Starting Formulation

SF 1005
Black Enamel

EPON™ Resin 1001-CX-75 / EPIKURE™ Curing Agent 3115-X-70

Features
• Formulated for spray application
• Desirable mixing ration of 1 to 1 by volume

<table>
<thead>
<tr>
<th>Formula</th>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>Carbon black: Monarch™ 880</td>
<td>Cabot Corporation</td>
<td>13.6</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>EPIKURE Curing Agent 3115-X-70</td>
<td>Hexion</td>
<td>98.7</td>
<td>12.66</td>
</tr>
<tr>
<td></td>
<td>Ethyl 3-ethoxy propionate</td>
<td></td>
<td>41.0</td>
<td>5.24</td>
</tr>
</tbody>
</table>

  Mill grind to a steel ball mill and grind for 48 hours, and let down with the following

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKURE Curing Agent 3115-X-70</td>
<td>29.6</td>
<td>3.79</td>
<td></td>
</tr>
<tr>
<td>n-Butanol</td>
<td>17.9</td>
<td>2.66</td>
<td></td>
</tr>
<tr>
<td>Ethyl 3-ethoxy propionate</td>
<td>193.4</td>
<td>24.74</td>
<td></td>
</tr>
<tr>
<td>Paint Additive #11</td>
<td>0.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

  Total Part A:  395.0 pounds / 50.0 gallons

Part B

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPON Resin 1001-CX-75</td>
<td>Hexion</td>
<td>217.5</td>
<td>23.90</td>
</tr>
<tr>
<td>Beetle™ U216-8</td>
<td>Cytec Industries</td>
<td>13.6</td>
<td>1.61</td>
</tr>
<tr>
<td>Xylene</td>
<td>Shell Chemical Company</td>
<td>175.5</td>
<td>24.49</td>
</tr>
</tbody>
</table>

  Total Part B:  406.6 pounds / 50.0 gallons

Total Part A & B:  801.8 pounds / 100.0 gallons

Mixing Instructions

<table>
<thead>
<tr>
<th>Material</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>395.0</td>
<td>50.00</td>
</tr>
<tr>
<td>Part B</td>
<td>406.6</td>
<td>50.00</td>
</tr>
<tr>
<td>Part A + B</td>
<td>801.8</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Change the ingredients of the mill grind to a steel ball mill and grind for 48 hours.
Discharge mill and let down this mixture with the let down solution. The materials in the base component are simply combined, mixed and packaged.

Typical Handling
Combine equal volumes of the curing agent component and the base component, and mix thoroughly. Allow the mixed formulation to "sweat in" for one hour. The system is then...
Allow the mixed formulation to "sweat in" for one hour. The system is then ready for spray application. For application of this system in confined or poorly ventilated areas, we recommend the use of a fresh air-supplied hood and other protective clothing sufficient to cover the applicator’s entire body.

**Typical Formulation**

<table>
<thead>
<tr>
<th>Properties</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mix ratio Part A : Part B</td>
<td>by volume</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Nonvolatile content by weight</td>
<td>%</td>
<td>34.3</td>
</tr>
<tr>
<td>Weight per gallon</td>
<td>lb/gal.</td>
<td>8.0</td>
</tr>
<tr>
<td>Pigment : Binder Weight Ratio</td>
<td></td>
<td>0.05/1.0</td>
</tr>
<tr>
<td>Pigment volume concentration (PVC)</td>
<td>%</td>
<td>3.2</td>
</tr>
<tr>
<td>Volatile Organic Compound (VOC)</td>
<td>lb/gal.</td>
<td>5.27</td>
</tr>
<tr>
<td></td>
<td>g/L</td>
<td>632</td>
</tr>
<tr>
<td>Induction Time</td>
<td>hrs</td>
<td>1.0</td>
</tr>
<tr>
<td>Pot life</td>
<td>hrs</td>
<td>8+</td>
</tr>
</tbody>
</table>

**Cure Schedules**

At ambient temperatures of 70°F to 80°F, this coating will dry to handle in about six hours. Physical properties will be fully developed in about two days. Chemical and solvent resistance will be fully developed in seven days. At ambient temperatures of 55°F, several weeks may be required to produce full cure.

<table>
<thead>
<tr>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force dry, to a sandable stage</td>
<td></td>
</tr>
<tr>
<td>100°F</td>
<td>hrs</td>
</tr>
<tr>
<td>110°F</td>
<td>hrs</td>
</tr>
<tr>
<td>120°F</td>
<td>min.</td>
</tr>
<tr>
<td>140°F</td>
<td>min.</td>
</tr>
<tr>
<td>Force dry, to full cure</td>
<td></td>
</tr>
<tr>
<td>140°F</td>
<td>hrs</td>
</tr>
<tr>
<td>High temperature bake, to full cure</td>
<td></td>
</tr>
<tr>
<td>200°F</td>
<td>min.</td>
</tr>
<tr>
<td>250°F</td>
<td>min.</td>
</tr>
<tr>
<td>300°F</td>
<td>min.</td>
</tr>
<tr>
<td>350°F</td>
<td>min.</td>
</tr>
<tr>
<td>400°F</td>
<td>min.</td>
</tr>
</tbody>
</table>

**Storage**

Recommendations regarding storage conditions can be obtained by visiting our web site at [www.hexion.com](http://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.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Hexion, Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/