Eco-Prime™ EWDE102 Military Water-Borne Epoxy Primer

TECHNICAL DATA SHEET

Product Description

Eco-Prime™ EWDE102 military water-borne primer is used to protect aluminum and composite surfaces prior to top coating.

- Excellent adhesion and corrosion resistance
- Compatible with Desothane® HS topcoats
- Excellent fluid resistance
- Service temperature -54°C to 177°C (-65°F to 350°F)

Components

Mix ratio (by volume):
- EWDE102A (base component) 4 parts
- EWDE102B (activator component) 1 part

Specifications

EWDE102 primer is qualified to:
- MIL-PRF-85582 Type II Class C2

Note: PPG Aerospace recommends you check the most recent specification QPL for updated information.

Product Compatibility:

EWDE102 primer is compatible with the following topcoat specifications:
- DMS 2115
- MIL-DTL-53039
- MIL-DTL-64159
- MIL-PRF-22750
- MIL-PRF-85285
- MMS 420
- MIL-C-5541 or equivalent.

Surface Preparation and Pretreatments

Eco-Prime™ EWDE102 primer can be applied over clean, dry, intact aluminum and composite surfaces. Aluminum surfaces shall be treated with materials conforming to MIL-C-5541 or equivalent.
Instructions for Use

Mixing Instructions:
Prior to mixing, thoroughly shake the base component. Add the activator component to the base component and stir well. Maintain constant agitation for 10 minutes to ensure proper mixing.

Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.

Induction Time:
Not Required

Viscosity: (23°C/73°F)
- #2 Signature Zahn cup 26 to 41 seconds
- #4 Ford cup 20 to 30 seconds
- ISO 4mm cup 40 to 68 seconds
- BSB3 cup 42 to 66 seconds
- BSB4 cup 23 to 35 seconds
- AFNOR #4 cup 22 to 34 seconds

Note: Viscosities quoted are the typical ranges obtained when using specified mix ratio.

Pot Life:
4 hours @ 21 - 25°C (70 - 77°F)

Application Guidelines

Recommended Application conditions:
Temperature 15 - 30°C (59 - 86°F)
Relative Humidity 20 - 90%

Application:
Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 15 to 23 microns (0.6 to 0.9 mils). This can be accomplished with one medium coat with a 50% overlap.
These application guidelines represent PPG’s best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.

Theoretical Coverage:
13 square meters/liter at 25 microns dry film (540 square feet/gallon at 1 mil dry film)
Recommended dry film thickness; 15 to 23 microns (0.6 to 0.9 mils)

Dry Film Density:
1.96 grams/cubic centimeter (16.33 pounds/gallon)

Dry Film Weight:
49 grams/square meter at 25 microns dry film (0.010 pounds/square feet at 1 mil dry film)

Equipment:
EWDE102 primer is compatible with all forms of current conventional and HVLP spray equipment.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Tip Size</th>
<th>Pot Pressure</th>
<th>Atomization Pressure at the Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Volume Low Pressure Spray Gun (HVLP)</td>
<td>1.0 mm to 1.4 mm</td>
<td>10 to 20 psi (0.69 to 1.4 bar)</td>
<td>10 psi maximum (0.69 bar)</td>
</tr>
<tr>
<td>Conventional Air Spray Gun</td>
<td>1.2 mm to 1.8 mm</td>
<td>10 to 20 psi (0.69 to 1.4 bar)</td>
<td>45 to 60 psi (3.1 to 4.1 bar)</td>
</tr>
</tbody>
</table>

Equipment Cleaning:
Clean spray equipment as soon as possible after use. Flush spray equipment with DeSoto® CN20, DeSoto® CN44, or Desoclean™ 45 high performance solvent cleaner.

Physical Properties (product)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Dark Green</td>
</tr>
<tr>
<td>Gloss</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
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Dry Times

<table>
<thead>
<tr>
<th></th>
<th>13 - 21°C (55 - 70°F)</th>
<th>22 - 28°C (71 - 84°F)</th>
<th>&gt;29°C (&gt;85°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tack Free</td>
<td>2 hours</td>
<td>1 hour</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Dry to Stack</td>
<td>6 hours</td>
<td>4 hours</td>
<td>5 hours</td>
</tr>
<tr>
<td>Dry to Topcoat</td>
<td>4 - 24 hours</td>
<td>4 - 24 hours</td>
<td>4 - 24 hours</td>
</tr>
<tr>
<td>Dry Hard</td>
<td>6 hours</td>
<td>6 hours</td>
<td>6 hours</td>
</tr>
<tr>
<td>Full Cure</td>
<td>14 days</td>
<td>14 days</td>
<td>14 days</td>
</tr>
</tbody>
</table>

Accelerated cure:
Allow 15 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
followed by 30 minutes at 60°C (140°F)

VOC:
Mixed, ready for use VOC (EPA method 24) 340 grams/liter
Base Component 217 grams/liter
Activator Component 663 grams/liter

Flash point closed cup:
Base Component 116°C (240°F)
Activator Component 13°C (55°F)

Shelf Life:
12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.
24 months from date of manufacture for PRC-DeSoto Standard.
Note: Shelf life is provided for original, unopened containers.

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

Storage Recommendations
Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

Note: When procuring to a qualified material specification, follow those storage instructions.
Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at: www.ppgaerospace.com

For sales and ordering information call the local PPG office at the numbers listed below:

**Asia Pacific**
- **ASC – Australia**
  - Tel 61 (3) 9335 1557
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  - Fax 81 561 35 5201
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  - Fax 65 6861 6162
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  - Fax 44 (0) 1388 770288
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