Technical Data Sheet
Aerospace Sealants

PR-1775 class B non-chromate corrosion inhibitive sealant

Description

PR-1775 Class B is a non-chromate, corrosion inhibitive sealant. It has a service temperature range from -65 °F (-54 °C) to 250 °F (121 °C), with short term recurring exposures (approximately 6 hours) to 360 °F (182 °C). This material acts as an effective barrier against the common causes of corrosion on aluminum alloys or between dissimilar metals. The cured sealant maintains excellent elastomeric properties after exposure to both jet fuel and aviation gas.

PR-1775 Class B is a two-part, manganese dioxide cured, PERMAPOL™ P-5 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 AMS 3265 Class B specification test methods.

Application properties (typical)

Color	
Part A	Black
Part B	White
Mixed	Gray
Mixing ratio, By weight	Part A:Part B
B-1/2 12:100	
B-2 10:100	
Base viscosity (Brookfield #7 @ 2 rpm), Poise (Pa-s)	1,000 (1100)

Slump, inches (mm)

	Initial	50 Minutes	90 Minutes
B-1/2	0.15 (3.81)	——	——
B-2	0.10 (2.54)	0.20 (5.08)	0.30 (7.62)

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-1/2	1/2	4	6
B-2	2	16	24

Performance properties (typical)

Cured 14 days @ 77 °F (25 °C), 50% RH	
Cured specific gravity	1.59
Nonvolatile content, %	94
Ultimate cure hardness, Durometer A	51

Peel strength, pli (N/25 mm), 100% cohesion

AMS 2629 JRF immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	37 (165)
AMS 4901 (Titanium)*	34 (151)
AMS 5516 (Stainless steel)*	32 (142)
MIL-C-5541 (Alodine aluminum)	35 (156)
MIL-C-27725 (IFT coating)	33 (147)

AMS 2629 JRF/NaCl-H2O immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	38 (169)
AMS 4901 (Titanium)*	40 (178)
AMS 5516 (Stainless steel)*	43 (191)
MIL-C-5541 (Alodine aluminum)	43 (191)
MIL-C-27725 (IFT coating)	38 (169)

*Primed with PR-148 Adhesion Promoter

Tensile strength, psi (KPa)	
Standard cure, 14 days @ 77 °F (25 °C), 50% RH	495 (3413)
12 days immersion in AMS 2629 JRF @ 140 °F (60 °C) 5	500 (3448)
Elongation, %	
Standard cure, 14 days @ 77 °F (25 °C), 50% RH	420
12 days immersion in AMS 2629 JRF @ 140 °F (60 °C)	290

Corrosion test by cyclic loading and exposure - No signs of corrosion or sealant deterioration.

Corrosion test by galvanic cell method, 1 week AMS 4045 Aluminum/AMS 4911 Titanium couple, - No signs of corrosion or sealant deterioration.

AMS 4045 Aluminum/AMS 2400 Cadmium couple, - No signs of corrosion or sealant deterioration.

Thermal rupture resistance - Retains pressure of 10 psi with only negligible deformation, both before and after immersion in AMS 2629 JRF.
Low temperature flexibility @ -65 °F (-54 °C) - No cracking, checking or loss of adhesion.

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Resistance to hydrocarbons - 7 days @ 140 °F (60 °C) immersed in AMS 2629 JRF.	
Weight loss, %	5.0
Swell, %	6.6
Paintability - No separation from sealant.	

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.

Fungus resistance	Non-nutrient
Shaving and sanding - No rolling or tearing	

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.

Packing options

PR-1775 Class B is supplied in two-part can kits, SEMCO™ cartridges, and pre-mixed and frozen *Semco* cartridges.

Mixing instructions

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 kit together taking care to avoid leaving unmixed areas around the sides or bottom of the mixing container.

Storage life

The storage life of PR-1775 Class B is at least 9 months when stored at temperatures below 80 °F (27 °C) in original, unopened containers.

The storage life of PR-1775 Class B in pre-mixed and frozen *Semco* cartridges is at least 30 days when stored at temperatures below -40 °F (-40 °C).

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

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