# Starting Formulation

**SF 2006**

**Black Semi-Gloss Enamel**

**EPON™ Resin 1007F / Beetle 227-8**

## Features
- Excellent chemical resistance
- Excellent flexibility and adhesion

## Formula

### Part A - Grind Charge (Ball Mill)

#### Pigments
- Raven 500 Beads: 13.0 pounds, 0.87 gallons
- Celite 281: 13.0 pounds, 0.68 gallons

#### EPON Resin 1007F Solution
- EPON Resin 1007F: 259.8 pounds, 29.53 gallons
- Ethyl 3-ethoxy propionate: 139.4 pounds, 17.71 gallons
- Xylene: 31.8 pounds, 4.44 gallons
- Toluene: 104.7 pounds, 14.61 gallons

**Total Part A:** 561.7 pounds, 67.84 gallons

### Part B - Letdown (In Mill)

#### Urea Resin and Solvents
- BEETLE 227-8: 117.8 pounds, 14.18 gallons
- Propylene glycol methyl ether acetate: 62.6 pounds, 7.80 gallons
- Xylene: 70.5 pounds, 9.84 gallons

**Total Part B:** 250.9 pounds, 31.82 gallons

### Part C - Silicone Oil Addition

- Dow-Corning 200 Fluid Solution: 2.6 pounds, 0.34 gallons

**Total Part C:** 2.6 pounds, 0.34 gallons

**Total Part A & B & C:** 815.2 pounds, 100.00 gallons

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Mixing Instructions

<table>
<thead>
<tr>
<th>Part</th>
<th>Pounds</th>
<th>Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>561.7</td>
<td>67.84</td>
</tr>
<tr>
<td>Part B</td>
<td>250.9</td>
<td>31.82</td>
</tr>
<tr>
<td>Part C</td>
<td>2.6</td>
<td>0.34</td>
</tr>
<tr>
<td>Part A + B + C</td>
<td>815.2</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Charge the pigments, EPON Resin 1007F and solvents to a ball mill, and grind the mixture for at least 45 hours (pigment agglomeration may result in the finished paint if shorter grinding times are employed). Let down in the mill with the BEETLE 227-8 and remaining solvents. Transfer material into suitable container and add the diluted silicone oil solution. The silicone oil addition should be made in a separate mixing tank to avoid contamination of the mill.

Typical Handling: The finished paint formulation should have a viscosity suitable for spray application with no additional letdown.

This coating system should be baked for 20 minutes at 350 °F.

Typical Formulation

Table 1 / Formulation Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPON Resin 1007F/BEETLE 227-8 ratio (solids)</td>
<td>By weight</td>
<td>70/30</td>
</tr>
<tr>
<td>Nonvolatile content by weight</td>
<td>%</td>
<td>28.2</td>
</tr>
<tr>
<td>Weight per gallon</td>
<td>lb/gal</td>
<td>8.2</td>
</tr>
<tr>
<td>Pigment : Binder Weight Ratio</td>
<td></td>
<td>0.13/1.0</td>
</tr>
<tr>
<td>Pigment volume concentration (PVC)</td>
<td>%</td>
<td>7.1</td>
</tr>
<tr>
<td>Volatile Organic Compound (VOC)</td>
<td>lb/gal</td>
<td>5.82</td>
</tr>
<tr>
<td></td>
<td>g/L</td>
<td>698</td>
</tr>
<tr>
<td>Gloss, 60 degrees</td>
<td>hrs</td>
<td>50-55</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...
Contact Information

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

[www.hexion.com/Contacts/](http://www.hexion.com/Contacts/)

For literature and technical assistance, visit our website at [www.hexion.com](http://www.hexion.com)

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