | | | | | | | | | | | | | | | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 1869-77-8 | Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-, ethyl ester | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 2250-98-8 | 1-Octanesulphonamide, N,N',N"-[phosphinylidynetris(oxy-2,1-ethanedyl)]tris[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 2263-09-4 | 1-Octanesulphonamide, N-butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 2795-39-3 | 1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 2991-50-6 | Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 2991-51-7 | Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-, potassium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 3820-83-5 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonoxy)ethyl]- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 3871-50-9 | Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]-, sodium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 4151-50-2 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 13417-01-1 | 1-Octanesulphonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 14650-24-9 | 2-Propenoic acid, 2-methyl-, 2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 24448-09-7 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-methyl- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 24924-36-5 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-2-propenyl- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 25268-77-3 | 2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 29081-56-9 | 1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 29117-08-6 | Poly(oxy-1,2-ethanedyl)-, alpha-[2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl]-, omega-hydroxy | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 29457-72-5 | 1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, lithium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 30295-51-3 | 1-Octanesulphonamide, N-[3-(dimethoxyamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 30381-98-7 | 1-Octanesulphonamide, N,N'-[phosphinocobis(oxy-2,1-ethanedyl)]bis[N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 31506-32-8 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 38006-74-5 | 1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulphonyl]amino]-N,N',N'-trimethyl-, chloride | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks |
|------------------------|-----------|------------------------|-----------|---|---|------------|---|-------------------------------|---|---|-----------------|------------|---------------------------------|---|---|------------|--|---------|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | |
| | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 50598-29-3 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(phenylmethyl)- | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 52550-45-5 | Poly(oxy-1,2-ethanediyl), a-[2-[[[(heptadecafluorooctyl)sulphonyl]propylamino]ethyl]-ω-hydroxy- | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 56773-42-3 | Ethanaminium, N,N',N''-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulphonic acid (1:1) | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 57589-85-2 | Benzoic acid, 2,3,4,5-tetrachloro-6-[[[3-[[[(heptadecafluorooctyl)sulphonyl]oxy]phenyl]amino]carbonyl]-, monopotassium salt | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 58920-31-3 | 2-Propenoic acid, 4-[[[(heptadecafluorooctyl)sulphonyl]methylamino]butyl ester | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 61577-14-8 | 2-Propenoic acid, 2-methyl-, 4-[[[(heptadecafluorooctyl)sulphonyl]methylamino]butyl ester | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 61660-12-6 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trimethoxysilyl)propyl]- | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 67939-42-8 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trichlorosilyl)propyl]- | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 67969-69-1 | 1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonoxy)ethyl]-, diammonium salt | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 67939-88-2 | 1-Octanesulphonamide, N-[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, monohydrochloride | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68081-83-4 | Carbamic acid, (4-methyl-1,3-phenylene)bis-, bis[2-[ethyl]([perfluoro-C4-8-alkyl)sulphonyl]amino)ethyl ester | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68298-11-3 | 1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulphonyl]3-sulphopropyl]amino]-N-(2-hydroxyethyl)-N,N-dimethyl-, hydroxide, inner salt | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68329-56-6 | 2-Propenoic acid, eicosyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate, hexadecyl 2-propenoate, 2-[methyl]([nonafluorobutyl)sulphonyl]amino)ethyl 2-propenoate, 2-[methyl]([pentafluoroheptyl)sulphonyl]amino)ethyl 2-propenoate, 2-[methyl]([tridecafluoroheptyl)sulphonyl]amino)ethyl 2-propenoate, 2-[methyl]([undecafluoropentyl)sulphonyl]amino)ethyl 2-propenoate and octadecyl 2-propenoate | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68239-73-6 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(4-hydroxybutyl)-N-methyl- | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68310-75-8 | 1-Propanaminium, 3-[[[(heptadecafluorooctyl)sulphonyl]amino]-N,N',N''-trimethyl-, iodide, ammonium salt | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 68541-80-0 | 2-Propenoic acid, polymer with 2-[ethyl]([heptadecafluorooctyl)sulphonyl]amino)ethyl 2-methyl-2-propenoate and octadecyl 2-propenoate | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | | |
|------------------------|-----------|----------|-----------------|---|----------------|---|---|---|---|---|-------------------------------|------------|---------------------------------|-----------|---|---|------------|------------------|
| Prohibited Sub Level 1 | Sub Gr No | | | | | | Prohibited Sub Level 2 | Sub Gr No | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | | RoHS | JGPSSI Sub Gr No |
| | | | | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68555-90-8 | 2-Propenoic acid, butyl ester, polymer with 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68555-91-9 | 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68555-92-0 | 2-Propenoic acid, 2-methyl-, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68608-14-0 | Sulphonamides, C4-8-alkane, perfluoro, N-ethyl-N-(hydroxyethyl), reaction products with 1,1'-methylenebis[4-isocyanatobenzene] | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68649-26-3 | 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-, reaction products with N-ethyl-1,1,2,2,3,3,4,4,4,4-nonafluoro-N-(2-hydroxyethyl)-1-butanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-1-heptanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-1-hexanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,5-undecafluoro-N-(2-hydroxyethyl)-1-pentanesulfonamide, polymethylenepolyphenylene isocyanate and stearyl alc. | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68867-60-7 | 2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate and alpha-(1-oxo-2-propenyl)-omega-methoxypropyl(oxy-1,2-ethanedyl) | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | |
|------------------------|-----------|----------|-----------------|---|----------------|--|---|---|---|---|-------------------------------|-------------|---------------------------------|------------|---|------------|------|
| Prohibited Sub Level 1 | Sub Gr No | | | | | | Prohibited Sub Level 2 | Sub Gr No | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | | RoHS |
| | | | | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68877-32-7 | 2-Propenoic acid, 2-methyl-, 2-[ethyl[[(heptadecafluorooctyl)sulphonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and 2-methyl-1,3-butadiene | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68891-96-3 | Chromium, diaquatetrachloro[.mu.-[N-ethyl-N-[(heptadecafluorooctyl)sulphonyl] glycinato-.kappa.O:.kappa.O]]-.mu.-hydroxybis(2-methylpropano)di- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68909-15-9 | 2-Propenoic acid, eicosyl ester, polymers with branched octyl acrylate, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl acrylate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl acrylate, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl acrylate, polyethylene glycol acrylate Me ether and stearyl acrylate | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 68958-61-2 | Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl]-.omega.-methoxy- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 70225-14-8 | 1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1) | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 70776-36-2 | 2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 1,1-dichloroethene, 2-[[[(heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, N-(hydroxymethyl)-2-propenamido, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl 2-propenoate | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 71463-78-0 | Phosphonic acid, [3-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]propyl]- | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | Others | Perfluorooctane sulfonate and its salts | 71463-80-4 | Phosphonic acid, [3-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]propyl]-, diethyl ester | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | | | |
|------------------------|-----------|------------------------|-----------|--|---|-------------|---|----------|---|---|-----------------|-------|---------------------------------|-------------|-----------|------------|-------------------------------|---|---|------------------|--|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | | RoHS | JGPSSI Sub Gr No | |
| | | | | | | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | | Applicable | | |
| | | | | This list shows examples of applicable substances. Any substance not included in this list but classified as a "prohibited substance" shall be reported. | | | | | | | | | | | | | | | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 182700-90-9 | 1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-, reaction products with benzene-chlorine-sulphur chloride (S2Cl2) reaction products chlorides | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 192662-29-6 | Sulphonamides, C4-8-alkane, perfluoro, N-[3-(dimethylamino)propyl], reaction products with acrylic acid | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 251099-16-8 | 1-Decanaminium, N-decyl-N,N-dimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulphonic acid (1:1) | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306973-46-6 | Fatty acids, linseed-oil, dimers, 2-[[[(heptadecafluorooctyl)sulphonyl]methylamino]ethyl esters | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306973-47-7 | Sulphonamides, C4-8-alkane, perfluoro, N-(hydroxyethyl)-N-methyl, reaction products with 12-hydroxystearic acid and 2,4-TD, ammonium salts | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306974-19-6 | Sulphonamides, C4-8-alkane, perfluoro, N-methyl-N-[(3-octadecyl-2-oxo-5-oxazolidinyl)methyl] | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306974-28-7 | Siloxanes and Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]group] - terminated, polymers with 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl acrylate and stearyl methacrylate | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306974-45-8 | Sulphonic acids, C6-8-alkane, perfluoro, compounds with polyethylene-polypropylene glycol bis(2-aminopropyl) ether | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306974-63-0 | Fatty acids, C18-unsatd., dimers, 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino] ethyl esters | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306975-56-4 | Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and N,N,2-tris(6-isocyanatoethyl)imidodicarbonic diamide, reaction products with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-1-octanesulphonamide and N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-1-heptanesulphonamide, compds. with triethylamine | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306975-57-5 | Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,1'-methylenebis[4-isocyanatobenzene] and 1,2,3-propanetriol, reaction products with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-1-octanesulphonamide and N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-1-heptanesulphonamide, compds. with morpholine | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306975-62-2 | 2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl acrylate and vinylidene chloride | | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | |

