

# Lenovo Product Environmental Requirements

**Dear Lenovo Supplier,**

**Lenovo requires our suppliers must comply with the most recent version of Lenovo's Restricted Materials Specifications (41A7731, 41A7733 and packaging requirements), any applicable laws and regulations prohibiting or restricting specific substances.**

## Lenovo Environmental Requirements for Suppliers

### 1. Compliant with Lenovo 41A7731 & 41A7733 & Packaging requirements

Lenovo's specifications are integrated into the product development process and into supplier contracts as part of our standard contract terms and conditions. All materials, parts and products incorporated into Lenovo products or bundled with Lenovo products as part of a delivered solution are required to meet the requirements of applicable laws and regulations, Lenovo's Specification 41A7731 Baseline Environmental Requirements for Materials, Parts and Products and Lenovo RoHS Specification 41A7733 as specified in our contracts, hardware drawings and specifications. Suppliers must complete and return the Lenovo Supplier Material Declaration (by each P/N) and the RoHS Checklist (1 checklist per supplier). At Lenovo's request, the supplier must be able to provide technical documentation in the form of internal design controls, supplier data or analytical test reports. Non-Lenovo brand products must comply with applicable legal requirements. All the necessary documents are available in Lenovo web site. [The latest version must be used.](#)

Ensure components and products supplied to Lenovo meet contract requirements and environmental requirements 41A7731 and RoHS spec 41A7733

41A7731 is Lenovo Baseline Environmental Requirements, the hyperlink as below:

[http://www.lenovo.com/global\\_procurement/us/en/Guidelines/41A7731.pdf](http://www.lenovo.com/global_procurement/us/en/Guidelines/41A7731.pdf)

41A7733 is the Lenovo RoHS Engineering Specification, the hyperlink as below:

[http://www.lenovo.com/social\\_responsibility/us/en/41A7733\\_RoHS-REACH\\_Eng\\_Spec.pdf](http://www.lenovo.com/social_responsibility/us/en/41A7733_RoHS-REACH_Eng_Spec.pdf)

- Requires review of product components and manufacturing processes
- Requires consultation with sub-tier suppliers

**Lenovo packaging requirements can be found at [www.lenovo.com](http://www.lenovo.com) ->About Lenovo ->Global Procurement -> Product content restrictions and packaging requirements**

### 2. Supplier Material Declaration (1752A xml or GDX)

Lenovo requires suppliers to complete and sign a Supplier Material Declaration (1752A xml or GDX), to declare materials, parts and products compliant with Lenovo's Restricted Materials specifications. This Declaration is required to release a part to production.

To sign the Supplier Declaration, the supplier must ensure that the product meets the Lenovo 41A7731 and 41A7733 specifications and record any applicable exemptions.

At Lenovo's request, the supplier must also be able to provide technical documentation in the form of internal design controls, supplier declarations, or analytical test data.

Lenovo's goal is to collect supplier declarations on each part in a product's bill of materials, and it should be collected **no later than SIT exit.**

The Supplier Material Declaration covers full material disclosures:

- All substances must compliant with Lenovo requirements which indicated in Threshold Level column.

# Lenovo Product Environmental Requirements

**The Supplier Material Declaration is collected at the "purchase" level:**

- if Lenovo purchases a part - the declaration is for the part
- if Lenovo purchases a Building Block / Assembly - the declaration is for the Building Block
- if Lenovo purchases a complete, finished system product - the declaration is for the complete, finished system product

**Supplier signs Lenovo Supplier Material Declaration and return to the Lenovo Requester / Contact. (Follow the 1752A xml format for electronic digital signature or paper copy)**

[http://www.lenovo.com/global\\_procurement/us/en/Guidelines/Restrictions\\_and\\_Packaging.html](http://www.lenovo.com/global_procurement/us/en/Guidelines/Restrictions_and_Packaging.html)

Supplier Material Declaration can be found at [www.lenovo.com](http://www.lenovo.com) -> About Lenovo -> Global Procurement -> Product Content Restrictions and Packaging Requirements -> Lenovo Guide to Full Material Disclosures (Version 1)

**Supplier registers and applies the GDX account first, then submit the data on GDX.**

**GDX website:** <http://qpointhtech.com/>

New GDX tutorial video from the supplier perspective:

[http://www.youtube.com/watch?v=C6\\_B4fOcaYg](http://www.youtube.com/watch?v=C6_B4fOcaYg)

Access credentials:

You can download the video mp4 files from the Q Point website.

