

Tools to comply with Product based Environmental Policies

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Tools

- ▶ - Applicability Analysis
- ▶ - Compliance Management
- ▶ - Conformity Assessment

Applicability analysis – Sector Relevance

- ▶ WEEE / RoHS
 - ▶ ELV
 - ▶ REACH
 - ▶ EuP
- ▶ Electrical comp. / prod.
 - ▶ Electronics comp./ prod.
 - ▶ Auto. Components
 - ▶ Auto. manufacturer
 - ▶ Chemicals – bulk / specialty
 - ▶ Articles containing chemicals
 - ▶ EEE and Auto
 - ▶ Prod. / Comp. using electrical energy
 - ▶ Prod. / Comp. using thermal energy

Applicability analysis – Export Destination

- ▶ Do you export to EU countries (25 member states)
- ▶ Do you export to any OEM / Tier 1 / Tier 2 suppliers that in turn export products to EU

Also Note:

- ▶ Certain MNCs/ Branded Companies may proactively adopt applicable regulations – globally
- ▶ Similar developments are taking place for other sectors as well
- ▶ Intentional use of material of concern will not be permitted

Applicability Analysis – Inclusion Criteria

► WEEE / RoHS

1. Large Household appliances
2. Small household appliances
3. IT and telecommunication equipments
4. Consumer equipments
5. Lighting Equipments
6. Electrical and electronics tools
7. Toy, Leisure and sport equip.
8. *Medical Devices*
9. *Monitoring and control instruments*
10. Automatic dispensers

Applicability Analysis – Inclusion Criteria

▶ ELV

- Category M1 : Vehicles used for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat
- Category N1 : Vehicles used for the carriage of goods and having a maximum weight not exceeding 3.75 metric tons.

Applicability Analysis – Inclusion Criteria

- ▶ REACH
 - ▶ Importer / manufacturer of any particular chemical in the volume > 1 ton / year
 - ▶ Importer / manufacturer of any article (product) that contains / embedded any specific chemical > 1 ton / year
 - ▶ Articles containing substance of high concern in conc. > 0.01 %

Applicability Analysis – Exclusion Criteria

- ▶ WEEE / RoHS
- ▶ ELV
- ▶ REACH
 - ▶ Voltage rating > 1000 Volts AC
 - ▶ Voltage rating > 1500 Volts DC
 - ▶ Certain applications exempted
 - ▶ > 8 seats passenger vehicle
 - ▶ > 3.75 ton goods vehicle
 - ▶ Applications listed in annex II
 - ▶ < 1 ton per year
 - ▶ Chemicals regulated by other laws – Nuclear, Food, medical etc.
 - ▶ Polymers with less than 2% monomer
 - ▶ Chemicals with established information and no or low impacts

Applicability Analysis – Acceptable Levels of Restricted Substances

- ▶ RoHS
 - ▶ PBB, PBDE, Pb, Hg, Cr6+ < 0.1 % by wt.
 - ▶ Cd < 0.01 % by wt.
 - ▶ Conc. Levels relaxed for certain applications
- ▶ ELV
 - ▶ Pb, Hg, Cr6+ < 0.1 % by wt.
 - ▶ Cd < 0.01 % by wt.

Applicability Analysis – Acceptable Levels of Treatment

- ▶ WEEE
 - ▶ Recycling / Reuse minimum 75%
 - ▶ Recovery (including energy) 80%
- ▶ ELV
 - ▶ 1st Jan 2006
 - Recycle / reuse 70%
 - Recovery 75%
 - ▶ 1st Jan 2015
 - Recycle / reuse 85%
 - Recovery 95%

Compliance Management

- ▶ Material of Concern
 - ▶ Heavy Metal - Substitution
 - ▶ Toxic substances - Substitution
- ▶ Treatment
 - ▶ Recycling - Substitution / Design
 - ▶ Registration

Preparation

- ▶ Team Selection
- ▶ Define objectives and scope
- ▶ Timeline
- ▶ Resource
- ▶ Approval of management

Knowing your product – Material of Concern

- ▶ What - material of concern are in the product leaving your factory
- ▶ Where and how - are these being introduced to the product
- ▶ Why - Rational for using these material of concern
- ▶ Identifying functional use of these materials of concern

