

# **Fujitsu Group Specified Chemical Substances List**



We care for the Earth.

Oct. 11, 2011 (Edition 1.5)

**Fujitsu Limited**

Purchasing Unit

Corporate Environmental Strategy Unit

Corporate Product Technology Unit

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## Fujitsu Group specified chemical substances

[Definition of terms]

Containment : A chemical substance exists in Deliverables.

Concentration : content rate of chemical substances

Its unit is used with [ppm] (parts per million by weight) or [wt%] (weight percent). In terms of concentration calculation methods, please refer to the notation of each table.

Intentional addition: deliberate use in the formulation of Deliverables where its presence is desired to provide a specific characteristic, appearance or quality regardless of concentration of the chemical substance

Material : homogeneous material which cannot be decomposed further more or composite material which can be regarded as homogeneous in order to fulfill its specific function(s), for which it is set or formed at particular position

Impurities : substances that are contained in natural materials and cannot be eliminated during processes in which they are manufactured into industrial sources

Preparation : means a mixture or solution composed of two or more substances (e.g. adhesives, plating solutions, coating materials)

Deliverables : material, components, units, accessories, OEM/ODM products, or equipment all of which are equipped to Fujitsu Group's products, and packaging materials

### 1. Banned Substances

**Table 1: Banned Substances**

| No  | Substances  | Standards of ban   | Remark                                    | Reference                                 |
|-----|---|--|---|---|
| 001 | Asbestos  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  |   | REACH (Restriction)                       |
| 002 | Azo colorants and Azo dyes which form certain aromatic amines | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  | Refer to footnote (*2)                    | REACH (Restriction)                       |
| 003 | Cadmium /Cadmium Compounds                                    | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.<br>[3] Concentration in Material must not exceed 100 ppm even contained as impurities.<br>[4] Sum of concentration of the 4 substances (*1) in packaging materials must not exceed 100 ppm even contained as impurities. | Refer to Exempted Application in Table 1e | REACH (Restriction)<br><br>RoHS Directive |

| No  | Substances  | Standards of ban   | Remark                                    | Reference   |
|-----|---|--|---|---|
| 004 | Chromium VI Compounds   | <p>[1] Ban of intentional addition or use</p> <p>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p> <p>[3] Concentration in Material must not exceed 1000 ppm even contained as impurities.</p> <p>[4] Sum of concentration of the 4 substances (*1) in Packaging materials must not exceed 100 ppm even contained as impurities.</p>   |   | RoHS Directive  |
| 005 | Lead/Lead Compounds   | <p>[1] Ban of intentional addition or use</p> <p>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p> <p>[3] Concentration in Material must not exceed 1000 ppm even contained as impurities. In this regard, however, concentration in Material must not exceed 300 ppm in the case of PVC (Polyvinyl Chloride) cable.</p> <p>[4] Sum of concentration of the 4 substances (*1) in Packaging materials must not exceed 100 ppm even contained as impurities.</p> | Refer to Exempted Application in Table 1e | REACH (Restriction)<br>RoHS Directive                   |
| 006 | Mercury/Mercury Compounds   | <p>[1] Ban of intentional addition or use</p> <p>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p> <p>[3] Concentration in Material must not exceed 1000 ppm even contained as impurities.</p> <p>[4] Sum of concentration of the 4 substances (*1) in Packaging materials must not exceed 100 ppm even contained as impurities.</p>   | Refer to Exempted Application in Table 1e | REACH (Restriction)<br>RoHS Directive                   |
| 007 | Ozone Depleting Substances (CFCs, HCFCs, HBFCs, carbon tetrachloride, etc.) | <p>[1] Ban of intentional addition or use</p> <p>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.</p>   | Refer to detailed substances in Table 1b  | Montreal Protocol<br>EC No.2037/2000<br>EC No.1005/2009 |

| No  | Substances  | Standards of ban   | Remark                                    | Reference   |
|-----|---|--|---|---|
| 008 | PFOS and PFOS-related substances                          | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.<br>[3] Concentration or amount must not exceed undermentioned numerical numbers in case of being contained as impurities.<br>- Concentration in Material: 0.1wt%<br>- Concentration in Preparation(ink, toner, etc.): 0.005wt%<br>- Amount in the coated materials: 1µg/m <sup>2</sup> | Refer to Exempted Application in Table 1e | REACH (Restriction)                                   |
| 009 | Polybrominated Biphenyls (PBBs)                           | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.<br>[3] Concentration in Material must not exceed 1000 ppm even contained as impurities.  |   | RoHS Directive  |
| 010 | Polybrominated Diphenylethers (PBDEs)                     | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.<br>[3] Concentration in Material must not exceed 1000 ppm even contained as impurities.  |   | RoHS Directive  |
| 011 | Polychlorinated Biphenyls (PCBs) and specific substitutes | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  | Refer to detailed substances in Table 1c  | REACH (Restriction)                                   |
| 012 | Polychlorinated Terphenyls (PCTs)                         | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  |   | REACH (Restriction)                                   |
| 013 | Shortchain Chlorinated Paraffins (C10-13)                 | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  |   | REACH (Restriction)<br><br>Laws of Swiss, and Austria |
| 014 | Tri-substituted organostannic compounds (except for TBTO) | Concentration in Deliverables must not exceed 1000 ppm.  |   | REACH (Restriction)                                   |
| 015 | Tributyl Tin Oxide (TBTO)                                 | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.  |   | REACH (Restriction)<br><br>CSCL (*3)                  |
| 016 | Dimethylfumarate (DMF)                                    | Concentration in Deliverables must not exceed 0.1 ppm.   |   | 2009/251/EC   |

