

Pollution Prevention in the European Union

WEEE and RoHS
Directives

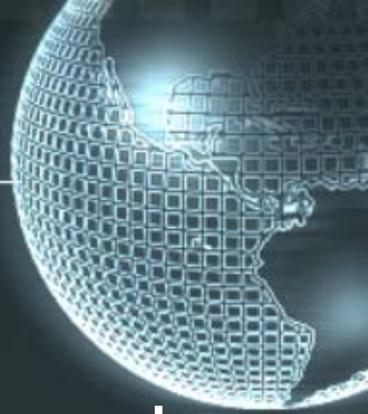
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Presented by:

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CHMM



Did you say Oui and Arroz?

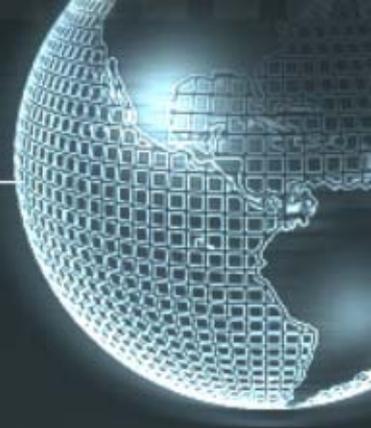


- Just when you thought you had a firm grip on the environmental acronyms in the USA & California, the European Union decides to enter the fray with :

WEEE & RoHS

Agenda

- The EU and Electronics
- Definitions
- Requirements
- Exemptions
- Applicability
- Compliance Strategies

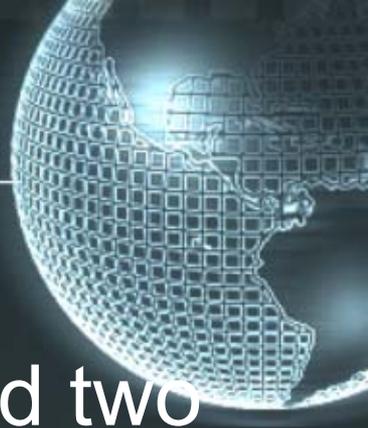


The European Union

- The European Union:
 - “Family of democratic European countries, committed to working together for peace and prosperity”
 - Originally 6 countries in 1973
 - 15 original member states (yellow)
 - 10 new member states (blue)
 - 3 applicant states (pink)



The EU and Electronics



- On January 27, 2003 the EU adopted two laws regulating electrical and electronic equipment, including:
 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive (RoHS Directive)
 - Waste Electrical and Electronic Equipment Directive (WEEE Directive)

Definitions



- The WEEE Directive places an obligation on the producers of electronics to take back ‘end-of-life’ or waste products free of charge in an effort to reduce the amount of such waste going to landfill
 - The WEEE Directive covers all products already sold to consumers, as well as products that will be sold in the future to private and business consumers
- The RoHS Directive compliments the WEEE Directive by banning the presence of specific hazardous substances in products at the design phase

Definitions



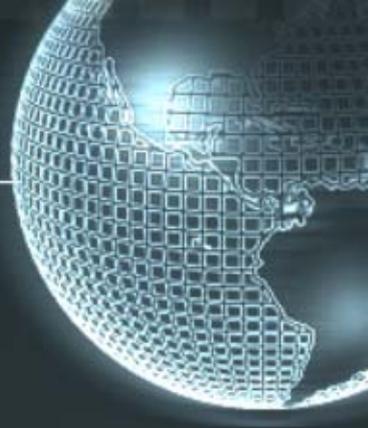
- **Electrical and Electronic Equipment (EEE)**
 - Equipment which is dependent on electric currents or electromagnetic fields in order to work properly; and
 - Equipment for the generation, transfer, and measurements of such currents and fields falling under applicable categories and designed for use with a voltage rating not exceeding 1000 Volts for alternating current and 1500 Volts for direct current.

Definitions



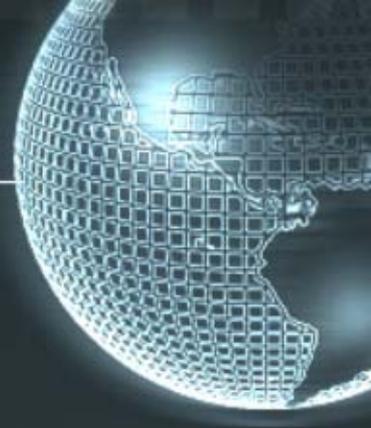
- EEE Examples:
 - Large Household Appliances
 - Small Household Appliances
 - IT and Telecommunications Equipment
 - Consumer Equipment
 - Lighting Equipment
 - Electrical and Electronic Tools
 - Toys, Leisure and Sports Equipment
 - Medical Devices
 - Monitoring and Control Instruments

Requirements



- RoHS : July 1, 2006
 - Bans the following compounds from all EEE put on the market :
 - Lead;
 - Mercury;
 - Cadmium;
 - Hexavalent Chromium;
 - Poly Brominated Biphenyls; and
 - Poly Brominated Diphenyl Ethers.