Use the following login information to download the files:

<ftp.qpointtech.com>

Login: gdx\_guest

Password: qpointhgdx

## 3. REACH Regulation

### Substances of Very High Concern (SVHC) in Articles - Reporting Requirements

Lenovo requires suppliers to identify if any Substances of Very High Concern (SVHC) present in an Article (Deliverable) at or above the 0.1% weight by weight (w/w) concentration and report the name and CAS number of the SVHC candidate and the quantity on the Supplier Material Declaration (1752A xml form) for the Deliverable. See Table 2 in this section for a list of SVHC which must be reported on the Supplier Material Declaration. The current candidate list of SVHC as published by the EU is located at: [http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp). This list is subject to change by the European Chemicals Agency (ECHA).

Two of the SVHC are not included on the table below. They are:

- 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)
- Alkanes, C10-C13, chloro (Short Chained chlorinated Paraffins)

It is unlikely that musk xylene is present in electronic hardware and the short chained chlorinated paraffins are banned in Lenovo Deliverables, see Specification 41A7731, Table 1. If these substances are present in a Deliverable please report them on the Supplier Material Declaration (1752A xml form). There is a section for "Other" which can be used for this purpose.

If an SVHC is present in a Deliverable at or above the reporting concentrations, the Supplier must provide a customer communication to Lenovo meeting the requirements of Article 33 of the EU REACH Regulation.

# Lenovo Product Environmental Requirements

EC# - found in EINECS (European INventory of Existing Commercial chemical Substances).

EU REACH Regulation Number 1907/2006 can be found at

[http://echa.europa.eu/reach/legislation\\_en.asp](http://echa.europa.eu/reach/legislation_en.asp)

The EU provides guidance documents for REACH, specifically guidance documents for Substances in Articles as well as the candidate list for SVHC at [http://guidance.echa.europa.eu/guidance\\_en.htm](http://guidance.echa.europa.eu/guidance_en.htm)

Additional information about REACH can be found at the European Chemicals Agency web site at <http://echa.europa.eu/>

## Definitions

**REACH:** an acronym for the European Commission Regulation Number 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of CHemicals.

**RoHS:** European Union Directive [2002/95/EC](#) restriction of the use of certain hazardous substances in new electrical and electronic equipment that became effective July 1, 2006.

### Substance(s) of Very High Concern (SVHC)

1. Substances meeting the criteria for classification in accordance with EU Directive 67/548/EEC:

- Carcinogenic category 1 or 2
- Mutagenic category 1 or 2
- Toxic for reproduction category 1 or 2;

2. Substances which are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with the criteria set out in Annex XIII of the EU REACH Regulation;

3. Substances- such as those having endocrine disrupting properties or those having PBT properties or vPvB properties which do not fulfill the criteria of 2 above - for which there is scientific evidence of probable serious effects to human health or the environment which give rise to an equivalent level of concern to those of other substances listed in 1 or 2 and which are identified on a case-by-case basis in accordance with the procedure set out in Article 59 of REACH. This definition is from the EU REACH Regulation, Article 57.

**Article** - an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition. This definition is from EU Regulation 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

**Deliverable(s):** any tangible item(s) delivered by or for a Supplier to Lenovo in accordance with a purchase contract or other agreement with Lenovo. Deliverables include, but are not limited to, components, materials, parts, and products.

**Electronic Product Environmental Assessment Tool (EPEAT):** based upon IEEE Standard 1680 for the Assessment of Personal Computer Products (1680). Refer to: <http://www.epeat.net/>

**Intentionally added:** deliberate use in a product, material, part, assembly

**Homogenous material:** of uniform composition throughout (e.g., plastics, ceramics, glass, metals, alloys, resins, coatings, solder, flux).