| No  | Substances                                   | Standards of ban  | Remark   | Reference                      |
|-----|--|---|--|--------------------------------|
| 017 | Dibutyltin compounds (DBT)                   | Concentration in Deliverables must not exceed 1000 ppm.   | Ban from July 1, 2011<br>Refer to Exempted Application in Table 1e   | REACH (Restriction)            |
| 018 | Diocetyl tin compounds (DOT)                 | Concentration in Deliverables must not exceed 1000 ppm.   | Ban from July 1, 2011<br><br>This applies to cases that are used for textile, leather products or their parts intended to come into contact with the skin directly, and the case that are used for two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits). | REACH (Restriction)            |
| 019 | Fluorinated greenhouse gases (HFC, PFC, SF6) | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.   | Refer to detailed substances in Table 1d<br><br>This applies to cases that are used for one component foams.   | EU Regulation No.842/2006      |
| 020 | Formaldehyde                                 | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.<br>[3] Concentration in Material must not exceed 75 ppm even contained as impurities. | This applies to cases that are used for textile products or their parts.   | Laws of Austria, and Lithuania |
| 021 | Tris(2,3-dibromopropyl)phosphate (TRIS)      | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.   | This applies to cases that are used for textile products or their parts intended to come into contact with the skin directly.  | REACH (Restriction)            |
| 022 | Tris (1-aziridinyl) phosphine oxide (TEPA)   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process.   | This applies to cases that are used for textile products or their parts intended to come into contact with the skin directly.  | REACH (Restriction)            |

| No  | Substances   | Standards of ban  | Remark | Reference |
|-----|--|---|--------|-----------|
| 023 | Polychlorinated Naphthalenes (more than 3 chlorine atoms)  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 024 | Hexachlorobenzene  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 025 | Aldrin   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 026 | Dieldrin   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 027 | Endrin   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 028 | DDT<br>Chlorophenothane  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 029 | Chlordanes   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 030 | N,N'-ditolyl-p-phenylenediamine,<br>N-tolyl-N'-xylyl-p-phenylenediamine and<br>N,N'-dixylyl-p-phenylenediamine | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 031 | 2,4,6-tri-tert-butylphenol   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 032 | Toxaphene  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 033 | Mirex  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 034 | Kelthane   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |

| No  | Substances                                       | Standards of ban  | Remark | Reference |
|-----|--|---|--------|-----------|
| 035 | Hexachloro-1,3-butadiene                         | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 036 | 2-(2H-benzotriazol-2-yl)-4,6-di-tert-butylphenol | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 037 | Pentachlorobenzene                               | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 038 | $\alpha$ -Hexachlorocyclohexane                  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 039 | $\beta$ -Hexachlorocyclohexane                   | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 040 | $\gamma$ -Hexachlorocyclohexane                  | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |
| 041 | Chlordecone                                      | [1] Ban of intentional addition or use<br>[2] Ban of attachment, mix, or production of the substances in the manufacturing process. |        | CSCL (*3) |

\*1: Four (4) substances mean Cadmium, Lead, Mercury and each compound and Chromium VI Compounds.

\*2: This applies to cases that azo colorants and azo dyes are used for leather products, textile products or their parts that are possible to contact human skins directly for a long time **AND** that form certain aromatic amines listed in Table 1a as a result of decomposition of azo group.

\*3: Class I specified chemical substances on Japanese Chemical Substances Control Law (CSCL)

Notation regarding Table 1:

Deliverables shall meet all of "Standards of ban" specified in the above table.

In terms of "Banned Substances", methodology of how to calculate concentration shall follow below:

- In this article, the denominator in calculations of the concentration shall be the mass of the "Material" or the total mass of the Deliverables. You can decide which mass to choose complying with the "Standards of ban" in Table 1 in individual substances.
- In the case of complex substances or materials, the following will be the "Material".
  - Chemical compounds, polymer alloys, metal alloys
  - In the case that Deliverables are raw material such as paint, adhesive, ink, paste, polymer resin, glass powder, ceramic powder, each finally formed product by means of expected normal usage.

- Examples: - Dried and hardened material for paints or adhesives  
 - Molded article for polymer resins  
 - Hardened material for glass or ceramic powder

- Single layer of paint, printing, or plating. Or, in the case of multi layers, each single layer shall be defined as the "Material".
- In the case of packaging material, corrugated board (base material), adhesive, tape, ink, etc.
- The numerator in calculations of the concentration shall be mass of the applicable chemical substance. In the case of metal alloy, metal element in the metal alloy will be the numerator.

**Table 1a: Aromatic Amines formed from azo colorants and azo dyes**

| Specific Substances                 | CAS No.  |
|-------------------------------------|----------|
| biphenyl-4-ylamine                  | 92-67-1  |
| Benzidine                           | 92-87-5  |
| 4-chloro-o-toluidine                | 95-69-2  |
| 2-naphthylamine                     | 91-59-8  |
| o-aminoazotoluene                   | 97-56-3  |
| 5-nitro-o-toluidine                 | 99-55-8  |
| 4-chloroaniline                     | 106-47-8 |
| 4-methoxy-m-phenylenediamine        | 615-05-4 |
| 4,4'-methylenedianiline             | 101-77-9 |
| 3,3'-dichlorobenzidine              | 91-94-1  |
| 3,3'-dimethoxybenzidine             | 119-90-4 |
| 3,3'-dimethylbenzidine              | 119-93-7 |
| 4,4'-methylenedi-o-toluidine        | 838-88-0 |
| 6-methoxy-m-toluidine               | 120-71-8 |
| 4,4'-methylene-bis(2-chloroaniline) | 101-14-4 |
| 4,4'-oxydianiline                   | 101-80-4 |
| 4,4'-thiodianiline                  | 139-65-1 |
| o-toluidine                         | 95-53-4  |
| 4-methyl-m-phenylenediamine         | 95-80-7  |
| 2,4,5-trimethylaniline              | 137-17-7 |
| o-anisidine                         | 90-04-0  |
| 4-amino azobenzene                  | 60-09-3  |

