

TECHNICAL DATA

PR-1199 Secondary Fuel Barrier Coating

Description

PR-1199 is a sprayable, polyurethane coating designed for use as a secondary fuel barrier on composite aircraft integral fuel tanks. The product is typically applied to the exterior surfaces of the composite center wing box tank which has been primed with DeSoto primer 512X310 qualified to BMS10-103. Should a leak occur in the tanks primary seal system, PR-1199 will aid in containment of the leak and prevent fuel migration.

PR-1199 cures at room temperature to form a resilient transparent coating with high elongation and tensile strength properties. It gives the advantage of a very fast ambient cure profile for short cycle times and short tack free times. The spray applied product is clear after cure, making for easy detection of cracks/issues with the primed composite tank during inspections or as needed.

The following tests are in accordance with BMS 5-167.

Application Properties (Typical)

| | |
|---|----------------------------|
| Color | |
| Part A | Translucent Amber |
| Part B | Milky White |
| Mixing ratio | |
| By weight | Part A:Part B 26.25:100 |
| By volume | 25:100 |
| Viscosity | |
| Part A | |
| (Brookfield #4 @ 10 rpm), | |
| Poise (Pa-s) | 20 (2) |
| Part B | |
| (Brookfield #2 @ 10 rpm), | |
| Poise (Pa-s) | 10-30 (1-3) |
| Mixed | |
| (Brookfield #5 @ 20 rpm), | |
| Poise (Pa-s) | 15 (1.5) |
| Application life (<10,000 cps), min | 30 |
| Cure time, hrs: | |
| 0.010-0.020 inch (0.25-0.50mm) wet film | |
| 77°F (25°C) | 2-3 |
| Weight Per Gallon, lbs/gal (kg/l) | |
| Part A | 8.7 (1.06) |
| Part B | 8.3 (0.99) |

Performance Properties (Typical)

| | |
|--|-----------|
| Cured 7 days @ 77°F (25°C), 50% RH | |
| Nonvolatile content, % | |
| Part A | 55 |
| Part B | 70 |
| Hours to Ultimate Cure Hardness | 3 |
| Tensile Strength, psi (MPa) | |
| Standard Cure | 2500 (17) |
| 24 hours at 250°F (121°C) | 3000 (20) |
| Elongation, % | |
| Standard Cure | 600 |
| 24 hours at 250°F (121°C) | 400 |
| Surface Appearance of Cured Film - No streaks, blisters, inclusions, undispersed materials, or other surface irregularities. | |
| Environmental Resistance - No loss of adhesion. No blistering or other film failure. | |

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.

Surface Preparation

Immediately before applying sealant to primed substrates, the surfaces should be cleaned with solvents. Contaminants such as dirt, grease, and/or processing lubricants must be removed prior to sealant application.

A progressive cleaning procedure should be employed using appropriate solvents and a new lint-free cloth conforming to AMS 3819. (Reclaimed solvents or tissue paper should not be used.) Always pour solvent on the cloth to avoid contaminating the solvent supply. Wash one small area at a time.

It is important that the surface is dried with a second clean cloth prior to the solvent evaporating to prevent the redeposition of contaminants on the substrate.

Substrate composition can vary greatly. This can affect sealant adhesion. It is recommended that adhesion characteristics to a specific substrate be determined prior to application on production parts or assemblies.

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Mixing Instructions

PR-1199 is supplied in a two-part kit. Mix according to the ratios indicated in the application properties section. Mix Part A and Part B separately to uniformity, then thoroughly mix entire contents of both parts of the kit together taking care to avoid leaving unmixed areas around the sides or bottom of the mixing container.

Packing Options

PR-1199 is supplied in two-part can kits.

Application Instructions

PR-1199 has been developed for use with HVLP spray equipment. Air spray guns or HVLP atomize the coating more effectively than airless or assisted airless spray equipment and are recommended for PR-1199. Though this product may be sprayable, once applied it has moderate thixotropic properties which permit a 10-20 mil (0.25-0.50mm) wet film build on horizontal surfaces.

Storage Life

The storage life of PR-1199 is at least 6 months when stored at temperatures below 90°F (32°C) in original, unopened containers.

Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS 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
1-800-AEROMIX (237-6649).**

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