**Mechanically disjointed:** Separated by mechanical actions such as unscrewing, cutting, crushing, grinding, and abrasive processes

# Lenovo Product Environmental Requirements

**ppm** = parts per million = mg / kg. Mass of substance as a percentage of the homogenous material, not the weight of substance in the entire part or product unless otherwise noted. 1000 ppm = 0.1%; 100 ppm = 0.01% by weight

**Preparation:** a mixture or solution composed of two or more substances, for example paint, lubricant or ink. This definition is found in the EU Council Directive relating to restrictions on the marketing and use of certain dangerous substances and preparations and EU Regulation 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

**Substance:** a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition. This definition is found in the EU Council Directive relating to restrictions on the marketing and use of certain dangerous substances and preparations and EU Regulation 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Substance includes such examples as ethanol and metals. Note: metals are included here not in the form of a part or product such as a heat sink or sheet metal cover but as a metal such as aluminum or aluminum alloy. Substance goes beyond a pure chemical compound defined by a single molecular structure. The definition of the substance includes different constituents such as impurities. Also note the word “substance” is used throughout this specification, only the “Substance” with a capital letter refers to this specific definition.

**Threshold level:** Concentration limit above which the presence of a substance in a material or product must be declared

## 4. Additional Requirements for EPEAT Products (Only)

All desktop, laptop and computer monitor products provided under this contract are required to have achieved **Gold** registration under the Electronic Products Environmental Assessment Tool (EPEAT). EPEAT is a procurement tool designed to help large volume purchasers evaluate, compare and select desktop computers, laptops and monitors based upon their environmental attributes as specified in the IEEE Standard for the Assessment of Personal Computer Products (1680). The registration criteria and list of registered products are provided at [www.epeat.net](http://www.epeat.net).

## 5. Additional Requirements for Low Halogen Products (Only)

Lenovo "Low Halogen" products, materials, parts and assemblies must meet all of the following requirements:

Substance	Threshold Level	Reference
All Printed Circuit Board (PCB) and substrate laminates materials must meet Bromine (Br) and Chlorine (Cl) requirements for low halogen as defined in IEC 61249-2-21. Printed Circuit Board (PCB) and substrate laminates do not include the solder mask. Solder mask is considered a separate homogenous plastic material.  <b>Bromine (Br)</b>	Maximum concentration of 900 ppm(0.09%) by weight	IEC 61249-2-21 JEDEC - JEP709

# Lenovo Product Environmental Requirements

Chlorine (Cl)	Maximum concentration of 900 ppm(0.09%) by weight  Note: Combined total concentration of bromine and chlorine must not exceed 0.15 % (1500ppm) by weight	
All other materials and components, with the exception of Printed Circuit Board (PCB) and substrate laminates, must meet the following requirements:  Bromine (Br) in Brominated Flame Retardants (BFRs)  Chlorine (Cl) in Chlorinated Flame Retardants (CFRs) or Polyvinyl Chloride (PVC)	Less than 900 ppm (0.09%) by weight in homogenous materials  Less than 900 ppm (0.09%) by weight in homogenous materials	IEC 61249-2-21 JEDEC - JEP709 JIG Level B

## Note:

1. Halogens fluorine (F), iodine (I), and astatine (At) are not restricted
2. Any materials and components other than PCB laminates and prepreg materials fall under item 2 "All other." in Table 2 above.
3. A listing of BFR compounds may be found in the Joint Industry Guide (JIG) 101-A Annex ([www.eia.org](http://www.eia.org))
4. Low Halogen materials, parts and products require a unique part number to differentiate them from "non-low-halogen" versions
5. Suppliers must submit a Part Change Notice (PCN) identifying alternate materials
6. Supplier must complete and provide a Lenovo Supplier Material Declaration showing Br and Cl < 900 ppm by weight in any Printed Circuit Board laminates; Br in BFRs < 1000 ppm, Cl in CFRs < 1000 ppm, Cl in PVC < 1000 ppm in homogenous material for other components and materials
7. Supplier shall provide Lenovo a **Test Report** from a qualified, independent laboratory upon Request
8. Reactive TBBPA for printed circuit boards is exempt, until acceptable alternative materials are identified

## Exemptions:

Reactive TBBPA for printed circuit boards until acceptable alternative materials are identified  
Server and Third-party option products  
Parts for standard, "non-low-halogen" products are exempt

**We highly appreciate your support in implementing these requirements.**

**Complement: The terms will be deemed as well communicated and explained to the suppliers, and become effective and binding if no dissension is raised by suppliers**

Sincerely

Thank you