**Table 1b: Ozone Depleting Substances**

| Substance Group                               | Examples of Chemical Substances         | CAS No.     | Remark |
|---|---|-------------|--------|
| CFCs  | CFC-11                                  | 75-69-4     |        |
|   | CFC-12                                  | 75-71-8     |        |
|   | CFC-13                                  | 75-72-9     |        |
|   | CFC-111                                 | 354-56-3    |        |
|   | CFC-112                                 | 76-12-0     |        |
|   |   | 76-11-9     |        |
|   | CFC-113                                 | 76-13-1     |        |
|   |   | 354-58-5    |        |
|   | CFC-114                                 | 76-14-2     |        |
|   | CFC-115                                 | 76-15-3     |        |
|   | CFC-211                                 | 422-78-6    |        |
|   |   | 422-81-1    |        |
|   | CFC-212                                 | 3182-26-1   |        |
|   | CFC-213                                 | 134237-31-3 |        |
|   | CFC-214                                 | 29255-31-0  |        |
| 2268-46-4                                     |   |             |        |
| CFC-215                                       | 1599-41-3                               |             |        |
|   | 76-17-5                                 |             |        |
|   | 4259-43-2                               |             |        |
| CFC-216                                       | 661-97-2                                |             |        |
| CFC-217                                       | 422-86-6                                |             |        |
| Halons  | Halon-1011(Bromochloromethane)          | 74-97-5     |        |
|   | Halon-1202                              | 75-61-6     |        |
|   | Halon-1211                              | 353-59-3    |        |
|   | Halon-1301                              | 75-63-8     |        |
|   | Halon-2402                              | 124-73-2    |        |
| Tetrachloromethane (Carbon tetrachloride)     |   | 56-23-5     |        |
| 1,1,1-Trichloroethane (Methylchloroform)      |   | 71-55-6     |        |
| Bromomethane (Methyl bromide)                 |   | 74-83-9     |        |
| Bromoethane (Ethyl bromide)                   |   | 74-96-4     |        |
| 1-Bromopropane (n-propyl bromide)             |   | 106-94-5    |        |
| Trifluoroiodomethane (Trifluoromethyl iodide) |   | 2314-97-8   |        |
| Chloromethane (Methyl chloride)               |   | 74-87-3     |        |
| HBFCs<br>Hydrobromofluorocarbons              | Dibromofluoromethane (HBFC-21 B2)       | 1868-53-7   |        |
|   | Bromodifluoromethane (HBFC-22 B1)       | 1511-62-2   |        |
|   | Bromofluoromethane (HBFC-31 B1)         | 373-52-4    |        |
|   | Tetrabromofluoroethane (HBFC-121 B4)    | 306-80-9    |        |
|   | Tribromodifluoroethane (HBFC-122 B3)    | -           |        |
|   | Dibromotrifluoroethane (HBFC-123 B2)    | 354-04-1    |        |
|   | Bromotetrafluoroethane (HBFC-124 B1)    | 127-72-1    |        |
|   | Tribromofluoroethane (HBFC-131 B3)      | -           |        |
|   | Dibromodifluoroethane (HBFC-132 B2)     | 75-82-1     |        |
|   | Bromotrifluoroethane (HBFC-133 B1)      | 421-06-7    |        |
|   | Dibromofluoroethane (HBFC-141 B2)       | 358-97-4-   |        |
|   | Bromodifluoroethane (HBFC-142 B1)       | 420-47-3    |        |
|   | Bromofluoroethane (HBFC-151 B1)         | 762-49-2    |        |
|   | Hexabromofluoropropane (HBFC-221 B6)    | -           |        |
|   | Pentabromodifluoropropane (HBFC-222 B5) | -           |        |

