Solid Formulation

SF 2802

Red Powder Coating for Pipe and Rebar Application

EPON™ Resin 2024 / EPIKURE™ Curing Agent P-104

Features
- Very good general purpose powder coating
- Good film appearance
- Extra rapid cure speed
- Very good storage stability

Formula

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPON Resin 2024</td>
<td>Hexion</td>
<td>832.0</td>
</tr>
<tr>
<td>EPIKURE Curing Agent P-104</td>
<td>Hexion</td>
<td>33.0</td>
</tr>
<tr>
<td>Red iron oxide</td>
<td></td>
<td>15.0</td>
</tr>
<tr>
<td>Barytes</td>
<td></td>
<td>120.0</td>
</tr>
</tbody>
</table>

Total Formulation: 1,000.0

Mixing Instructions

Total Formulation: 1,000.0

Powder coatings are generally manufactured by the melt mix technique. All the components are dry blended, usually in a high intensity mixer. This homogeneous blend is processed through an appropriate single or twinscrew extruder and cooled to a friable solid. The dispersed extrudate is then pulverized to yield a suitable particle size distribution and sieved to eliminate coarse particles which could detract from the appearance of the coating.

Typical Handling Properties

Powder coatings can be applied by electrostatic spray, fluidized bed, electrostatic fluidized bed, and flocking gun methods. Thick (5-10 mil) film can be applied by fluidized bed, and insulative coatings are often applied in this way. Powder coating (10-20 mil thick) for underground pipe is usually applied by passing the hot (450-480 °F) pipe through a cylindrical chamber with several electrostatic spray guns positioned inside the chamber to coat the pipe as it passes through. The coating cures rapidly due to residual heat. After a water quench, the pipe slides on rubber rollers to an electrical holiday detector. The holidays may be coated with 2-component epoxy coating to complete the operation.

The application methods for the EPON™ Resin 2024/EPI-CURE™ Curing Agent P-104 powder coating involve electrostatic spray, fluidized bed, electrostatic fluidized bed and flocking gun. This system requires the incorporation of a bake cycle to cure the formulation.

This coating will cure in 1.5 to 2.0 minutes at 450 °F to 475 °F.

The formulations suggested in this bulletin may have broad application in the field of surface coatings. If any of your proposed uses are concerned with food contact, it will be...
necessary to consult with Resolution Performance Products LLC and the other raw material suppliers regarding FDA status of the materials involved.

Typical Formulation Table 1 / Formulation Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bake schedule</td>
<td>Min./°F</td>
<td>2/450</td>
</tr>
<tr>
<td>Flexibility, 12 mil film at 0 °F</td>
<td>%</td>
<td>Pass 5</td>
</tr>
<tr>
<td>Degrees per pipe diameter length</td>
<td></td>
<td>Pass 6</td>
</tr>
<tr>
<td>Pencil hardness, ASTM D3363-74</td>
<td></td>
<td>5H</td>
</tr>
<tr>
<td>MIBK resistance</td>
<td>min.</td>
<td>30</td>
</tr>
<tr>
<td>Cathodic disbanding, average radius of disbonded area</td>
<td>mm.</td>
<td>2-3</td>
</tr>
</tbody>
</table>

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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Contact Information

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For literature and technical assistance, visit our website at www.hexion.com

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