

Technical Data Sheet

Aerospace Sealants



PR-1750 Class B fuel tank sealant

Description

PR-1750 Class B is an aircraft integral fuel tank sealant. It has a service temperature range from -65 °F (-54 °C) to 250 °F (121 °C), with intermittent excursions up to 360 °F (182 °C). This material is designed for fillet sealing of fuel tanks and other aircraft fuselage sealing applications. The cured sealant maintains excellent elastomeric properties after prolonged exposure to both jet fuel and aviation gas.

PR-1750 Class B is a two-part, manganese dioxide cured 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.

PR-1750 Class B is available in preformed parts using PPG's proprietary Ambient Reactive Extrusion (PPG ARE™) additive printing technology.

The following tests are in accordance with AMS 3276 Class B specification test methods, unless otherwise noted.

Application properties (typical)

Color			
Part A	Black		
Part B	Beige		
Mixed	Dark Gray		
Mixing Ratio	Part A: Part B		
By weight	10:100		
Base Viscosity, Poise (Pa-s)			
(Brookfield #7 @ 2 rpm)	12,000 (1,200)		
Slump, inches (mm)			
	Initial	50 minutes	90 minutes
B-1/2	0.30 (7.62)	—	—
B-2	0.30 (7.62)	0.25 (6.35)	0.25 (6.35)
	Initial	2 hours	3.5 hours
B-4	0.30 (7.62)	0.25 (5.08)	0.20 (5.08)
	Initial	3 hours	5.5 hours
B-6	0.25 (6.35)	0.20 (5.08)	0.20 (5.08)
Application life and cure time @ 77 °F (25 °C), 50% RH			
			Cure time to 30
	Application life	Tack free time	Durometer A
	(hours)	(hours)	(hours)
B-1/2	1/2	< 4	8
B-2	2	<8	11
B-4	4	<36	90
B-6	6	<48	120

Performance properties (typical)

Cured 14 days @ 77 °F (25 °C), 50% RH	
Cured specific gravity	1.58
Nonvolatile content, %	97
Ultimate cure hardness, Durometer A	50
Peel strength, pli (N/25 mm), 100% cohesion	
AMS 2629 JRF immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	34 (151)
AMS 4901 (Titanium)*	35 (156)
AMS 5516 (Stainless steel)*	34 (151)
MIL-C-5541 (Alodine aluminum)	34 (151)
MIL-PRF-27725 (IFT coating)	35 (156)
AMS2629 Type I fuel/3% saltwater immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	39 (173)
AMS 4901 (Titanium)*	41 (182)
AMS 5516 (Stainless steel)*	39 (173)
MIL-C-5541 (Alodine aluminum)	39 (173)
MIL-PRF-27725 (IFT coating)	37 (164)
*Primed with PR-148 Adhesion Promoter	
Tensile Strength, psi (kPa)	
Standard Cure	420 (2896)
12 days immersion in AMS2629 JRF @ 140 °F (60 °C) + 60 hours @ 160 °F (71 °C) + 6 hours @ 180 °F (82 °C)	300 (2069)
Elongation, %	
Standard Cure	250
12 days immersion in AMS2629 JRF @ 140 °F (60 °C) + 60 hours @ 160 °F (71 °C) + 6 hours @ 180 °F (82 °C)	325
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.	
Corrosion resistance - No corrosion, adhesion loss, softening, or blistering after immersion in 2-layer salt water/AMS 2629 JRF after 12 days @ 140 °F (60 °C) + 60 hours @ 160 °F (71 °C) + 6 hours @ 180 °F (82 °C).	
Resistance to hydrocarbons - 7 days @ 140 °F (60 °C) immersed in AMS 2629 JRF	
Weight loss, %	4
Swell, %	8.9

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

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

Resistance to other fluids - Excellent resistance to water, alcohols, petroleum-base and synthetic lubricating oils, and petroleum-base hydraulic fluids.

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. (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-1750 Class B is supplied in two-part can kits, Semkit® injection kits, and pre-mixed and frozen Semco® cartridges.

PR-1750 Class B is also available in preformed parts using *PPG ARE* technology.

Storage life

The storage life of PR-1750 Class B stored in two-part can kits and *Semkits* is at least 6 months when stored at temperatures below 80 °F (27 °C) in original, unopened containers.

The storage life of PR-1750 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 Safety Data Sheet (SDS) which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available upon request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

**For emergency medical information call
1-800-228-5635**

**Additional information can be found at:
www.ppgaerospace.com**

**For sales and ordering information call
1-800-AEROMIX (237-6649).**

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