| Substance Group                   | Examples of Chemical Substances          | CAS No.  | Remark                |
|-----------------------------------|--|--|-----------------------|
| HBFCs<br>Hydrobromofluorocarbons  | Tetrabromotrifluoropropane (HBFC-223 B4) | -  |                       |
|                                   | Tribromotetrafluoropropane (HBFC-224 B3) | -  |                       |
|                                   | Dibromopentafluoropropane (HBFC-225 B2)  | 431-78-7   |                       |
|                                   | Bromohexafluoropropane (HBFC-226 B1)     | 2252-78-0  |                       |
|                                   | Pentabromofluoropropane (HBFC-231 B5)    | -  |                       |
|                                   | Tetrabromodifluoropropane (HBFC-232 B4)  | -  |                       |
|                                   | Tribromotrifluoropropane (HBFC-233 B3)   | -  |                       |
|                                   | Dibromotetrafluoropropane (HBFC-234 B2)  | -  |                       |
|                                   | Bromopentafluoropropane (HBFC-235 B1)    | 460-88-8   |                       |
|                                   | Tetrabromofluoropropane (HBFC-241 B4)    | -  |                       |
|                                   | Tribromodifluoropropane (HBFC-242 B3)    | 70192-80-2   |                       |
|                                   | Dibromotrifluoropropane (HBFC-243 B2)    | 431-21-0   |                       |
|                                   | Bromotetrafluoropropane (HBFC-244 B1)    | 679-84-5   |                       |
|                                   | Tribromofluoropropane (HBFC-251 B3)      | 75372-14-4   |                       |
|                                   | Dibromodifluoropropane (HBFC-252 B2)     | 460-25-3   |                       |
|                                   | Bromotrifluoropropane (HBFC-253 B1)      | 421-46-5   |                       |
|                                   | Dibromofluoropropane (HBFC-261 B2)       | 51584-26-0   |                       |
|                                   | Bromodifluoropropane (HBFC-262 B1)       | -  |                       |
| Bromofluoropropane (HBFC-271 B1)  | 1871-72-3                                |  |                       |
| HCFCs<br>Hydrochlorofluorocarbons | HCFC-21                                  | 75-43-4  | Refer to footnote(*1) |
|                                   | HCFC-22                                  | 75-45-6  | Refer to footnote(*1) |
|                                   | HCFC-31                                  | 593-70-4   | Refer to footnote(*1) |
|                                   | HCFC-121                                 | 134237-32-4<br>354-11-0<br>354-14-3                            | Refer to footnote(*1) |
|                                   | HCFC-122                                 | 41834-16-6<br>354-21-2<br>354-15-4<br>354-12-1                 | Refer to footnote(*1) |
|                                   | HCFC-123                                 | 34077-87-7<br>90454-18-5<br>306-83-2<br>354-23-4<br>812-04-4   | Refer to footnote(*1) |
|                                   | HCFC-124                                 | 63938-10-3<br>2837-89-0<br>354-25-6                            | Refer to footnote(*1) |
|                                   | HCFC-131                                 | 27154-33-2<br>134237-34-6<br>359-28-4<br>811-95-0<br>2366-36-1 | Refer to footnote(*1) |
|                                   | HCFC-132                                 | 25915-78-0<br>1649-08-7<br>1842-05-3<br>471-43-2<br>431-06-1   | Refer to footnote(*1) |

| Substance Group                   | Examples of Chemical Substances | CAS No.  | Remark                   |
|-----------------------------------|---------------------------------|--|--------------------------|
| HCFCs<br>Hydrochlorofluorocarbons | HCFC-133                        | 1330-45-6<br>431-07-2<br>75-88-7<br>421-04-5   | Refer to<br>footnote(*1) |
|                                   | HCFC-141                        | 1717-00-6<br>25167-88-8<br>430-57-9<br>430-53-5  | Refer to<br>footnote(*1) |
|                                   | HCFC-142                        | 25497-29-4<br>338-65-8<br>75-68-3<br>338-64-7  | Refer to<br>footnote(*1) |
|                                   | HCFC-151                        | 110587-14-9<br>762-50-5<br>1615-75-4   | Refer to<br>footnote(*1) |
|                                   | HCFC-221                        | 134237-35-7<br>29470-94-8<br>422-26-4  | Refer to<br>footnote(*1) |
|                                   | HCFC-222                        | 134237-36-8<br>422-49-1<br>422-30-0  | Refer to<br>footnote(*1) |
|                                   | HCFC-223                        | 134237-37-9<br>422-52-6<br>422-50-4  | Refer to<br>footnote(*1) |
|                                   | HCFC-224                        | 134237-38-0<br>422-54-8<br>422-53-7<br>422-51-7  | Refer to<br>footnote(*1) |
|                                   | HCFC-225                        | 127564-92-5<br>128903-21-9<br>422-48-0<br>422-44-6<br>422-56-0<br>507-55-1<br>13474-88-9<br>431-86-7<br>136013-79-1<br>111512-56-2 | Refer to<br>footnote(*1) |
|                                   | HCFC-226                        | 134308-72-8<br>431-87-8  | Refer to<br>footnote(*1) |
|                                   | HCFC-231                        | 134190-48-0<br>421-94-3  | Refer to<br>footnote(*1) |
|                                   | HCFC-232                        | 134237-39-1<br>460-89-9  | Refer to<br>footnote(*1) |
|                                   | HCFC-233                        | 134237-40-4<br>7125-83-9   | Refer to<br>footnote(*1) |
|                                   | HCFC-234                        | 127564-83-4<br>425-94-5  | Refer to<br>footnote(*1) |
|                                   | HCFC-235                        | 134237-41-5<br>460-92-4  | Refer to<br>footnote(*1) |
| HCFC-241                          | 134190-49-1<br>666-27-3         | Refer to<br>footnote(*1)   |                          |

| Substance Group                   | Examples of Chemical Substances | CAS No.  | Remark                   |
|-----------------------------------|---------------------------------|--|--------------------------|
| HCFCs<br>Hydrochlorofluorocarbons | HCFC-242                        | 134237-42-6<br>460-63-9                            | Refer to<br>footnote(*1) |
|                                   | HCFC-243                        | 134237-43-7<br>7125-99-7<br>338-75-0<br>460-69-5   | Refer to<br>footnote(*1) |
|                                   | HCFC-244                        | 134190-50-4<br>679-85-6<br>421-75-0                | Refer to<br>footnote(*1) |
|                                   | HCFC-251                        | 134190-51-5<br>818-99-5<br>421-41-0                | Refer to<br>footnote(*1) |
|                                   | HCFC-252                        | 134190-52-6<br>819-00-1                            | Refer to<br>footnote(*1) |
|                                   | HCFC-253                        | 134237-44-8<br>460-35-5                            | Refer to<br>footnote(*1) |
|                                   | HCFC-261                        | 134237-45-9<br>7799-56-6<br>420-97-3               | Refer to<br>footnote(*1) |
|                                   | HCFC-262                        | 134190-53-7<br>420-99-5<br>102738-79-4<br>421-02-3 | Refer to<br>footnote(*1) |
|                                   | HCFC-271                        | 134190-54-8<br>420-44-0<br>430-55-7                | Refer to<br>footnote(*1) |

Notation regarding Table 1b:

\*1: The substances are exempted from the Prohibited Substances in manufacturing process specified in Table 4.

