PPG Aerospace
PRC-DeSoto

TECHNICAL DATA

PR-1772 Class B Low Weight Fuselage Sealant

Description

PR-1772 Class B is a low weight sealant. It has a service temperature range from -65°F (-54°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C). It offers as much as a thirty percent weight savings, per unit volume, over traditional sealants used for these purposes. The cured sealant maintains excellent elastomeric properties after limited exposure to both jet fuel and aviation gas.

PR-1772 Class B is a two-part, chemically curing polysulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form a resilient sealant having excellent adhesion to common aircraft substrates.

The following tests are in accordance with Boeing specification BMS 5-142 Class B specification test methods.

Application Properties (Typical)

Color	
Part A	Black
Part B	Off white
Mixed	Dark brown
Mixing ratio, by weight	Part A:Part B
B-2	10:100
Base viscosity (Brookfield #7 @ 2 rpm), Poise (Pa-s)	9,000 (900)

Slump, inches (mm)

	Initial	50 Minutes	90 Minutes
B-2	0.15 (3.81)	0.15 (3.81)	0.15 (3.81)

Application life and cure time @ 77°F (25°C), 50% RH

	Application life (hours)	Tack free time (hours)	Cure time to 30 A Durometer (hours)
B-1	1	<4	<7
B-2	2	<6	<10

Performance Properties (Typical)

Cured 14 days @ 77°F (25°C), 50% RH

Cured specific gravity	1.09
Nonvolatile content, %	91
Ultimate cure hardness, Durometer A	45

Peel strength, pli (N/25 mm), 100% cohesion
Cured 14 days @ 77°F (25°C), 50% RH

MIL-C-5541 (Alodine aluminum)	35 (156)
MIL-A-8625 Type I CAA (Anodized aluminum)	38 (169)
AMS 5901 (Stainless steel)	38 (169)
AMS-T-9046 (Titanium comp. B)	35 (156)
BMS 5-89 (Corrosion Inhibiting Primer)	37 (164)
BMS 10-11 Type I Grade A (Epoxy primer)	38 (169)
BMS 10-11 Type I Grade E (Epoxy primer)	34 (151)
BMS 10-11 Type II Grade A (Epoxy primer)	27 (120)
BMS 10-11 Type II Grade D (Epoxy primer)	37 (164)
BMS 10-20 Type II (Epoxy primer)	38 (169)
BMS 10-60 Type I Grade A (Polyurethane topcoat)	35 (156)
BMS 10-60 Type II Grade A (Polyurethane topcoat)	37 (164)
AMS-QQ-A-250/13 (Alclad)	36 (160)
AMS-QQ-A-250/12 (Bare Aluminum)	38 (169)

Type III fuel immersion, 7 days @ 120°F (49°C)

MIL-C-5541 (Alodine aluminum)	38 (169)
MIL-A-8625 Type I CAA (Anodized aluminum)	35 (156)
AMS 5901 (Stainless steel)	38 (169)
AMS-T-9046 (Titanium comp. B)	35 (156)
BMS 5-89 (Corrosion Inhibiting Primer)	32 (142)
BMS 10-11 Type I Grade A (Epoxy primer)	32 (142)
BMS 10-11 Type I Grade E (Epoxy primer)	29 (129)
BMS 10-11 Type II Grade A (Epoxy primer)	32 (142)
BMS 10-11 Type II Grade D (Epoxy primer)	37 (164)
BMS 10-20 Type II (Epoxy primer)	34 (151)
BMS 10-60 Type I Grade A (Polyurethane topcoat)	36 (160)
BMS 10-60 Type II Grade A (Polyurethane topcoat)	26 (116)
AMS-QQ-A-250/13 (Alclad)	36 (160)
AMS-QQ-A-250/12 (Bare Aluminum)	35 (156)

3% NaCl-H_2O immersion, 7 days @ 120°F (49°C)

MIL-C-5541 (Alodine aluminum)	36 (160)
MIL-A-8625 Type I CAA (Anodized aluminum)	36 (160)
AMS 5901 (Stainless steel)	38 (169)
AMS-T-9046 (Titanium comp. B)	37 (164)
BMS 5-89 (Corrosion Inhibiting Primer)	35 (156)
BMS 10-11 Type I Grade A (Epoxy primer)	32 (142)
BMS 10-11 Type I Grade E (Epoxy primer)	34 (151)
BMS 10-11 Type II Grade A (Epoxy primer)	33 (147)
BMS 10-11 Type II Grade D (Epoxy primer)	37 (164)
BMS 10-20 Type II (Epoxy primer)	35 (156)
BMS 10-60 Type I Grade A (Polyurethane topcoat)	36 (160)
BMS 10-60 Type II Grade A (Polyurethane topcoat)	32 (142)
AMS-QQ-A-250/13 (Alclad)	37 (164)
AMS-QQ-A-250/12 (Bare Aluminum)	36 (160)

Tensile strength, psi (KPa)

Cured 14 days @ 77°F (25°C), 50% RH	190 (1311)
Type III fuel immersion, 7 days @ 120°F (49°C)	220 (1518)

Elongation, %

Cured 14 days @ 77°F (25°C), 50% RH	280
Type III fuel immersion, 7 days @ 120°F (49°C)	275

Corrosion resistance - No corrosion, adhesion loss, softening, or blistering after 7 day immersion in AMS 2629 JRF @ 120°F (49°C).

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Resistance to hydrocarbons - 7 days @ 140°F (60°C) immersed in AMS 2629 JRF.

Weight loss, %	4.9

Resistance to heat - No softening, sponging blistering, checking, cracking, shrinkage, or adhesion loss.

Flexibility - No cracks after bending 180 degrees over 0.125 inch (3.18 mm) mandrel.

Repairability to itself - Excellent to both freshly cured as well as fuel aged and abraded fillets.

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.

For a more thorough discussion of proper surface preparation, please consult the SAE Aerospace Information Report AIR 4069. This document is available through SAE, 400 Commonwealth Avenue, Warrendale, PA 15096-0001.

Mixing Instructions

PR-1772 Class B is supplied in a two-part kit. Mix according to the ratios indicated in the application properties section. Mix Part A separately to uniformity, then thoroughly mix entire contents of both parts of kit together taking care to avoid leaving unmixed areas around the sides or bottom of the mixing container.

Storage Life

The storage life of P/S 1772 Class B is at least 9 months when stored at temperatures between 40°F(4°C) and 90°F (32°C) in original, unopened containers.

Health Precautions

This product is safe to use and apply when recom-mended 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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