DeSoto® 825-009 High Temperature Urethane Primer

TECHNICAL DATA SHEET

Product Description

DeSoto® 825-009 High Temperature urethane primer is a heat resistant coating that can withstand an operating temperature of 232°C (450°F). 825-009 is used over aluminum and composite surfaces.

- Excellent adhesion to composites and aluminum
- Corrosion resistance
- Can be used by itself or topcoated
- Excellent fluid resistance
- Service temperature -54°C to 232°C (-65°F to 450°F)

Components

Mix ratio (by volume):

- 825-009 (base component) 4 parts
- 910-175 (activator component) 1 part
- 020-044 (thinner component) 4 parts

Specifications

825-009 primer is qualified to:

- AIMS 04-04-21
- BAMS 565-013
- CMS-CT-122
- SMS-111207 Type 5

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

825-009 primer is listed on:

- BAC 5710 Type 51
- RPS 13.84
- DPM 5893

Note: PPG Aerospace recommends you check the most recent process standard for updated information.

Product Compatibility:

825-009 is compatible with the following epoxy topcoat process standard:

- BAC 5710 Type 53
DeSoto® 825-009 High Temperature Urethane Primer

Surface Preparation and Pretreatments

825-009 primer/coating 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 activator component to the base component and stir well. Add the thinner component while stirring. Maintain constant agitation for 10 minutes to ensure proper mixing. Induction time may be required.

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 15 to 22 seconds
- #4 Ford cup 10 to 17 seconds
- ISO 4mm cup 18 to 30 seconds
- BSB3 cup 26 to 34 seconds
- BSB4 cup 14 to 20 seconds
- AFNOR #4 cup 14 to 18 seconds

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

Pot Life:
8 hours @ 21 - 25°C (70 - 77°F)
DeSoto® 825-009 High Temperature Urethane Primer

Application Guidelines

Recommended Application Conditions:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>15 - 30°C (59 - 86°F)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>20 - 90%</td>
</tr>
</tbody>
</table>

Application:

Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 25 to 50 microns (1.0 to 2.0 mils). This can be accomplished by one or two medium coats with a 50% overlap. Note the first coat should be allowed to tack up before applying the second coat. If the second is applied before the first coat has tacked up, sagging can occur.

825-009 can be topcoated with 529K002 high temperature epoxy topcoat.

*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:

- 9.8 square meters/liter at 25 microns dry film (399 square feet/gallon at 1 mil dry film)
- Recommended dry film thickness; 25 to 50 microns (1.0 to 2.0 mils)

Dry Film Density:

- 1.84 grams/cubic centimeter (15.33 pounds/gallon)

Dry Film Weight:

- 46 grams/square meter at 25 microns dry film (0.00936 pounds/square feet at 1 mil dry film)
DeSoto® 825-009 High Temperature Urethane Primer

Equipment:
825-009 primer is compatible with all non-electrostatic 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</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</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)

- **Color:** Aluminized Green
- **Gloss:** Not Applicable

<table>
<thead>
<tr>
<th>Dry Times</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>Time Between Coats</td>
<td>45 minutes</td>
<td>30 minutes</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Dry to Stack</td>
<td>5 hours</td>
<td>4 hours</td>
<td>3 hours</td>
</tr>
<tr>
<td>Dry to Overcoat</td>
<td>8 - 24 hours</td>
<td>6 - 24 hours</td>
<td>4 - 24 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 30 minutes flash off at 24°C ± 3°C (75°F ± 10°F) followed by 90 - 120 minutes at 121°C (250°F) for dry to topcoat.
DeSoto® 825-009 High Temperature Urethane Primer

VOC:
Mixed, ready to use VOC (EPA method 24) 612 grams/liter
Base Component 510 grams/liter
Activator Component 118 grams/liter
Thinner Component 910 grams/liter

Flash point closed cup:
Base component -6°C (22°F)
Activator Component -6°C (22°F)
Thinner Component -1°C (31°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
Fax 61 (3) 9335 3490

ASC – Japan
Tel 81 561 35 5200
Fax 81 561 35 5201

ASC – South East Asia
Tel 65 6861 1119
Fax 65 6861 6162

ASC – Suzhou
Tel (86-512) 6661 5858
Fax (86-512) 6661 6868

ASC – Tianjin
Tel (86-022) 2482 8625
Fax (86-022) 2482 8600

**Europe and Middle East**

ASC – Central Europe
Tel 49 (40) 742 193 10
Fax 49 (40) 742 139 69

ASC – Middle East & India
Tel (971) 4 883 9666
Fax (971) 4 883 9665

ASC – North Europe
Tel 44 (0) 1388 770222
Fax 44 (0) 1388 770288

ASC – South Europe
Tel 33 (0) 235 53 43 71
Fax 33 (0) 235 53 54 44

**Americas**

1 (818) 362-6711 or 1-800-AEROMIX

Desoclean and DeSoto are trademarks of PRC-DeSoto International, Inc.

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller’s and manufacturer’s sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.