Knowing your product – Design Aspects

- ▶ What - Design approaches are presently in use
- ▶ Why - Rational for using these design approaches
- ▶ Identifying use / benefits of these Design Approaches

Substitution / Solutions

- ▶ Discussions on
 - Alternatives for materials of concern
 - Modifications in Design approaches
 - Decide - go / no-go
- ▶ Identify options for detailed assessment and allocate responsibilities
- ▶ Detailed feasibility assessment of each option

Implementation

- ▶ Ranking of options – prioritizing implementation
- ▶ Presenting to the reference group
- ▶ Developing implementation plan
- ▶ Communicate the compliance status to the buyers / other stakeholders
- ▶ Keep tracking developments in regulations

Compliance Management - Guidelines

- ▶ ISO 14062 – Integrating Environmental aspects into product design and development
- ▶ Eco-Design Manual – TU Delft
- ▶ IPP Compliance Manual

Conformity Assessment

- ▶ Compliance with the stipulated norms / limits
 - Content – Material Declaration
 - ▶ Mercury, Cadmium, Chromium, Lead
 - ▶ PBB, PBDE
- ▶ Testing - Analytical procedures – Any Vs. Certified Vs. Identified labs
- ▶ Conformity – Lab Results / Labeling / Certificate

Conformity Assessment - Material Declaration

- ▶ What is in your product?
- ▶ Are you in control of your supply chain?
- ▶ Are there are restricted substances in your components, parts and subparts?
- ▶ Are your products compliant with various Directive / Laws?
- ▶ Who is eligible to declare / certify – compliance of your product?

Conformity Assessment - Material Declaration – Standards / Guides

- ▶ Joint Industry Guide – Material Composition Declaration Guide
- ▶ ECMS Technical Report TR/70 – Product-related environmental attributes (section 5.8)
- ▶ EN45014 General criteria for suppliers declaration of conformance
- ▶ IEC 61906: Procedure for declaration of materials in products of the electrotechnical and electronics industry (DIN 19220)
- ▶ ISO14021: Environmental labels and declarations – Self-declaration environmental claims – guidelines and definition and usage of terms
- ▶ ZVEI Information of Substances and Materials in Products (Umbrella Spec)
- ▶ JEDEC / IPC J-STD-020C: Moisture/Reflow Sensitivity Classification
- ▶ JEDEC / IPC J-STD-033A: Handling, Packing, Shipping and use of Moisture/Reflow Sensitive SMDs
- ▶ JEDEC JESD97: Marking , Symbols, and Labels for Identification of Lead (Pb) Free Assemblies, Components, and Devices
- ▶ IPC-1065 (1401): material Declaration Handbook (For Users and Manufacturers of Printed Circuit Boards)
- ▶ JGPSSI: Excel-based worksheet for Material Declaration
- ▶ Centor Compliance Connect: Excel-based worksheet for Material Declaration
- ▶ IPC-PDX 2.0: Supply Chain Communication
- ▶ RosettaNet PIP 2A9/2A10: Query/Distribute Technical/ Engineering Information
- ▶ RosettaNet PIP 2A13: Distribute Material Composition Information
- ▶ ECALGA: ebXML standard for exchange of engineering data under development by JEITA

Conformity Assessment - Typical Material and Substance Declaration

- ▶ Scope
- ▶ Applicable Documents
- ▶ Requirements
 - Terms and Definitions
- ▶ Levels of Declaration
 - RoHS Yes/No Compliance
 - RoHS/JIG materials Content Disclosure
 - Customer Specified disclosure
- ▶ Data Model
- ▶ Business Processes
- ▶ Description of the Form
- ▶ Supplier Declaration Model
- ▶ Legal Issues and certification Statements
- ▶ Audit Procedures
- ▶ Verification Procedures

Conformity assessment – Independent / Designated Agencies

- ▶ Regulatory Impact Assessment
 - ▶ Evaluation of Manufacturer's documentation
 - ▶ Supplier Evaluation / Assessment
 - ▶ Product testing / Verification
 - ▶ Detection of Specific Substances
 - ▶ Gap Analysis - compliance
 - ▶ Training / Seminars
 - ▶ Material Risk Profiling
 - ▶ Conformity surveillance audits – in lines with the criteria and procedures laid to grant conformity with sp. Requirements
- = Certificate / Label of Compliance

Further Information Visit

- www.aceepr.com

Thank you