# Starting Formulation

**SF 2500**

**Clear Bake Coating**

**EPI-REZ™ Resin 3522-W-60**

<table>
<thead>
<tr>
<th>Formula Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI-REZ Resin 3522-W-60</td>
<td>Hexion</td>
<td>637.50</td>
<td>69.29</td>
</tr>
</tbody>
</table>

Thoroughly pre-mix the following and add to the above under gentle agitation.

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cymel 324</td>
<td>Cytec Industries</td>
<td>53.1</td>
<td>5.71</td>
</tr>
<tr>
<td>Butyl OXITOL™ Glycol Ether</td>
<td>Shell Chemical Co.</td>
<td>22.5</td>
<td>3.00</td>
</tr>
<tr>
<td>2-Propoxethanol</td>
<td></td>
<td>40.2</td>
<td>5.00</td>
</tr>
<tr>
<td>BYK-301 Anti-cratering agent</td>
<td>BYK-Chemie USA</td>
<td>2.0</td>
<td>0.25</td>
</tr>
<tr>
<td>Nacure XP333 (catalyst)</td>
<td>King Industries</td>
<td>2.75</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Blend thoroughly.  

Dissolve following by warming to 150 °F then add to above under agitation before allowing to cool.

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyandiamide</td>
<td>Cytec Industries</td>
<td>13.5</td>
<td>0.41</td>
</tr>
<tr>
<td>Deionized water</td>
<td></td>
<td>133.0</td>
<td>15.97</td>
</tr>
</tbody>
</table>

Total Formulation

904.55 | 100.00

## Mixing Instructions

<table>
<thead>
<tr>
<th>Material</th>
<th>Supplier</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Formulation</td>
<td></td>
<td>904.55</td>
<td>100.00</td>
</tr>
</tbody>
</table>

## Typical Formulation Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonvolatile content by weight</td>
<td>% 48.5</td>
</tr>
<tr>
<td>Nonvolatile content by volume</td>
<td>% 43.2</td>
</tr>
<tr>
<td>Weight per gallon</td>
<td>lb/gal</td>
</tr>
<tr>
<td>pH</td>
<td></td>
</tr>
<tr>
<td>Viscosity @ 25°C</td>
<td>KU 57</td>
</tr>
<tr>
<td>Water</td>
<td>lb/gal</td>
</tr>
<tr>
<td>Organics</td>
<td>lb/gal</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>lb/gal</td>
</tr>
</tbody>
</table>

© and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion’s terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion’s specifications. Nothing contained herein constitutes an offer for the sale of any product.
Typical Film Properties

Table 2 / Film Performance Properties

<table>
<thead>
<tr>
<th>Units</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>min./°F</td>
<td>5/450</td>
<td>30/400</td>
<td>15/400</td>
<td>30/350</td>
</tr>
<tr>
<td>Reverse Impact</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Direct Impact</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>MEK Rubs 2</td>
<td>100 = HB</td>
<td>100 = 3H</td>
<td>100 = 2B</td>
<td>100 = 6B</td>
</tr>
<tr>
<td>Pencil Hardness</td>
<td>4H</td>
<td>5H</td>
<td>5H</td>
<td>4H</td>
</tr>
<tr>
<td>Adhesion</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

1 Films cast #42 Myra Bar (0.75 mil.) on Bonderite 1000; 10 min. flash.
2 Those greater than 400 °F recover loss rapidly; those under 400 °F do not.

Films are subject to flash rusting at intrinsic pH. To avoid flash rusting pH may be adjusted to either 6.0 by addition of glacial acetic acid or to 9.0 by addition of dimethylethanolamine. 1

Films will appear “seedy” after flashing and prior to baking.

1 Supplied by Union Carbide Corp.

Table 3 / Stability Information

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Coating</th>
<th>pH</th>
<th>Films</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 week at 75 °F</td>
<td>Settles</td>
<td>7.2</td>
<td>OK</td>
</tr>
<tr>
<td>1 week at 125 °F</td>
<td>Settles</td>
<td>9.5</td>
<td>OK</td>
</tr>
<tr>
<td>2 weeks at 75 °F</td>
<td>Settles</td>
<td>7.8</td>
<td>OK</td>
</tr>
<tr>
<td>2 weeks at 125 °F</td>
<td>Settles</td>
<td>9.0</td>
<td>Unstable</td>
</tr>
<tr>
<td>Freeze / Thaw</td>
<td>4 cycles</td>
<td>7.0</td>
<td>OK</td>
</tr>
</tbody>
</table>

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.

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.

© and ™ Licensed trademarks of Hexion Inc.

DISCLAIMER

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion’s terms and conditions of sale. Hexion MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion’s specifications. Nothing contained herein constitutes an offer for the sale of any product.
(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/

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

DISCLAIMER
The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.