Requirements



- WEEE : August 13, 2005
 - Requires existing producers to pay for the collection, recycling, recovery and proper disposal of EEE

WEEE Exemptions



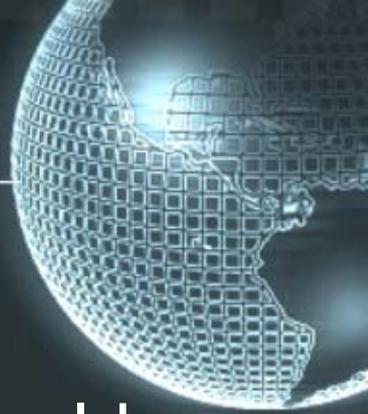
- The WEEE Directive explicitly excludes four types of EEE:
 - Equipment intended specifically for military purposes;
 - Large-scale stationary industrial tools;
 - Implanted and infected medical devices; and
 - EEE that is a part of another type of equipment.

ROHS Exemptions



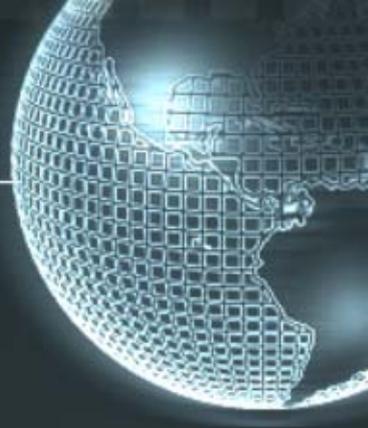
- The RoHS Directive exempts the inclusion of hazardous materials used in the following applications:
 - Mercury in some lighting applications
 - Lead in the glass of cathode ray tubes, electronic components and florescent tubes
 - Lead in certain steel, aluminum and copper alloys

RoHS Exemptions (cont.)



- Lead in high melting temperature type solders (SnPb solder >85% lead)
- Lead in solders for servers, storage and array systems (exempted until 2010)
- Lead in solders for network infrastructure equipment for switching, signaling, transmission, as well as network management (exemption expiration date TBD)

RoHS Exemptions (cont.)



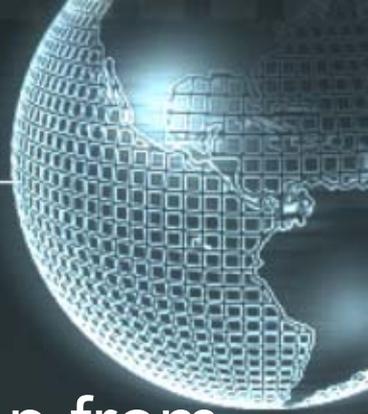
- Lead in electronic ceramic parts (e.g., piezoelectronic devices)
- Cadmium plating (e.g., anti-corrosion plating for sheet metal)
- Hexavalent chromium (in absorption refrigerators)

RoHS Exemptions (cont.)



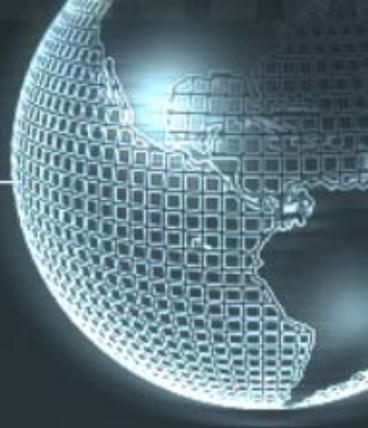
- This Directive does not apply to spare parts for the repair, or to the re-use, of electrical and electronic equipment put on the market before July 1, 2006

Compliance Strategies



- WEEE and RoHS Directives close the loop from cradle to grave
- Industry Involvement
- Product Stewardship
 - Involves new product engineering, legal, corporate compliance, manufacturing, quality, sales, EHS, etc.
- Environmental Management System
 - ISO 14001
 - Incorporate compliance effort into EMS goals and objectives

Compliance Strategies



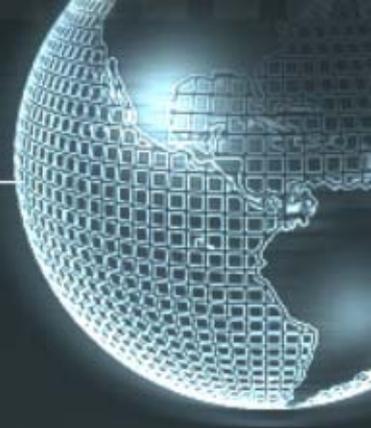
- Design for Environment
 - Identify restricted hazardous substances
 - Recyclability standards
 - Product end of life / Reliability
- Supply Chain Management
 - Certification system
 - Auditing program
 - Response to product inquiries
- Product Take Back
 - Establish infrastructure
 - Recyclability criteria
 - Coordinate with sales and customers

Summary



- The EU aims to minimize the impact of waste electronic products to human health and the environment through WEEE and RoHS legislation by:
 - Restricting certain hazardous materials from inclusion in electronic products
 - Forcing producers to take back and ensure the proper disposal of electronic products
- Equipment manufacturers, manufacturing services, and suppliers must take steps to ensure legal sale of products in EU
- Compliance may be difficult - Assess applicability and develop a strategy before it is too late!

The End



Thank You!