

TECHNICAL DATA

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.

The following tests are in accordance with AMS 3276 Class B specification test methods.

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			
(Brookfield #7 @ 2 rpm),			
Poise (Pa-s)		12,000 (1200)	
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 (6.35)	0.20 (5.08)
	Initial	4 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			
	Application life (hours)	Tack free time (hours)	Cure time to 35 A Durometer (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)
AMS 2629 JRF/NaCl-H ₂ O 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, 14 days @ 77°F (25°C), 50% RH	
	420 (2896)
12 days immersion in AMS 2629 JRF @ 140°F (60°C), + 60 hours @ 160°F (71°C), + 6 hours @ 180°F (82°C)	
	300 (2069)

Elongation, %	
Standard cure, 14 days @ 77°F (25°C), 50% RH	
	250
12 days immersion in AMS 2629 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).

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

Weight loss, %	4.0
Swell, %	8.9

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 lubri-
cating oils, and petroleum-base hydraulic fluids.

Fungus resistance Non-nutrient

Shaving and sanding - No rolling or tearing

Note: The application and performance property val-
ues above are typical for the material, but not intend-
ed for use in specifications or for acceptance inspec-
tion 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 tis-
sue paper should not be used.) Always pour solvent
on the cloth to avoid contaminating the solvent sup-
ply. 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 avail-
able through SAE, 400 Commonwealth Avenue,
Warrendale, PA 15096-0001.

Packing Options

PR-1750 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 applica-
tion 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-1750 Class B stored in two-part
can kits and Semo® cartridges is at least 9 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 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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