

May 3, 2004

Subject: RoHS Compliance

Dear IBM Supplier:

In February 2003, the European Union issued Directive 2002/95/EC on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHs). The purpose of this letter is to communicate IBM's requirements for suppliers, our expectations for achieving compliance with the RoHS directive and the timeline.

- This RoHs directive requires producers of electrical and electronic equipment to eliminate the use of six environmentally-sensitive substances: lead, mercury, cadmium, hexavalent chromium; and the use of PBB and PBDE flame retardants, in electrical and electronic products sold in the European Union beginning July 1, 2006.
- Our product development is proceeding according to plan and we have made considerable headway in transitioning towards RoHS-compliant products and processes. However, our progress is very dependent upon our supplier's readiness and capability to make RoHS-compliant parts and products available.
- Our target is to have RoHS-compliant products in 1Q'2005. This means that during 2004 we will continue to enlarge our product scope in the piloting of RoHS-compliant processes and the design of RoHS compatible products. In order to reach this target, our suppliers will need to be capable of delivering RoHS-compliant parts and products well ahead of July 1, 2006.
- IBM is committed to doing business with environmentally responsible suppliers. IBM requires its suppliers to comply with all applicable laws, regulations, orders and policies in providing products and services to IBM. Suppliers must comply with IBM's environmental specification for hardware materials, parts and products which is found in the environment links at www-1.ibm.com/procurement/proweb.nsf/

We appreciate your support regarding this initiative. We are acutely aware of the strategic partnership that must exist between our suppliers and IBM if we are to achieve RoHS-compliance in a timely manner. We look forward to continued close collaboration in achieving RoHS compliance for IBM new products announced in 2005 and beyond.

We are confident that with your support, IBM will be able to move our supply chain forward to meet these challenges.

Questions regarding IBM's RoHS implementation strategy should be directed to the Council Chairperson.

Sincerely,

Original Signed By:

John Paterson
Vice President, Chief Procurement Officer
IBM Global Procurement, IBM Integrated Supply Chain

IBM's General Requirements for RoHS Compliance

IBM expects all of its hardware and hardware service suppliers to be actively progressing toward RoHS-compliance. Progress tracking will be an integral part of supplier business reviews. Our target is to have RoHS-compliant products in 2005

IBM expects suppliers to align their RoHS-compliance Roadmaps with customer requirements, including the ability to support both non-RoHS-compliant and RoHS-compliant product builds during the transition period.

IBM expects its suppliers to inform IBM of any anticipated technology or cost issues that may affect the supplier's ability to support IBM products during or after the RoHS-conversion. There should be no cost premium for RoHS-compliant parts, materials, products or services.

IBM expects RoHS-compliant materials, parts and products supplied to IBM to be of equal or greater quality than non-RoHS materials, parts and products.

IBM expects all of its suppliers to comply with IBM Environmental Requirements for Materials, Parts and Products Specification 46G3772. Suppliers are responsible to notify IBM if any banned or RoHS-reportable substances are used in materials, parts or products provided to IBM. Suppliers are expected to complete and return the Environmentally Conscious Products Questionnaire which is found in the environment links at www-1.ibm.com/procurement/proweb.nsf/

Suppliers are expected to provide a unique manufacturer Part Number for any part that is changed to become lead (Pb)-free or RoHS-compliant and are expected to have an effective management system to prevent inadvertent mixing of RoHS-compliant and non-RoHS-compliant parts. This should include an effective marking/labeling strategy for packaging, parts, and documentation.

Suppliers are expected to inform IBM of any anticipated technological or cost issues that may affect the supplier's ability to support IBM materials, parts or products during or after the RoHS-conversion.

Suppliers are expected to provide periodic, detailed conversion plans with readiness updates.

Conversion plans should include the following:

RoHS-compliance Roadmap including:

Sample availability – Dates and Lead-times.

Qualification schedule

High Volume Production availability & lead-times

End-of-life plans for non-RoHS-compliant materials, parts and products

Suppliers are required to confirm their sub-suppliers' ability to comply with applicable government RoHS regulations and IBM requirements.

Suppliers are requested to provide the following information to IBM **by May 31, 2004** by sending an email to the IBM Council Chairperson.

- Supplier company RoHS-contact name, email, telephone number and address
- Supplier RoHS plan and Roadmap to become RoHS-compliant
- Date when RoHS-compliant sample parts will be available
- Date when RoHS-compliant production parts will be available for order
- Suppliers are expected to complete and return the Environmentally Conscious Products Questionnaire to IBM which is found at www-1.ibm.com/procurement/proweb.nsf/

Additional Requirements for IBM Personal Systems Group Products and Options

- Suppliers must comply with IBM Specification 97P3864, in addition to specification 46G3772
- Suppliers must provide lead (Pb)-free reflow compatible components

Additional Requirements for IBM Server, Storage and Storage Array Products

- Suppliers must comply with IBM Specification 53P6233, in addition to specification 46G3772
- Server, storage and storage array products will use the RoHS exemption for lead in solders (the exemption expires in the year 2010)

Reference

Please access the IBM Global Procurement web site at www-1.ibm.com/procurement/proweb.nsf/

Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHs)

Current European Union (EU) member states include Austria, Belgium, Denmark, United Kingdom, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, The Netherlands, Portugal, Spain and Sweden. Cyprus, The Czech republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia join the EU in May 2004.