PR143 Epoxy Primer

Product Description

PR143 is a two-pack, ambient curing, chromated epoxy primer developed for the internal and external protection of aircraft.

- Ambient curing
- Excellent resistance to phosphate ester hydraulic oils
- Superior water resistance & adhesion properties
- Excellent corrosion resistance
- Also available in military grades - (separate TDS available on request, may be subject to military export control restrictions)

Components

Mix Ratio (by volume)

- PR143 (Base)                        2 parts
- ACT143 (Activator)                  1 part
- T187 or T17 (Thinner)               to viscosity

Specifications

PR143 is qualified to:

- AVN 7-003
- BS2X33B
- DOL 255
- MSRR 9064
- SP-J-513-A-0016 Type I Class A

PR143 meets the performance requirements of:

- MIL-P-23377 Type I
- AIMS 04-04-001
- AIMS 04-04-004

Product Compatibility

PR143 is compatible with the following primer / topcoat specifications:

- BS2X32
- BS2X34 A+B
- SP-J-513-C-0083
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Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.

Surface Preparation and Pretreatment

Ensure correct surface pre-treatment has been carried out and that drying and overcoat times within the process are adhered to. Ensure the surface is clean, dry, and intact using a high performance solvent cleaner - DeSoto® CN20 or Desoclean™ 45 solvent cleaners are recommended. Check the temperature and humidity are within acceptable limits.

Instructions for Use

Hand stir or mechanically shake the base material until all the components are uniformly dispersed. Add activator to base material and mix thoroughly. Add thinner to the recommended viscosity (approx. 1 volume).

Note: All products and components should be placed in ambient conditions of 15-30°C (59-86°F) for at least 24 hours prior to mixing and application.

Induction Time:
Not required

Viscosity: (23°C/73°F)
- AFNOR2.5 45 - 56 seconds
- AFNOR4 15 - 16 seconds
- BSB3 26 - 30 seconds
- DIN4 13 - 14 seconds
- FORD4 12 - 15 seconds
- ISO3 37 - 50 seconds
- ISO4 18 - 22 seconds
- ZAHN2 16 - 20 seconds

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

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

Application Guidelines

Recommended Application Conditions:
Temperature 15 - 35°C (59 - 95°F)
Relative Humidity 30 - 85%
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**Application:**
Apply one wet even cross-coat to achieve a dry film thickness of 15 - 25 µm (0.6-1 mil)

**Theoretical Coverage:** (ready for use)
11 m² Lt @ 20 µm dry film thickness
440 ft² US gal @ 0.8 mil dry film thickness

**Recommended Dry Film Thickness:**
15 - 25 µm
0.6 - 1 mil

**Dry Film Density:**
2.2 g/cm³
18.8 lbs/US gal

**Dry Film Weight:**
45 g/m² @ 20 µm dry film thickness
0.009 lbs/ft² @ 0.8 mil dry film thickness

*Note: These application guidelines represent PPG’s best advice for usage in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.*

**Equipment:**

PR143 is compatible with most forms of current spray equipment.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Tip Size</th>
<th>Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airmix</td>
<td>609 to 644</td>
<td>725 to 870 psi (50 to 60 bar)</td>
</tr>
<tr>
<td>HVLP Air Spray</td>
<td>1.2 to 1.6 mm</td>
<td>22 to 29 psi (1.5 to 2 bar)</td>
</tr>
<tr>
<td>Conventional</td>
<td>1.2 to 1.5 mm</td>
<td>43 to 58 psi (3 to 4 bar)</td>
</tr>
<tr>
<td>Airless</td>
<td>9 to 11 thou</td>
<td>58 to 87 psi (4 to 6 bar)</td>
</tr>
<tr>
<td>Air-assisted Airless</td>
<td>609 to 611</td>
<td>58 to 73 psi (4 to 5 bar)</td>
</tr>
<tr>
<td>Low Pressure Electrostatic</td>
<td>1.2 mm</td>
<td>72 to 87 psi (5 to 6 bar)</td>
</tr>
</tbody>
</table>

**Equipment Cleaning:**
Clean spray equipment before use and as soon as possible after use, DeSoto® CN20 or Desoclean™ 45 solvent cleaners are recommended.
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Physical Properties

Colour:
- Yellow
- Green

Gloss:
<20 units with a 60° gloss meter

<table>
<thead>
<tr>
<th>DRYING TIMES</th>
<th>23°C (73°F)</th>
<th>70°C (158°F)</th>
<th>125°C (257°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry to Handle</td>
<td>40 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry to Tape</td>
<td>4 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry to Mask</td>
<td>4 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Dry</td>
<td>6 hours</td>
<td>30 minutes</td>
<td></td>
</tr>
<tr>
<td>Re-coat with Self</td>
<td>30 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry to Overcoat</td>
<td>4 to 48 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Cure</td>
<td>7 days</td>
<td>3 hours</td>
<td>1 hour</td>
</tr>
</tbody>
</table>

Note: Drying times listed above are dependent upon film thickness applied, air flow conditions and application technique.

Flash Off Time:
15 minutes @ 20 - 25°C (68 - 77°F) before force dry.

VOC: (ASTM) (2:1:1 mix)
Mixed ready for use 675 g/Lt
PR143 Base Component 550 g/Lt
ACT143 Activator 720 g/Lt
T17 Thinner 830 g/Lt
T187 Thinner 870 g/Lt

Flash Point:
- PR143 Base Component 20°C (68°F)
- ACT143 Activator 20°C (68°F)
- T17 Thinner 16°C (61°F)
- T187 Thinner 32°C (90°F)
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Shelf Life:

<table>
<thead>
<tr>
<th>Component</th>
<th>Shelf Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR143 Base Component</td>
<td>24 months in original unopened container</td>
</tr>
<tr>
<td>ACT143 Activator</td>
<td>24 months in original unopened container</td>
</tr>
<tr>
<td>T17 Thinner</td>
<td>24 months in original unopened container</td>
</tr>
<tr>
<td>T187 Thinner</td>
<td>24 months in original unopened container</td>
</tr>
</tbody>
</table>

Note: Shelf life may vary due to OEM specification requirements. Refer to container label for specific shelf life information.

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.
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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:

<table>
<thead>
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</tr>
</thead>
<tbody>
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<td>Tel 49 (40) 742 193 10</td>
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<td>Fax 61 (3) 9335 3490</td>
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<td>Fax 44 (0) 1388 770288</td>
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<tr>
<td>Fax (86-512) 6661 6868</td>
<td>Fax 33 (0) 235 53 54 44</td>
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<tr>
<td>ASC – Tianjin</td>
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<tr>
<td>Tel (86-022) 2482 8625</td>
<td></td>
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<tr>
<td>Fax (86-022) 2482 8600</td>
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</table>

Americas

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

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