



October 14, 2005

PRODUCT BASED ENVIRONMENTAL REGULATIONS ALERT

WEEE Directive now in effect.

RoHS Directive becomes effective July 1, 2006

As electronics have become more common throughout the world, concerns have developed as to what the effect is of filling landfills with electronics products. Therefore, product based environmental regulations are becoming more common worldwide. Several new directives are coming into force in the European Union and various requirements are coming to the US and other countries. If you produce electrical or electronic products, these directives most likely apply to you. Manufacturer's now must consider the life cycle management of products from initial design through recovery and recycling. Many companies are finding that in order to manage these new requirements, additional business resources are necessary.

Below is a list of the new regulations that you need to be aware of and specific information on the two Directives with the greatest immediate impact, the RoHS and WEEE directives.

EUROPE

RoHS DIRECTIVE (2002/95/EC): Restriction of Hazardous Substances
Limits use of Lead, Cadmium, Mercury, Hexavalent Chromium, PBB and PBDE in electronic products effective July 1, 2006.

WEEE DIRECTIVE (2002/96/EC): Waste Electrical & Electronic Equipment
Requires producers to manage post-consumer recycling and disposal of electronic products effective August 13, 2005.

EuP DIRECTIVE (2005/32/EC): Energy Using Products
Requires producers to design products to meet specific eco-design criteria over entire life cycle effective 2007 for certain specific products.

REACH DIRECTIVE: Registration, Evaluation and Authorization of Chemicals
Requires registration and risk assessment of chemical substances effective 2007.



USA

Some states are restricting use of RoHS substances. For example, California has the Safe Drinking water and toxic enforcement act of 1986 (Prop 65) which prohibits contamination of drinking water with certain chemicals. Massachusetts has the Toxics Use Reduction Act which is aimed at reducing unnecessary use of toxics chemicals.

Some states are enacting or considering WEEE laws. For example, California has the Electronic Waste Recycling Act of 2003 which provides for collecting and recycling of computers and TVs.

California has new energy efficiency standards for certain electronic products.

CHINA

Has management methods similar to RoHS effective 1/18/06.

Developing regulations parallel to WEEE.

Has new energy efficiency standards for certain products.

RoHS Directive:

The RoHS Directive restricts the use of lead, mercury, cadmium, hexavealent chromium and the flame retardants polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE). The directive covers all equipment dependent on electrical currents or electromagnetic fields in 8 categories:

- IT / Telecommunications
- Electrical and Electronic Tools
- Consumer Equipment
- Large Household Appliances
- Small Household Appliances
- Lighting Equipment
- Toys, Leisure and Sport
- Automatic Dispenser

A key issue is how manufacturers are going to change their production process in order to eliminate these restricted substances. Another issue is how to show compliance with the requirements. The directive specifies the amount of these substances that are permissible, however, there are no compliance criteria provided. Good news is that the requirements must be the same for each country in the European Union. The directive allows for self certification. The problem is that there are currently no harmonized standards or test methods. Various working groups are drafting standards but none have been adopted yet and it does not appear that any will be published prior to the July 1, 2006 deadline. Therefore, manufacturers are left to decide themselves how to show compliance. One



option is to perform materials testing on all homogeneous materials (material that cannot be mechanically disjointed into different materials) used in your product. The most common test methods are X-Ray Fluorescent screening using EDXF or XRF equipment. For more detailed analysis, Gas Chromatography and Mass Spectroscopy equipment can be used. Another option is to obtain declaration of conformity from each one your suppliers for all materials used in their product. However, you then are relying on the declaration in order for you to claim compliance for your product – as you are the one ultimately responsible. Therefore, manufacturers must decide on whether on not to accept the declarations or to do some materials testing, or to perform full materials testing. In the future it may be that a management system is in place to track parts, such as a database of certified materials, so that not everyone is testing the same materials. Once you have determined how your company is going to prove compliance, you must then determine how to report this information as no common format currently exists.

The RoHS directive will be enforced by market surveillance. The UK currently has an enforcement plan in place and can be found at www.rohs.gov.uk. Other countries are still working on their enforcement methods. There are no marking requirements for products per this directive.

WEEE Directive:

The WEEE Directive requires producers to manage post-consumer recycling and disposal of electronic products. The directive covers all equipment dependent on electrical currents or electromagnetic fields in 10 categories:

- IT / Telecommunications
- Medical Devices
- Monitoring and Control Instruments
- Electrical and Electronic Tools
- Consumer Equipment
- Large Household Appliances
- Small Household Appliances
- Lighting Equipment
- Toys, Leisure and Sport
- Automatic Dispenser

The key issue for the WEEE directive is the principle that the producers are financially responsible for the collection and treatment of waste of electrical and electronic equipment based on the amount of products that they place on the market. Each country will implement a recycling scheme that will involve recyclers, administrators, and a fee structure which means that each member state could have different requirements. There will be a registration agency in each member state. Companies must keep records on



how much they place on market and report this to the agencies. The European representative of the company must be the one who registers with the agencies (except in Germany, US exporters can register directly).

The WEEE directive does require that the equipment be marked with the wheelie bin mark per EN50419, along with the date of shipment to Europe. Since this directive is in effect now, you must place this symbol on your product now if your equipment is within the scope of the directive. Although the recovery and recycling programs are not yet in place, this at least informs consumers not to put the product into the general garbage.

Washington Laboratories provides consultation services in regards to these directives. If you have any questions or would like further assistance with these directives, please feel free to contact Berri Remenick at 301-473-1255 or email berrir@wl.com.