RHODORSIL® HFR 1

Fire resistance

**Description**
RHODORSIL HFR 1 is an agent allowing improvement of fire resistance of silicone elastomers vulcanizing under heat.

**Characteristics**
- Transparent consistent paste
- Density at 25 °C, approx. : 1.09
- Mooney consistence, approx. : 24

**Dose for use**
RHODORSIL HFR 1 can be used in 1 to 2p weight in relation to 100p EVC mix.

The silicone elastomers thus obtained can comply with various norms such as:
- JAR 2585a and b, CEI 707 FV-0, FV-1, FV-2, ASTM D 2863/ Oxygen index (tested on material).

**Fire resistance**
The tables given below are examples of the results obtained from EVC containing 1 to 2p of RHODORSIL HFR 1.
The trials were performed on 2mm thick elastomer plates, after addition of 1.25p dichloro-peroxide-2, 4 benzoyl (50%) and vulcanization for 8 min at 115 °C.

<table>
<thead>
<tr>
<th>Trials of Fire resistance according to</th>
<th>RHODORSIL HFR 1</th>
<th>0p</th>
<th>1p</th>
<th>2p</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAR 25853b</td>
<td>HCR</td>
<td>Extinction time ( in seconds )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MF 8160 E density : 1.15</td>
<td>Complete burning</td>
<td>75</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>MF 8270 E density : 1.32</td>
<td>Complete burning</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>CEI 707</td>
<td>HCR</td>
<td>Class according to vertical trial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MF 749 E density: 1.45</td>
<td>Complete burning</td>
<td>FV-1</td>
<td>FV-1</td>
<td></td>
</tr>
<tr>
<td>Oxygen index</td>
<td></td>
<td>Inflammation and incandescence time (s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTM D 2863 (%)</td>
<td></td>
<td>&gt; 250</td>
<td>215</td>
<td>175</td>
</tr>
<tr>
<td>MF 8160 E density: 1.15</td>
<td></td>
<td>26</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>MF 8270 E density: 1.32</td>
<td></td>
<td>28</td>
<td>40</td>
<td>41</td>
</tr>
</tbody>
</table>

**Note:** RHODORSIL HFR 1 presents the best efficacity with EVC catalysed by 2,4 dichloro-benzoyl peroxide.
Further, post-cure of EVC does not significantly modify the results

**Staining**
An additive master-batch with RHODORSIL HFR 1 can be stained in bright colours by means of:
COLOURING BASES FOR SILICONE EVC (without cadmium) BLUESTAR (brochure: SIL 95 143 1/3).
RHODORSIL® HFR 1

Examples of applications
RHODORSIL HFR 1 can be used for all applications requiring good fire resistance.

Packaging
RHODORSIL HFR 1 is supplied in 25 kg drums.

Storage and shelf life
RHODORSIL HFR 1 may be stored in its original packaging at temperature below 30 °C for up to 18 months from the date of manufacture marked clearly on the packaging. Past this date, Bluestar Silicones no longer guarantees that the product meets the sales specifications.

Safety
Consult the Safety Data Sheet for RHODORSIL HFR 1.

Visit our website www.bluestarsilicones.com

Warning to the users
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