RoHS and WEEE European Directives

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In order to address rapidly increasing hazardous waste in land fills, the European Parliament and the Council of the European Union issued Directive 2002/95/EC on January 27, 2003 that calls for restriction of the use of certain hazardous substances in electrical and electronic equipment. Directive 2002/95/EC is also commonly referred to as RoHS (Restriction of Hazardous Substances) Directive [1]. The purpose of RoHS Directive is to approximate the laws of European Union member states on restriction of the use of hazardous substances in electrical and electronic equipment and to contribute to environmentally sound recovery and disposal of waste electrical and electronic equipment. In addition to RoHS Directive, Council of the European Union also issued another Directive 2002/96/EC that is generally referred to as WEEE (Waste in Electrical and Electronic Equipment) Directive [2]. The aim of WEEE Directive is to prevent waste, to promote reuse, recycle and other forms of recovery so as to reduce disposal. Both RoHS and WEEE directives are periodically amended for their scope and the list of hazardous chemicals based on new data from risk assessment studies. RoHS Directive mainly deals with the list of hazardous substances and time line for enforcement, WEEE Directive provides guidelines for various products that are included in electrical and electronic equipment waste. Both RoHS and WEEE complement each other in terms of the intent and scope of reducing hazardous waste in electrical and electronic equipment. According to RoHS Directive, the current list of hazardous substances include Lead, Mercury, Hexavalent Chromium, Cadmium, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)[1].

On August 18, 2005, the European Union amended RoHS Directive to include the maximum concentrations of various hazardous substances as follows: the maximum concentration by weight in homogeneous materials for Lead, Mercury, Hexavalent Chromium, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE) to be 0.1%; the maximum concentration of Cadmium by weight in homogeneous materials to be 0.01% [3]. Decabromo diphenyl ether is a commonly used flame retardant in plastics industry and it falls under the general category of Polybrominated diphenyl ethers. However, on October 13, 2005, the European Union exempted Decabromo diphenyl ethers (DecaBDE) from RoHS list of hazardous substances based on risk assessment study by Council Regulation (EEC No 793/93) which concluded that at present there is no need to reduce risks for consumers beyond those which are already being applied [4]. Until there is new evidence leading to a different conclusion to that of risk assessment study, DecaBDE will be exempted from RoHS Directive. RoHS list of hazardous substances will be subjected to review every four years or four years after an item is added.

The time line for enforcement of RoHS and WEEE Directives starts from July 1, 2006. All manufacturers of electrical and electronic products in European Union will be required to comply with RoHS and WEEE directives. Current countries in European Union include Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland,

France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and United Kingdom. European (EU) Dealers and Distributors that supply components for electronic and electrical equipment are exempted from RoHS and WEEE Directives. However, the EU manufactures of electrical and electronic equipment will require compliance form non EU Dealers and Distributors. Non EU manufactures of electrical and electronic products are not required to comply with RoHS and WEEE Directives at the present time.

In September 2004, the state of California passed SB50 which is an amendment to SB20 (The Electronic Water Recycling Act of 2003) that states any electronic device prohibited to be sold in EU because of noncompliance to RoHS and WEEE Directives, shall be prohibited to be sold in California starting January 1, 2007 [5]. The state of Maine legislative declaration LD 743 1319-EE states that by 2006 producers selling electronic equipment must phase out the use of lead, mercury, cadmium, hexavalent chromium, brominated flame retardants and polyvinyl chloride and may offer for sale only products that contain less harmful alternatives [6]. In China, the Ministry of Information Industry is considering a modified version of RoHS (China RoHS) that limits the use of six substances listed in RoHS starting July 1, 2006 [7]. In summary, although European Union took leadership in developing RoHS and WEEE directives, more and more countries are expected to follow suit with some versions of RoHS and WEEE Directives in the near future.

References:

1) Official Journal of European Union, L 37, pages 19 – 23, 13.2.2003

2) Official Journal of European Union, L 37, pages 24 – 38, 13.2.2003

3) Official Journal of European Union, L 214, page 65, 19.8.2005

4) Official Journal of European Union, L 27, pages 48 – 50, 15.10.2005

5) California Bill No. SB50, Chapter 863, September 29, 2004

6) Maine LD 743, page 4, 1319-DD

7) MII (Ministry of Information Industry), Peoples republic of China notification to World Trade Organization (WTO) on September 28, 2005