Table 6

Chemical Substances Management List (Level 1 and Level 2 prohibited)

| Rank | | | | Category | substance group | CAS No. | substance name | Synonyms | Japan's Laws | | | | Overseas Laws | | | | | Remarks | | | |
|------------------------|-----------|------------------------|-----------|---|---|-------------|---|----------|---|---|-----------------|------------|---------------------------------|------------|-------------|------------|------------|---|------------|------------------|-----|
| Prohibited Sub Level 1 | Sub Gr No | Prohibited Sub Level 2 | Sub Gr No | | | | | | Class 1 Specified Chemicals in Chem-sub Law | Production Prohibited Chemicals in Article 56, the Safety Law | Ozone Layer Law | ChemG | German Consumer Goods Ordinance | | | 76/769/EEC | | | RoHS | JGPSSI Sub Gr No | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | This list shows examples of applicable substances. Any substance not included in this list but classified as a "prohibited substance" shall be reported. | | | | | Applicable, use limited and its threshold | Applicable, use limited and its threshold | Applicable | Applicable | Use limited and its threshold | Applicable | Use limited | Threshold | Applicable | Use limited and its threshold | Applicable | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306975-84-8 | Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-hydroxy-, polymer with 1,6-diisocyanatohexane, N-(hydroxyethyl)-N-methyl perfluoro C4-8-alkane sulphonamides- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306975-85-9 | 2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with N-(hydroxymethyl)-2-propenamide, 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl methacrylate, stearyl methacrylate and vinylidene chloride | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306976-25-0 | 1-Hexadecanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, bromide, polymers with Bu acrylate, Bu methacrylate and 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl acrylate | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306976-55-6 | 2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with 2,4-diisocyanato-1-methylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2-propenoic acid, N-ethyl-N-(hydroxyethyl)perfluoro-C4-8-alkanesulphonamides-blocked | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306977-58-2 | 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymers with acrylic acid, 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl acrylate and propylene glycol monoacrylate, hydrolysed, compounds with 2,2'-(methylimino)bis[ethanol] | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306978-04-1 | 2-Propenoic acid, butyl ester, polymers with acrylamide, 2-[methyl(perfluoro-C4-8-alkyl)sulphonylamino]ethyl acrylate and vinylidene chloride | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306978-65-4 | Hexane, 1,6-diisocyanato-, homopolymer, N-(hydroxyethyl)-N-methyl perfluoro-C4-8-alkane sulphonamides- and stearyl alc.-blocked | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306979-40-8 | Poly(oxy-1,2-ethanediyl), .alpha.-[2-(methylamino)ethyl]-, omega.-{[1,1,3,3-tetramethylbutyl]phenoxy}-, N-[(perfluoro-C4-8-alkyl)sulphonyl] | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 26 | | | Others | Perfluorooctane sulfonate and its salts | 306980-27-8 | Sulphonamides, C4-8-alkane, perfluoro, N,N'-[1,6-hexanediy]bis[2-oxo-3,5-oxazolidinediy]methylene]bis[N-methyl- | | | | | | | | | | Yes | parts: 1,000 ppm or more, surface coating: 1ug/m2 or more | | | |
| Yes | 27 | | | Others | Specified benzotriazole | 3846-71-7 | Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)- | | Yes | | | | | | | | | | | | |
| | Yes | 16 | | Halogenized organic compounds | PVC and its mixtures, copolymer | 9002-86-2 | PVC and its mixture | | | | | | | | | | | | | B07 | |
| | Yes | 16 | | Halogenized organic compounds | PVC and its mixtures, copolymer | 9003-22-9 | Vinyl chloride/vinyl acetate copolymer | | | | | | | | | | | | | | B07 |

