

Our View on Management of Chemical Substances in Tokyo Electron Group Products

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1. PURPOSE

In accordance with the basic environmental policies of Tokyo Electron Group (hereinafter referred to as TEL), the company established the Green Procurement Guidelines in January 2001 in order to manufacture environment-friendly products. TEL then launched the Compliance-with-RoHS Activity in 2006 to ensure the company voluntarily conforms to the EU RoHS directive. The China RoHS directive was enforced in March 2007 and EU REACH was enforced in June of the same year, kicking off a new era of chemical substance control. Similar laws and regulations have also been enacted and are enforced in other countries. In Japan, too, the movement toward stricter management of chemical substances has started through enactment of the Revised Act on Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. In order to ensure compliance with the above-stated laws and regulations on chemical substances, TEL brings our view on management of chemical substances into operation. This view applies, as part of green procurement, to prohibition and management of chemical substances contained in components used in TEL products, and auxiliary materials incidental to production such as solvents.

2. SCOPE

This procedure applies to management of chemical substances (simply called substances) contained in procured components used in TEL products, jigs shipped together with TEL products, and shaped products (also called articles) such as packaging materials.

3. DEFINITIONS

3.1 TEL Managed Substances Group

This term refers to all substances that fall under any of the following categories: TEL prohibited substances, TEL restricted substances, TEL mandatory managed substances, and TEL general managed substances. Applicable substances shall be designated by the TEL Contained Substance Steering Meeting. If the same substance is included in two or more lists, priority regarding its categorization shall be given in the order of TEL prohibited substances, TEL restricted substances, TEL mandatory managed substances, and TEL general managed substances.

3.2 TEL Prohibited Substances

3.2.1 Substances prohibited by international regulations

Every group listed in Annexes A, B, C and E in the Montreal Protocol on Substances that Deplete the Ozone Layer

3.2.2 Substances that are legally prohibited in countries TEL operates in

3.2.3 Substances that TEL voluntarily prohibits

3.3 TEL Prohibited Substances level

This term refers to the level of substances classified as TEL Prohibited Substances as defined in section 3.2.

3.3.1 Level 1: Currently prohibited for use

Substances and their applications are currently prohibited for use in parts and materials.

3.3.2 Level 2: Prohibited for future use

Substances that will be classified as Level 1 upon the arrival of a predetermined date, or substances that have been determined to be prohibited by convention.

3.3.3 Level 3: Identifying the presence of substance

The presence of substances and their applications will be assessed. Since these substances may be classified as Level 1 in the future, it is recommended to consider alternative materials.

3.4 TEL Restricted Substances

These are six substances designated in the RoHS directive 2011/65/EU. However, TEL does not apply the exemptions admitted depending on the intended use stated in the RoHS directive. The six substances and their threshold values are shown below.

1. Cadmium and cadmium compounds [100 ppm]
2. Lead and lead compounds [1000 ppm]
3. Mercury and mercury compounds [1000 ppm]
4. Hexavalent chromium compounds [1000 ppm]
5. Polybromobiphenyl (PBB) [1000 ppm]
6. Polybrominated diphenyl ethers (PBDE) including Decabromodiphenyl ether (DecaBDE) [1000 ppm]
7. Bis(2-ethylhexyl) phthalate (DEHP) [1000 ppm]
8. Butyl benzyl phthalate (BBP) [1000 ppm]
9. Dibutyl phthalate (DBP) (0,1 %) [1000 ppm]
10. Diisobutyl phthalate (DIBP) (0,1 %) [1000 ppm]

3.5 TEL Mandatory Managed Substances

This term refers to substances that TEL specified, from the chemSHERPA Managed Substance List (hereinafter referred to as the chemSHERPA Management List), and from legally restricted substances in other countries, as those for which management is mandatory.

3.6 TEL General Managed Substances

This term refers to substances TEL specified from the chemSHERPA Management List (see 3.12.) as those for which information must be communicated.

