Environmental product information
Contactors type AF190 ... AF205
General

The AF190 ... AF205 family is made to respond successfully to all plant engineering requirements, from the standard ones to the most technologically advanced ones.

Date published: 2013-09-21
The AF190 ... AF205 product family is manufactured in Sweden.

Product Conformity & Compliance

Regulation EC 1907/2006 (REACH)
- AF190 ... AF205 contactors do not contain any substances of very high concern as listed in “the Candidate list” provided by the European Chemical Agency, ECHA, according to the European REACH-regulation. Number of substances on the Candidate List: 144 (last updated: 20 June 2013)

Directive 2011/65/EU (RoHS) (former 2002/95/EC)
- According to our current best knowledge, the AF190 ... AF205 products are compliant with the European RoHS Directive 2011/65/EU and therefore do not contain any restricted substances exceeding the limitations in the directive.
Restricted substances referred to in Article 4(1) and maximum concentration values tolerated by weight in homogeneous materials Lead (0,1 %), Mercury (0,1 %), Cadmium (0,01 %), Hexavalent chromium (0,1 %), Polybrominated biphenyls (PBB) (0,1 %), Polybrominated diphenyl ethers (PBDE) (0,1 %).

Directive 94/62/EC (Packaging and waste packaging)

Product Safety

Conformity assessment with the product Standards is carried out by third party tests laboratory (accredited by Swedac) in respect of the EN ISO/IEC 17025 European Standard, by the Swedish certification body Intertek Semko AB according to IECCE CB Scheme and CB Certificate has been issued.

Standard:
- EN 60947-4-1; UL 60947-4-1

EU Directives:

Certifications
Product Composition

The chart below shows the constituents of AF190 ... AF205. The total weight of the product is 2860 g excluding packaging.
(All materials ≥ 1 wt%, in accordance with IEC 62474 IEC)

Constituent substances

<table>
<thead>
<tr>
<th>Constituent materials</th>
<th>Constituent substances</th>
<th>Weight %</th>
<th>Cas no / EG no</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC RF 654-20</td>
<td>Styrene</td>
<td>13,35%</td>
<td>100-42-5 / 601-026-00-0</td>
</tr>
<tr>
<td>Akulon K22S KS PA6</td>
<td>-</td>
<td>1,26%</td>
<td>-</td>
</tr>
<tr>
<td>Pa6h2 G-20-v2hf</td>
<td>Melamine cyanurate</td>
<td>21,63%</td>
<td>37640-57-6 / 253-575-7</td>
</tr>
<tr>
<td>66h2 G-25-voct1</td>
<td>Zinc borate</td>
<td>3,24%</td>
<td>1332-07-6 / 215-566-6</td>
</tr>
<tr>
<td>Latamid 68 H2-V0 RAL 7012 (PA68)</td>
<td>Melamine cyanurate</td>
<td>0,76%</td>
<td>37640-57-6 / 253-575-7</td>
</tr>
<tr>
<td>Ultradur B4520</td>
<td>-</td>
<td>0,01%</td>
<td>-</td>
</tr>
<tr>
<td>Nitrile rubber NBR 70 shore A</td>
<td>-</td>
<td>0,05%</td>
<td>-</td>
</tr>
<tr>
<td>SMC XFRHNS 15</td>
<td>Styrene</td>
<td>0,45%</td>
<td>100-42-5 / 2002-851-5</td>
</tr>
</tbody>
</table>
Packaging

The total weight for AF190 ... AF205 packaging material is 210g. The chart provides information for each packaging material used. The cardboard and the paper used for the product manual are made of recycled fibers and are 100% recyclable. The polymer films used are marked with the proper identification code and are recyclable.

Product Use

Standard usage scenario: 3500 h per year, 20 years, 80 % load (prEN50598-3)
Losses 8 W/pole at Ie/AC3 205 A + Coil holding 7 VA= 31 W
Rated operational power 110 kW

AF 205
1740 kWh
Power loss less than 0.03%

(prEN 50598-2 Power losses of motor starters are lower than 0.1 %)
End-of-life

The recycling potential of AF190 ... AF205 is 72 %. The metals and polymers recycling and recovery rate are shown below. Ref IEC/TR 62635 Ed. 1.0

Recyclability and recoverability rate has been calculated based on the guidelines of the IEC IEC/TR 62635 Edition 1.0 (2012-10-19)
Guidelines for end-of-life information provided by manufacturers and recyclers and for recyclability rate calculation of electrical and electronic equipment

For the best recovery of the materials it is recommended to follow the scrapping instructions provided in the technical manual of AF190 ... AF205 at the product information portal (www.abb).
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