7. Major Changes from Version 5.1

In Version 6, in consideration of the need for smooth information disclosure and transmission of data regarding chemical substances contained in articles in the supply chain, the control standard specified by the Joint Article Management Promotion consortium (JAMP) has been referenced.

Major changes from Version 5.1 involve additions made to the list of substances included in the following regulations and industry standards relating to the managed substances listed in these guidelines.

- Japan Chemical Substances Control Law (Class 1 specified substances)
- Japan Industrial Safety and Health Law (substances that are prohibited from manufacture)
- Japan Poisonous and Deleterious Substances Control Law (specified toxic substances)
- EU 67/548/EEC
- EU 76/769/EEC
- EU REACH Regulation Candidate substances for authorization (Substances of Very High Concern (SVHC))
- ESIS PBT (Substances that fulfill determination criteria for PBT)
- GADSL

| Revision History | Revision Contents |
|------------------|---|
| 2 (1) 5) | Added examples of packaging material "(Pallets, shrink packs etc.)" |
| 5 (4) | Revised the identification target for managed substances |
| 5 (11) | Deleted the definition of M-No. |
| 5 (12) | Deleted the reference for the Japan Green Procurement Survey Standardization Initiative (JGPSSI) |
| 6 (1) 2) | Added the referenced law "State of California: Regulations on the generation of formaldehyde by plywood" |
| 6 (1) Table 1 | Added the applicable prohibited substance name (No. 3) "bis (tributyl tin)=oxide (CAS No. 56-35-9) |
| | Added a description about the lead intentionally used in electroless nickel plating. (Transferred the previous content of the "list of managed values of prohibited substances") (No. 20) |
| | Added the referenced law (No. 25) "State of California: Regulations on the generation of formaldehyde by plywood" |
| 6 (1) Table 2-6 | Supplemented expressions "Ex. Speaker" → "Ex. Speaker box" |
| 6 (3) | <ul style="list-style-type: none"> • Revised the identification target for "managed substances" • Added the target substances of "managed substances" |
| 6 (4) | <ul style="list-style-type: none"> • Deleted the applicable items from the target substance list of "prohibited substances", in accordance with the deletion of M-No. (Table 6). • Referenced JAMP materials as a list of sample substances controlled by each legal regulation and industry standard for "prohibited substances" and "managed substances". |
| 6 (5) | Referenced the JAMP tool as search software for checking the applicability of "managed substances" in these guidelines. |

Panasonic Group
Chemical Substances Management Rank Guidelines
Version 6 (For Products)

Revised on: March 30, 2009

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