3.7 TEL Substances List

3.7.1 About the TEL Substances List

The TEL Substances List is a list of substances included in the TEL Managed Substances Group. This list was developed based on the substance names and other information. In the list, the chemSHERPA Management List is in principle used as the main reference source. For details, see Attachment "TEL Substances List".

Supplement: On use of the chemSHERPA Management List

Since the chemSHERPA Management List is incorporated into the chemSHERPA data entry support tool for articles / chemicals provided by CMP Consortium, almost all the substances in the TEL Managed Chemical Substances

Group can be checked using this system. However, coverage of the list in the support system is limited to the practical domain. Therefore, before presenting a final reply to TEL, the person in charge of reporting the inclusion must refer to the TEL Substances List for confirmation purposes.

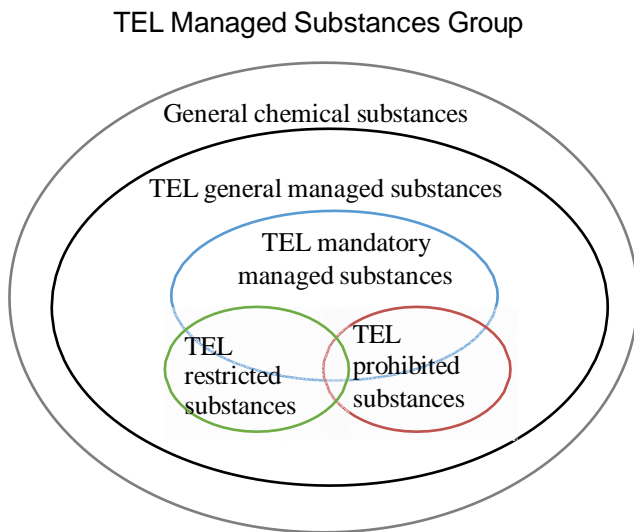
3.7.2 Examples of the substances to be managed for which provision of information is required:

- ① Carcinogenic, reprotoxic and mutagenic substances listed in EU CLP Regulation Annex VI Table 3.2. <Category 1 and Category 2>

- ② Restricted substances listed in EU REACH Annex XVII (excluding ① above).
- ③ Substances listed in EU REACH Annex XIV that require approval, and their candidates.
 - ④ Other substances, excluding ①, ② and ③ above, that are regulated by domestic or international regulations.

3.8 Chart Explaining Relationships between Types of Substances in the TEL Managed Chemical Substances Group

The chart shows the relationships between the substances described in 3.1 to 3.5 above.



3.9 EU RoHS

This is the abbreviation for the EU directive "Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment". Visit the following URL for details.

<https://j-net21.smrj.go.jp/development/rohs/basic/basic.html>

3.10 EU REACH

This is the abbreviation for Registration, Evaluation, Authorization and Restriction of Chemicals. This is a new regulation concerning chemical substances that was enacted on June 1, 2008. Visit the following URL for details.

<https://j-net21.smrj.go.jp/solution/development/reach/outline.html>

3.11 Format Specified by TEL

This term refers to the Contained Chemical Substances Inspection Format used by TEL. TEL uses the chemSHERPA-AI format, the format recommended by CMP Consortium to use to communicate information about substances contained in shaped products.

3.12 CMP Consortium

The CMP Consortium operates the Chemical & Circular Management Platform (CMP) as well as chemSHERPA, with the objective of contributing to the realization of a sustainable society by promoting the proper and efficient management and communicating of information on chemical substances contained in products and information related to resource circulation. Visit the following website for details.

<https://cmp-consortium.com/english/consortium/about>

3.13 chemSHERPA Managed Substance List <https://cmp-consortium.com/english/chemsherpa/tool>

3.14 Shaped Product (Article)

This term refers to an object that has a specific shape, surface or design that exerts a greater influence on its function than its chemical composition does.