**Table 1c: Polychlorinated Biphenyls (PCBs) and specific substitutes**

| Substances  | CAS No.    |
|---|------------|
| Polychlorinated Biphenyls (all isomers and congeners)           | 1336-36-3  |
| Monomethyl-tetrachloro-diphenyl methane<br>(Ugilec 141)         | 76253-60-6 |
| Monomethyl-dichloro-diphenyl methane<br>(Ugilec 121, Ugilec 21) | -          |
| Monomethyl-dibromo-diphenyl methane (DBBT)                      | 99688-47-8 |

**Table 1d: Fluorinated Greenhouse Gases (HFC, PFC and SF6)**

| Substance Name             | CAS No.                                 |          |
|----------------------------|---|----------|
| PFCs<br>(Perfluorocarbons) | Carbon tetrafluoride (Perfluoromethane) | 75-73-0  |
|                            | Perfluoroethane (Hexafluoroethane)      | 76-16-4  |
|                            | Perfluoropropane (Octafluoropropane)    | 76-19-7  |
|                            | Perfluorobutane (Decafluorobutane)      | 355-25-9 |
|                            | Perfluoropentane (Dodecafluoropentane)  | 678-26-2 |
|                            | Perfluorohexane (Tetradecafluorohexane) | 355-42-0 |
|                            | Perfluorocyclobutane                    | 115-25-3 |

| Substance Name                           |  | CAS No.     |
|--|--|-------------|
| Sulfur Hexafluoride (SF6)                |  | 2551-62-4   |
| HFCs<br>(Hydrofluorocarbons)             | Trifluoromethane (HFC-23)                  | 75-46-7     |
|  | Difluoromethane (HFC-32)                   | 75-10-5     |
|  | Methyl fluoride (HFC-41)                   | 593-53-3    |
|  | 2H,3H-Decafluoropentane (HFC-43-10mee)     | 138495-42-8 |
|  | Pentafluoroethane (HFC-125)                | 354-33-6    |
|  | 1,1,2,2-Tetrafluoroethane (HFC-134)        | 359-35-3    |
|  | 1,1,1,2-Tetrafluoroethane (HFC-134a)       | 811-97-2    |
|  | 1,1-Difluoroethane (HFC-152a)              | 75-37-6     |
|  | 1,1,2-Trifluoroethane (HFC-143)            | 430-66-0    |
|  | 1,1,1-Trifluoroethane (HFC-143a)           | 420-46-2    |
|  | 2H-Heptafluoropropane (HFC-227ea)          | 431-89-0    |
|  | 1,1,1,2,2,3-Hexafluoro-propane (HFC-236cb) | 677-56-5    |
|  | 1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)  | 431-63-0    |
|  | 1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)  | 690-39-1    |
|  | 1,1,2,2,3-Pentafluoropropane (HFC-245ca)   | 679-86-7    |
|  | 1,1,1,3,3-Pentafluoropropane (HFC-245fa)   | 460-73-1    |
| 1,1,1,3,3-Pentafluorobutane (HFC-365mfc) | 406-58-6                                   |             |

**Table 1e: Exempted applications from the containment restriction**

| No   | Substances                 | Exempted applications  |
|--|----------------------------|--|
| 003  | Cadmium /Cadmium Compounds | Cadmium and its compounds in one shot pellet type thermal cut-offs (Expires on 1 July 2011)  |
|  |                            | Cadmium and its compounds in electrical contacts   |
|  |                            | Cadmium in filter glasses and glasses used for reflectance standards   |
| 005  | Lead/Lead Compounds        | Lead in the glass of cathode ray tubes   |
|  |                            | Lead in glass of fluorescent tubes not exceeding 0.2% by weight  |
|  |                            | Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35% lead by weight  |
|  |                            | Lead as an alloying element in aluminium containing up to 0,4% lead by weight  |
|  |                            | Copper alloy containing up to 4% lead by weight  |
|  |                            | Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead).  |
|  |                            | Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications. |
|  |                            | Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound |
|  |                            | Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher   |
|  |                            | Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC(Expires on 1 July 2012)   |
|  |                            | Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications                                     |
|  |                            | Lead used in other than C-press compliant pin connector systems (Expires on 1 July 2012)   |
|  |                            | Lead in white glasses used for optical applications  |
| Lead in filter glasses and glasses used for reflectance standards  |                            |  |
| Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages. |                            |  |

|     |                                  |  |
|-----|----------------------------------|--|
| 006 | Mercury/Mercury Compounds        | Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp)<br>—Short length ( ≤ 500 mm):No limitation of use until 30 June 2011;3.5mg may be used per lamp after 30 June 2011<br>—Medium length ( > 500mm and ≤ 1500 mm):No limitation of use until 30 June 2011;5mg may be used per lamp after 30 June 2011<br>—Long length ( > 1,500 mm) :No limitation of use until 30 June 2011;13mg may be used per lamp after 30 June 2011 |
| 029 | PFOS and PFOS-related substances | - PFOS in photoresists or anti reflective coatings for photolithography processes<br>- PFOS in photographic coatings applied to films, papers, or printing plates  |
| 017 | Dibutyltin compounds (DBT)       | - One-component and two-component room temperature vulcanisation sealants (RTV-1 and RTV-2 sealants) and adhesives(Expires on 1 July 2014)<br>- Paints and coatings containing DBT compounds as catalysts when applied on articles(Expires on 1 July 2014)   |

Fujitsu Group may revise these exempted applications based on legislation.

