REACH SVHC-223

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 Drive Products and ABB System Drives, Helsinki, Finland.

REACH SVHC-223 declaration

ABB 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 some part types listed in Table 1 that may 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,

Juha Kokkonen
HSE Manager, Drive Products
juha.kokkonen@fi.abb.com

Vesa Tihonen
Manager, Product Engineering, System Drives
vesa.tihonen@fi.abb.com

ABB Oy
P.O. Box 184
00381 Helsinki, Finland
Phone: +358 10 22 11
Table 1 Communication of information on substances in articles (REACH Article 33)

<table>
<thead>
<tr>
<th>Part containing SVHC</th>
<th>Name of the substance</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin header</td>
<td>1,6,7,8,9,14,15,16,17,18,18-Dodecachloropentacyclo[12.2.1.16,9,02,13,05,10]octadeca-7,15-diene (&quot;Dechlorane Plus&quot;)</td>
<td></td>
</tr>
<tr>
<td>Lithium coin cell battery</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>LED</td>
<td>Hexahydromethylphthalic anhydride</td>
<td>25550-51-0</td>
</tr>
<tr>
<td>LCD Display</td>
<td>2-(2H-benzotriazol-2-yl)-4,6-diterpentylphenol (UV-328)</td>
<td>25973-55-1</td>
</tr>
<tr>
<td>LED</td>
<td>1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione</td>
<td>2451-62-9</td>
</tr>
<tr>
<td>Semiconductor, inductor, fuse, connector, contactor, current transducer</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>Thermal Pad</td>
<td>Diboron Trioxide</td>
<td>1303-86-2</td>
</tr>
<tr>
<td>Crystal Oscillator</td>
<td>Lead titanium trioxide</td>
<td>12060-00-3</td>
</tr>
<tr>
<td>Connector</td>
<td>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one</td>
<td>71868-10-5</td>
</tr>
<tr>
<td>Inductor</td>
<td>2-methylimidazole</td>
<td>693-98-1</td>
</tr>
</tbody>
</table>

The following RoHS exemptions (when relevant for RoHS category 11) apply to the substances listed in Table 1:

Exemption 6(a): Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight.

Exemption 6(b): Lead as an alloying element in aluminum containing up to 0.4% lead by weight.

Exemption 6(c): Copper alloy containing up to 4 % lead by weight.

Exemption 7(a): Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).

Exemption 8(b): Cadmium and its compounds in electrical contacts