RoHS Directive Compliance

Demonstrating Due Diligence

BUSINESS CHALLENGE
With an aim of reducing the negative environmental impact of product, minimizing toxicity, and setting reuse, recycling, and recovery targets, the European Community enacted legislation in the form of the Restrictions on the Use of Certain Hazardous Substances (RoHS) Directives. These Directives restrict the use of certain hazardous chemicals and require waste management of electrical and electronic equipment throughout the product life cycle.

SOLUTION
What is the RoHS Directive?
The objective of the RoHS Directive (2002/95/EC), effective 1 July 2006, is to restrict the use of six hazardous chemicals in electrical and electronic equipment. It is a requirement to design equipment taking into account the facilitating and dismantling and recovery at the end of product life. Overview information about the scope of the Directives is highlighted below:

<table>
<thead>
<tr>
<th>Hazardous Substance</th>
<th>Maximum Concentration Value (in each homogenous material)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (Pb)</td>
<td>0.1%</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>0.1%</td>
</tr>
<tr>
<td>Hexavalent Chromium (Cr(VI))</td>
<td>0.1%</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>0.01%</td>
</tr>
<tr>
<td>Polybrominated biphenyl flame retardants (PBB)</td>
<td>0.1%</td>
</tr>
<tr>
<td>Polybrominated diphenyl ether flame retardants (PBDE)</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Who Must Comply
- Manufacturers and importers need to ensure that their electrical and electronic equipment products, and the components of these products, comply with the requirements.
- The Directive also applies to those who export to Member States and to those who rebrand other manufacturers’ electrical and electronic equipment as their own.
- Retailers are considered to be the manufacturer when they are distributing their own brands under direct sourcing.

MARKET ACCESS COMPLIANCE SERVICES
Product Testing
- EMC
- Electrical Safety
- Environmental
- NEBS
- ATEX
- Due Diligence Screen Testing
- Performance Testing/Benchmarking

Certification for Global Acceptance
- CE Marketing
- FCC
- CB Scheme
- NRTL
- GS Mark
- NF Mark
- CCC, GOST-R, BSMI and more

Inspection, Audit & Assessments
Consultancy
WHY CHOOSE BUREAU VERITAS?
Reputation — For over 100 years, we have worked successfully with top manufacturers and retailers around the world to help them better manage risk and regulatory compliance.
Worldwide Locations — With locations close to sourcing areas in over 40 countries, we offer you the convenience of global coverage with local service where you need it.
Technical Knowledge & Leadership — Our staff participates in the development of international, industry and regulatory standards worldwide, keeping you and us at the forefront of changes in safety requirements and testing methods. In RoHS service, Bureau Veritas is a leader in obtaining HSPM accreditation from the IEC and in China obtaining CNAS 17025 accreditation. We actively participate in standards development on the IEC TC 111 group.
Personalized Service — At Bureau Veritas, we are committed to meeting your evolving needs and helping you anticipate new market trends. We offer you customized and specialized services to meet your quality assurance needs throughout your supply chain. Providing you with the highest levels of service is a priority for us.

OUR APPROACH
As a global leader in quality assurance solutions, Bureau Veritas offers you the ability to obtain regulatory compliance to RoHS from the product design stage through distribution.

<table>
<thead>
<tr>
<th>Testing</th>
<th>Consulting/Training</th>
<th>Inspections, Audits &amp; Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished product RoHS verification</td>
<td>Document Review</td>
<td>IECQ HSPM</td>
</tr>
<tr>
<td>Detection of specific substances</td>
<td>Training seminars</td>
<td>Gap analysis</td>
</tr>
<tr>
<td>XRF due diligence screening</td>
<td>Regulatory impact assessment</td>
<td>Green product management system</td>
</tr>
<tr>
<td>RoHS combination testing</td>
<td>RoHS or CPSIA compliance plan development</td>
<td></td>
</tr>
</tbody>
</table>

FAQ
What other Chemical Requirements of the European Community exist?

Restricted Substances in Waste Packaging Directive (94/62/EC)
The Directive covers all packaging placed on the market in the European Community and all packaging waste whether it is used or released at industrial, commercial, office, shop, service, household, or any other level.

Restricted Substances | Limits
--- | ---
Cadmium (Cd) | 100 ppm sum
Lead (Pb) | 100 ppm sum
Mercury (Hg) | 100 ppm sum
Chromium (Cr [VI]) | 100 ppm sum

Restricted Substances in Batteries — Battery Directive (2006/66/EC)*
• Batteries and accumulators containing more than 0.002% cadmium, 0.4% lead, or 0.0005% mercury are regulated, and where lead and cadmium batteries are allowed, they must be labeled with their heavy metal symbol (Pb or Cd), and the crossed out wheel-bin disposal mark.
• Cadmium batteries (more than 0.002% cadmium) are banned for use in products except only power tool, emergency, alarm, or medical applications.
• Portable batteries with over 0.0005% mercury are banned, although button cell type batteries are allowed up to 2% mercury.

* Batteries are specifically not covered by the RoHS Directive.