## 2.Reportable Substances

**Table 2: Reportable Substances**

| No. | Substances   | CAS No.  | Conditions of Deliverables to be reportable    | Remark | Reference                           |
|-----|--|--|--|--------|-------------------------------------|
| 001 | Anthracene   | 120-12-7   | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 002 | 4,4'-Diaminodiphenylmethane (4,4'-Methylenedianiline, 4,4'-MDA)  | 101-77-9   | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 003 | Dibutyl phthalate (DBP)  | 84-74-2  | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 004 | Cobalt dichloride  | 7646-79-9  | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 005 | Diarsenic pentaoxide   | 1303-28-2  | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 006 | Diarsenic trioxide   | 1327-53-3  | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 007 | 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)   | 81-15-2  | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 008 | Bis(2-ethylhexyl)phthalate (DEHP)  | 117-81-7   | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 009 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD) | 25637-99-4<br>3194-55-6<br>134237-50-6 ( $\alpha$ -HBCDD)<br>134237-51-7 ( $\beta$ -HBCDD)<br>134237-52-8 ( $\gamma$ -HBCDD) | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |

| No. | Substances  | CAS No.    | Conditions of Deliverables to be reportable    | Remark                 | Reference                           |
|-----|---|------------|--|------------------------|-------------------------------------|
| 010 | Lead hydrogen arsenate  | 7784-40-9  | Concentration in Deliverables exceeds 1000 ppm | Refer to footnote (*1) | REACH (Candidate for Authorization) |
| 011 | Benzyl butyl phthalate (BBP)  | 85-68-7    | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 012 | Triethyl arsenate   | 15606-95-8 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 013 | Anthracene oil  | 90640-80-5 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 014 | Anthracene oil, anthracene paste, distn. Lights   | 91995-17-4 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 015 | Anthracene oil, anthracene paste, anthracene fraction   | 91995-15-2 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 016 | Anthracene oil, anthracene-low  | 90640-82-7 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 017 | Anthracene oil, anthracene paste  | 90640-81-6 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 018 | Coal tar pitch, high temperature  | 65996-93-2 | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |
| 019 | <p>Aluminosilicate, Refractory Ceramic Fibres</p> <p>Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the two following conditions:</p> <p>a) Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> are present within the following concentration ranges:</p> <ul style="list-style-type: none"> <li>• Al<sub>2</sub>O<sub>3</sub>: 43.5 – 47 % w/w, and SiO<sub>2</sub>: 49.5 – 53.5 % w/w,</li> <li style="text-align: center;">or</li> <li>• Al<sub>2</sub>O<sub>3</sub>: 45.5 – 50.5 % w/w, and SiO<sub>2</sub>: 48.5 – 54 % w/w,</li> </ul> <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm).</p> | -          | Concentration in Deliverables exceeds 1000 ppm |                        | REACH (Candidate for Authorization) |

| No. | Substances   | CAS No.                              | Conditions of Deliverables to be reportable    | Remark | Reference                           |
|-----|--|--------------------------------------|--|--------|-------------------------------------|
| 020 | <p>Zirconia Aluminosilicate, Refractory Ceramic Fibres</p> <p>Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the two following conditions:</p> <p>a) Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> and ZrO<sub>2</sub> are present within the following concentration ranges:</p> <ul style="list-style-type: none"> <li>• Al<sub>2</sub>O<sub>3</sub>: 35 – 36 % w/w, and</li> <li>• SiO<sub>2</sub>: 47.5 – 50 % w/w, and</li> <li>• ZrO<sub>2</sub>: 15 - 17 % w/w,</li> <li>•</li> </ul> <p>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm).</p> | -                                    | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 021 | 2,4-Dinitrotoluene   | 121-14-2                             | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 022 | Diisobutyl phthalate (DIBP)  | 84-69-5                              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 023 | Tris(2-chloroethyl)phosphate (TCEP)  | 115-96-8                             | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 024 | Acrylamide   | 79-06-1                              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 025 | Trichloroethylene  | 79-01-6                              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 026 | Boric acid   | 10043-35-3<br>11113-50-1             | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 027 | Disodium tetraborate, anhydrous  | 1303-96-4<br>1330-43-4<br>12179-04-3 | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 028 | Tetraboron disodium heptaoxide, hydrate  | 12267-73-1                           | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 029 | Cobalt(II) sulphate  | 10124-43-3                           | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |

| No. | Substances  | CAS No.               | Conditions of Deliverables to be reportable    | Remark | Reference                           |
|-----|---|-----------------------|--|--------|-------------------------------------|
| 030 | Cobalt(II) dinitrate  | 10141-05-6            | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 031 | Cobalt(II) carbonate  | 513-79-1              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 032 | Cobalt(II) diacetate  | 71-48-7               | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 033 | 2-Methoxyethanol  | 109-86-4              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 034 | 2-Ethoxyethanol   | 110-80-5              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 035 | 2-ethoxyethyl acetate   | 111-15-9              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 036 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 68515-42-4            | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 037 | Hydrazine   | 7803-57-8<br>302-01-2 | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 038 | 1-methyl-2-pyrrolidone  | 872-50-4              | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 039 | 1,2,3-trichloropropane  | 96-18-4               | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |
| 040 | 1,2-Benzenedicarboxylic acid; di-C6-8-branched alkylesters, C7-rich (DIHP)      | 71888-89-6            | Concentration in Deliverables exceeds 1000 ppm |        | REACH (Candidate for Authorization) |

\*1: Applied only to them when they are used for "Exempted Application" of "lead compounds" defined in Table 1e.

Other than those above, they shall comply with the "Standards of ban" as "Lead compounds" defined in Table 1.