4. AWARENESS OF HAZARDOUS SUBSTANCES AND THEIR MANAGEMENT

4.1 TEL Prohibited Substances

Level 1: Currently prohibited for use

TEL prohibits inclusion of these substances in products. If a regulatory standard has been defined, the concentration - including impurities - must be below the standard.

Level 2: Prohibited for future use

Substances that will be classified as Level 1 upon the arrival of a predetermined date, or substances that have been determined to be prohibited by convention.

If a regulatory standard has been defined, the concentration - including impurities - must be below the standard.

Level 3: Identifying the presence of substance

TEL currently does not prohibit the inclusion of substances in products; however, the presence of these substances and their applications will be assessed, and since they may be classified as Level 1 in the future, it is recommended to consider alternative materials.

4.2 TEL Restricted Substances

TEL prohibits inclusion of these substances in products. If a regulatory standard has been defined for the target substances, the inclusion level must be below the threshold value. However, in spite of the foregoing, delivery of products containing quantities of substances beyond the threshold levels shall be permitted if such inclusion is reported using the format specified by TEL.

4.3 TEL Mandatory Managed Substances

This term refers to substances for which the relevant suppliers must be aware of inclusion levels. With the exception of prohibited and restricted substances, TEL does not immediately restrict inclusion of substances contained in this group in products. Rather, TEL mandates that suppliers submit to TEL data on use and inclusion levels of relevant substances that is obtained via investigation based on reasonably maximum possible efforts. In cases where TEL is subject to legal regulations, TEL manages the applicable substances based on facts known to it.

4.4 TEL General Managed Substances

This term refers to substances included in the chemSHERPA Managed Substance List. Such substances include TEL prohibited substances, TEL restricted substances, and TEL mandatory managed substances. TEL does not immediately restrict inclusion of substances contained in this group in products. Rather, TEL requires suppliers to submit data on the inclusion levels of such substances to TEL when "the inclusion is known". TEL sets the substances contained in this group as the managing target when "the inclusion is known". "The inclusion is known" means that "TEL has received information from an upstream supplier (e.g., a raw material manufacturer) in the supply chain about the fact that a target substance of management is included", or that "TEL has confirmed in some way that such substances are included". TEL may restrict or prohibit use of specific substances based on facts known to it.

5. EXEMPTION OF INVESTIGATION BASED ON THE FORMAT SPECIFIED BY TEL

On the condition that the following requirements are satisfied, suppliers are exempted from submitting investigation results using the format specified by TEL:

- 5.1 Suppliers must define the responsibility and procedures in document format to satisfy the requirements described in the "Guidelines for the management of chemical substances in products" published by CMP Consortium in relation to items and details of management actions concerning information on chemical substances contained in products.
- 5.2 Suppliers must evaluate their conformity to the "Guidelines for the management of chemical substances in products" published by CMP Consortium. Based on the judgment, suppliers issue and submit a self-declaration of conformity to TEL, attached with the Guidelines for the Management of Chemical Substance in Products Annex - List of Action Items and Check Sheet (hereinafter referred to as the Guideline Check Sheet).

- 5.3 TEL checks the Guideline Check Sheet to confirm the validity of the self-declaration of conformity, and verifies that the management system has been constructed as demanded by TEL.
- 5.4 If the delivered items do not contain any chemical substances that TEL must manage, that is, TEL prohibited substances, TEL restricted substances, and TEL mandatory managed substances, the supplier is exempted from providing the relevant information using the format specified by TEL.
- 5.5 If TEL has specified an additional chemical substance(s) about which information must be reported in order to observe laws, regulations, or other rules applicable in Japan or other related countries, the supplier must immediately check that the delivered items do not contain the specified chemical substance(s). If the supplier has discovered that the substance(s) is contained, the supplier must report the relevant fact using the format specified by TEL and cooperate to ensure conformity when requested by TEL.

6. **REVISION AND OTHER POINTS**

TEL revises the TEL Substances List and other information as needed.