REACH SVHC-201

As part of ABB’s values, and in alignment with the Supplier Code of Conduct, we seek to work with companies who contribute to a sustainable development and are ethically, socially, environmentally, and economically responsible.

ABB is responsible for ensuring that our products comply with legal requirements, such as RoHS and REACH. There are also other sets of environmental requirements not necessarily originating from legislation, but which are of great importance as ABB customers are demanding compliance with them. These include ship recycling and green building requirements.

The purpose is to avoid chemicals, materials and substances that
- may represent hazards to the environment, or
- the health of workers, customers, consumers and other stakeholders, or
- could negatively influence end-of-life properties.

ABB Drives has contacted all suppliers to collect component and material information. This information includes, but is not limited to:
- Full Material Disclosure
- RoHS compliance certificate
- REACH SVHC compliance certificate
- Component lifecycle status

Object of the declaration

This declaration refers to all product series manufactured by ABB Drives Helsinki, Finland.

REACH SVHC-201 declaration

ABB Drives products that are object of this declaration do not contain any of the Substances of Very High Concern (SVHC) exceeding 0.1% w/w, except for the parts listed in Table 1 that contain a Substance of Very High Concern (SVHC) above the threshold of 0.1% weight by weight (w/w). This threshold applies to each article of an object made up of more than one article, which were joined or assembled together (complex objects). “Once an article, always an article.”

Under normal and foreseeable conditions the products do not release harmful substances nor pose a risk to the customers.

Regulatory information

The REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) entered into force 1 June 2007. It covers the manufacture, import (into the EU), and use of chemical substances (e.g. raw materials, powders) in preparations (e.g. oil, resin, paint), special preparations (metal alloys), and in articles (finished products).
REACH Article 33 requires any supplier of an article containing Substances of Very High Concern (SVHC) above the threshold of 0.1% weight by weight (w/w) to provide the customer with sufficient information to allow safe use of the article. As a minimum, the name of that substance is communicated.

Article 33 does not impose any restrictions on the use of the products, nor is it a prohibition to use a substance.

Yours sincerely,

Mikko Ristolainen
Drives, Quality and HSE Manager

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<table>
<thead>
<tr>
<th>Part containing SVHC</th>
<th>Name of the substance</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium battery (CR2032, CR2450)</td>
<td>1,2-dimethoxyethane</td>
<td>110-71-4</td>
</tr>
<tr>
<td>Relay</td>
<td>Cadmium oxide</td>
<td>1306-19-0</td>
</tr>
<tr>
<td>IGBT module, diode module (power semiconductor)</td>
<td>Lead oxide (lead monoxide)</td>
<td>1317-36-8</td>
</tr>
<tr>
<td>Aluminium electrolytic capacitor</td>
<td>2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)</td>
<td>15571-58-1</td>
</tr>
<tr>
<td>LED Display</td>
<td>Hexahydromethylphthalic anhydride</td>
<td>25550-51-0</td>
</tr>
<tr>
<td>LCD Display</td>
<td>2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)</td>
<td>25973-55-1</td>
</tr>
<tr>
<td>Inductor chip</td>
<td>Benzene-1,2,4-tricarboxylic acid 1,2-anhydride</td>
<td>552-30-7</td>
</tr>
<tr>
<td>Connector, pulse transformer</td>
<td>Octamethylcyclotetrasiloxane</td>
<td>556-67-2</td>
</tr>
<tr>
<td>Resistor, capacitor, semiconductor, inductor, fuse, connector, contactor</td>
<td>Lead</td>
<td>7439-92-1</td>
</tr>
<tr>
<td>Memory circuit, semiconductor</td>
<td>[Bis-phenol A (BPA), 4,4’-isopropylidenediphenol]</td>
<td>80-05-7</td>
</tr>
<tr>
<td>Inductor chip, semiconductor</td>
<td>Hexahydro-2-benzofuran-1,3-dione (HHFA)</td>
<td>85-42-7</td>
</tr>
</tbody>
</table>

The following RoHS exemptions apply to the parts listed in Table 1:

R2-15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages. (Please note that a request for extension on the expiration date has been raised for this exemption. EU will make their decision on the exemption 18 to 24 months after the submission for extension. The actual expiration date will be reassigned once the decision on extension is made. Once a decision is made, the stakeholder has 12 to 18 months to be compliant with the new decision on the exemption.)

R2-6a: Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0.35% lead by weight.

R2-6b: Lead as an alloying element in aluminium containing up to 0.4% lead by weight.

R2-6c: Copper alloy containing up to 4% lead by weight.

R2-7a: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead). Applies to categories 1-7 and 10 (except applications covered by point 24 of this Annex) and expires on 21 July 2021.

R2-7c1: Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound. Applies to categories 1-7 and 10 (except applications covered under point 34) and expires on 21 July 2021.

R2-8b: Cadmium and its compounds in electrical contacts. (Please note that a request for extension on the expiration date has been raised for this exemption. EU will make their decision on the exemption 18 to 24 months after the submission for extension. The actual expiration date will be reassigned once the decision on extension is made. Once a decision is made, the stakeholder has 12 to 18 months to be compliant with the new decision on the exemption.)