Notation regarding Table 2:

- 1) Contents of management
  - Reportable Substance(s) shall be taken hold on the presence or absence in Deliverables, and if Deliverables meet "Conditions of Deliverables to be reportable" defined in the above table, its total mass, purpose of use, and application area, etc., shall be reported to Fujitsu Group.
- 2) In terms of "Reportable Substances", methodology of how to calculate concentration shall follow below:
  - Denominator on calculating concentration is mass of Deliverables.
  - Numerator is mass of the applicable chemical substance.

### 3.Control Substances

**Table 3: Control Substances**

| No  | Substances  | CAS No.   | Conditions of Deliverables to be controlled  | Remark  |
|-----|---|---|--|---|
| 001 | Beryllium/Beryllium Compounds                                 | 1304-56-9   | Concentration in Deliverables exceeds 1000 ppm   |   |
| 002 | Brominated Flame Retardants (other than PBBs, PBDEs or HBCDD) | —   | Concentration in Deliverables exceeds 1000 ppm   | Applied to plastic parts weighing more than 25g other than in printed circuit assemblies. Refer to detailed substances in Table 3a. |
| 003 | Nickel  | 7440-02-0   | Intentional addition or use  | All, where prolonged skin contact is expected.  |
| 004 | Perchlorates  | —   | Concentration in Deliverables exceeds 0.006ppm   | Refer to detailed substances in Table 3b.   |
| 005 | Phthalates (DINP, DIDP, DNOP)                                 | 28553-12-0 (DINP)<br>26761-40-0 (DIDP)<br>117-84-0 (DNOP) | Concentration in plasticized material such as plastics, rubbers in Deliverables exceeds 1000 ppm |   |
| 006 | Polyvinyl Chloride (PVC)                                      | 9002-86-2   | Concentration in Deliverables exceeds 1000 ppm   |   |
| 007 | Radioactive substances  | —   | Intentional addition or use  | Refer to detailed substances in Table 3c  |

Notation regarding Table 3:

1) Contents of management

In the case that Deliverables meet "Conditions of Deliverables to be controlled" defined in the above table, with respect to "Control Substance", its total mass, purpose of use, and application area, etc., shall be managed and recorded.

2) In terms of "Control Substances", methodology of how to calculate concentration shall follow below:

- In this article, the denominator in calculations of the concentration shall be the mass of the "Material" or the total mass of the Deliverables. You can decide which mass to choose complying with the " Control Substances " in Table 3 in individual substances,
- In the case of complex substances or materials, the following will be the "Material".
  - Chemical compound, polymer alloy, metal alloy
  - In the case that Deliverables are raw material such as paint, adhesive, ink, paste, polymer resin, glass powder, ceramic powder, each finally formed product by means of expected normal usage.  
Examples: - Dried and hardened material for paints or adhesives  
- Molded article for polymer resins  
- Hardened material for glass or ceramic powder
  - Single layer of paint, printing, or plating. Or, in the case of multi layers, each single layer shall be defined as the "Material".
  - In the case of packaging material, corrugated board (base material), adhesive, tape, ink, etc.
- The numerator in calculations of the concentration shall be mass of the applicable chemical substance. In the case of metal alloy, metal element in the metal alloy will be the numerator.

**Table 3a: Brominated flame retardants (other than PBBs, PBDEs or HBCDD)**

| Brominated flame retardants (other than PBBs, PBDEs or HBCDD)   | CAS No.     |
|---|-------------|
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(14)<br>[Aliphatic/alicyclic brominated compounds]   | —           |
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(15)<br>[Aliphatic/alicyclic brominated compounds in combination with antimony compounds]  | —           |
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(16)<br>[Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls]  | —           |
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(17)<br>[Aromatic brominated compounds excluding brominated diphenyl ether and biphenyls in combination with antimony compounds] | —           |
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(22)<br>[Aliphatic/alicyclic chlorinated and brominated compounds]   | —           |
| Brominated flame retardant which comes under notation of ISO1043-4 code number FR(42)<br>[Brominated organic phosphorus compounds]  | —           |
| Poly(2,6-dibromo-phenylene oxide)   | 69882-11-7  |
| Tetra-decabromo-diphenoxy-benzene   | 58965-66-5  |
| 1,2-Bis(2,4,6-tribromo-phenoxy)ethane   | 37853-59-1  |
| 3,5,3',5'-Tetrabromo-bisphenol A (TBBA)   | 79-94-7     |
| TBBA, unspecified   | 30496-13-0  |
| TBBA-epichlorhydrin oligomer  | 40039-93-8  |
| TBBA-TBBA-diglycidyl-ether oligomer   | 70682-74-5  |
| TBBA carbonate oligomer   | 28906-13-0  |
| TBBA carbonate oligomer, phenoxy end capped   | 94334-64-2  |
| TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated   | 71342-77-3  |
| TBBA-bisphenol A-phosgene polymer   | 32844-27-2  |
| Brominated epoxy resin end-capped with tribromophenol   | 139638-58-7 |
| Brominated epoxy resin end-capped with tribromophenol   | 135229-48-0 |
| TBBA-(2,3-dibromo-propyl-ether)   | 21850-44-2  |
| TBBA bis-(2-hydroxy-ethyl-ether)  | 4162-45-2   |
| TBBA-bis-(allyl-ether)  | 25327-89-3  |
| TBBA-dimethyl-ether   | 37853-61-5  |
| Tetrabromo-bisphenol S  | 39635-79-5  |
| TBBS-bis-(2,3-dibromo-propyl-ether)   | 42757-55-1  |
| 2,4-Dibromo-phenol  | 615-58-7    |
| 2,4,6-Tribromo-phenol   | 118-79-6    |
| Pentabromo-phenol   | 608-71-9    |
| 2,4,6-Tribromo-phenyl-allyl-ether   | 3278-89-5   |
| Tribromo-phenyl-allyl-ether, unspecified  | 26762-91-4  |
| Bis(methyl)tetrabromo-phthalate   | 55481-60-2  |
| Bis(2-ethylhexyl)tetrabromo-phthalate   | 26040-51-7  |
| 2-Hydroxy-propyl-2-(2-hydroxy-ethyl)-ethyl-TBP  | 20566-35-2  |
| TBPA, glycol-and propylene-oxide esters   | 75790-69-1  |

