Starting Formulation

SF 7007

Rapid Curing Potting Compound for Clutch Coils
EPON™ Resin 813 and 828 / EPIKURE™ Curing Agent 3271

Introduction

This formulation is designed for use as a thermal shock resistant, epoxy compound for potting preheated clutch coils. It cures to handling strength in 2 to 3 minute cycles. Maximum properties, including 150 °C heat resistance, are achieved with a post cure of 60 minutes at 120 °C.

<table>
<thead>
<tr>
<th>Formula</th>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
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<tbody>
<tr>
<td>Resin Portion</td>
<td>EPON Resin 813</td>
<td>Hexion</td>
<td>63</td>
<td>6.64</td>
</tr>
<tr>
<td></td>
<td>EPON Resin 828</td>
<td>Hexion</td>
<td>37</td>
<td>3.83</td>
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<tr>
<td></td>
<td>DC-200 Fluid, 100 centistoke grade</td>
<td>Dow-Corning Corp.</td>
<td>0.007</td>
<td>0.001</td>
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<tr>
<td></td>
<td>Novacite 325 Silica</td>
<td>Malvern Minerals Co.</td>
<td>130</td>
<td>5.89</td>
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<tr>
<td></td>
<td>1/16-inch Milled Glass</td>
<td></td>
<td>4</td>
<td>0.19</td>
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<td></td>
<td></td>
<td>234.007</td>
<td>16.551</td>
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<tr>
<td>Converter Portion</td>
<td>EPIKURE Curing Agent 3271</td>
<td>Hexion</td>
<td>11.4</td>
<td>1.33</td>
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<tr>
<td></td>
<td>Aromatic Amine Eutectic</td>
<td></td>
<td>7.6</td>
<td>0.81</td>
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<td></td>
<td></td>
<td></td>
<td>19.0</td>
<td>2.14</td>
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</table>

1 Epoxy compatible finish (Owens-Corning Fiberglas Co.)
2 A 60/40 blend of para, para'-diaminodiphenylmethane and meta-phenylenediamine.

Compounding

Resin Portion – Blend the epoxy resins and DC-200 air release agent to a homogeneous liquid under moderate speed agitation. Add the Novacite filler and milled glass and disperse thoroughly under high shear agitation.

Converter Portion – Preheat the aromatic amine eutectic to 52 to 66 °C and agitate in the original container to redissolve any crystallized portion and restore the mixture to a homogeneous state. Combine the aromatic amine eutectic and EPIKURE 3271 Curing Agent, blending under moderate speed agitation to a uniform composition. Package in tightly sealed metal or polyolefin plastic containers.

Potting Procedure

Preheat the resin portion to 54 °C or higher for convenient pumping and handling. Proportion and mix the resin and converter portions in mechanical metering and dispensing equipment. The ratio of resin portion to converter should be 12.3:1 by weight or 7.7:1 by volume.

Preheat the clutch coil unit to 120 °C and fill with the mixed compound. Maintain the temperature for 2 to 3 minutes, then grind off any overfill if necessary. Postcure the units.

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Postcure the units for 60 minutes at 120 °C to develop maximum thermal and physical strength properties.

Storage

Recommendations regarding storage conditions can be obtained by visiting our web site at www.hexion.com.

General Information

These are starting formulations and are not proven in the user’s particular application but are simply meant to demonstrate the efficacy of the products and to assist in the development of the user’s own formulation. It is the user’s responsibility to fully-test and qualify the formulation, along with the ingredients, methods, applications or equipment identified herein (“Information”), by the user’s knowledgeable formulator or scientist, and to determine the appropriate use conditions and legal restrictions, prior to use of any Information.

Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

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