| Brominated flame retardants (other than PBBs, PBDEs or HBCDD) | CAS No.     |
|---|-------------|
| N,N'-Ethylene-bis-(tetrabromo-phthalimide)                    | 32588-76-4  |
| Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)        | 52907-07-0  |
| 2,3-Dibromo-2-butene-1,4-diol                                 | 3234-02-4   |
| Dibromo-neopentyl-glycol                                      | 3296-90-0   |
| Dibromo-propanol  | 96-13-9     |
| Tribromo-neopentyl-alcohol                                    | 36483-57-5  |
| Poly tribromo-styrene   | 57137-10-7  |
| Tribromo-styrene  | 61368-34-1  |
| Dibromo-styrene grafted PP                                    | 171091-06-8 |
| Poly-dibromo-styrene  | 31780-26-4  |
| Bromo-/Chloro-paraffins                                       | 68955-41-9  |
| Bromo-/Chloro-alpha-olefin                                    | 82600-56-4  |
| Vinylbromide  | 593-60-2    |
| Tris-(2,3-dibromo-propyl)-isocyanurate                        | 52434-90-9  |
| Tris(2,4-dibromo-phenyl) phosphate                            | 49690-63-3  |
| Tris(tribromo-neopentyl) phosphate                            | 19186-97-1  |
| Chlorinated and brominated phosphate ester                    | 125997-20-8 |
| Pentabromo-toluene  | 87-83-2     |
| Pentabromo-benzyl bromide                                     | 38521-51-6  |
| 1,3-Butadiene homopolymer, brominated                         | 68441-46-3  |
| Pentabromo-benzyl-acrylate, monomer                           | 59447-55-1  |
| Pentabromo-benzyl-acrylate, polymer                           | 59447-57-3  |
| Decabromo-diphenyl-ethane                                     | 84852-53-9  |
| Tribromo-bisphenyl-maleinimide                                | 59789-51-4  |
| Brominated trimethylphenyl-lindane                            | —           |
| Other Brominated Flame Retardants                             | —           |
| Tetrabromo-cyclo-octane                                       | 31454-48-5  |
| 1,2-Dibromo-4-(1,2-dibromo-methyl)-cyclo-hexane               | 3322-93-8   |
| TBPA Na salt  | 25357-79-3  |
| Tetrabromo phthalic-anhydride                                 | 632-79-1    |

**Table 3b: Perchlorates**

| Perchlorate Compounds       | CAS No.   |
|-----------------------------|-----------|
| Lithium perchlorate         | 7791-03-9 |
| Other perchlorate compounds | —         |

**Table 3c: Radioactive Substances**

| Radioactive Substances (Radioactive Isotopes) | CAS No.    |
|---|------------|
| Uranium-238                                   | 7440-61-1  |
| Radon   | 10043-92-2 |
| Americium-241                                 | 14596-10-2 |
| Thorium-232                                   | 7440-29-1  |
| Cesium-137                                    | 10045-97-3 |
| Strontium-90                                  | 10098-97-2 |
| Other radioactive substances                  | —          |

#### 4. Prohibited Substances in manufacturing process

**Table 4: Prohibited Substances in manufacturing process**

| Substances                             | Details  |
|--|--|
| Ozone Depleting Substances in Table 1b | <p>The following cases are exempted:</p> <ul style="list-style-type: none"> <li>– The substances are used for indirect manufacturing process such as analytical determination and product development.</li> <li>– The substances are used for freezing machines and/or air-conditioning machines.</li> </ul> <p>The following substances are exempted from the substances:</p> <ul style="list-style-type: none"> <li>– Substances of footnote (*1) of Table 1b: HCFCs</li> </ul> <p>[Note] If you use HCFCs, please work to reduce the emission and/or the use.</p> |

[Revision record]

|              |               |   |
|--------------|---------------|---|
| May 13, 2010 | (Edition 1)   | Created. (Separated from “Fujitsu Group Green Procurement Direction”)<br>Added 1 substance to Reportable Substances.  |
| Jul 9, 2010  | (Edition 1.1) | Added 2 substances to Banned Substances, and renamed 1 substance.<br>Added 5 substances to Ozone Depleting Substances.<br>Added 8 substances to Reportable Substances.<br>Redefined 2 Radioactive Substances. |
| Oct 25, 2010 | (Edition 1.2) | Restructured Exempted Applications (Table 1d).<br>Deleted 5 Reportable Substances.  |
| Jan 24, 2011 | (Edition 1.3) | Added 5 substances to Banned Substances.<br>Added 6 substances to Reportable Substances.<br>Deleted 2 substances to Control Substances.<br>Created “Table 4: Prohibited Substances in manufacturing process”  |
| Jul 6, 2011  | (Edition 1.4) | Added 5 substances to Reportable Substances.<br>Deleted 3 substances to Reportable Substances.  |
| Oct 11, 2011 | (Edition 1.5) | Revised in part (Clause 4)  |



We care for the Earth.

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