

### PR-1828 Class B rapid curing fuel tank sealant

#### Description

PR-1828 Class B is an aircraft integral fuel tank sealant. It has a service temperature range from -80°F (-62°C) to 320°F (160°C), with intermittent excursions up to 420°F (216°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-1828 Class B is a two-part, epoxy cured Permapol® P-3 polythioether compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. Unlike standard polysulfide fuel tank sealants, it cures at low temperatures and is unaffected by changes in relative humidity. This sealant has excellent adhesion to common aircraft substrates.

The following tests are in accordance with AMS 3277 Class B specification test methods.

#### Application properties (typical)

Color			
part A			purple
part B			white
mixed			white
Mixing ratio			part A: part B
by weight			12:100
Base viscosity			
(Brookfield #7 @ 2 rpm),			
poise (Pa-s)			12,000 (1200)
Slump, inches (mm)			
Initial	50 minutes		90 minutes
B-1/4	0.10 (2.54)	-----	-----
B-1/2	0.10 (2.54)	-----	-----
B-2	0.20 (5.08)	0.15 (3.81)	0.15 (3.81)

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

			Cure time
	Application	Tack free	to 35 A
	life	time	Durometer
	(hours)	(hours)	(hours)
B-1/4	1/4	<1	1.5
B-1/2	1/2	<2	3
B-2	2	<12	16

#### Performance properties (typical)

Standard cure 7 days @ 77°F (25°C), 50% RH

Cured specific gravity	1.47
Nonvolatile content, %	96

Ultimate cure hardness,	
durometer A	47

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

AMS 2629 JRF immersion, 7 days @ 140°F (60°C)

AMS 2471 (anodized aluminum)	39 (173)
AMS4911 (titanium)	34 (151)
AMS 5516 (stainless steel)	34 (151)
MIL-DTL-5541 (alodine aluminum)	43 (191)
AMS-C-27725 (IFT coating)	38 (169)

AMS 2629 JRF/NaCl-H<sub>2</sub>O immersion, 7 days @ 140°F (60°C)

AMS 2471 (anodized aluminum)	45 (200)
AMS4911 (titanium)	45 (200)
AMS 5516 (stainless steel)	40 (178)
MIL-DTL-5541 (alodine aluminum)	50 (222)
AMS-C-27725 (IFT coating)	46 (205)

Tensile strength, psi (KPa)

standard cure, 7 days	
@ 77°F (25°C), 50% RH	350 (2413)
standard heat cycle	230 (1586)

Elongation, %

standard cure, 7 days	
@ 77°F (25°C), 50% RH	350
standard heat cycle	225

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, %	2.5
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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 freshly cured as well as fuel aged and abraded fillets.

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Reparability to polysulfide sealants - excellent adhesion to sealant when used with PR-188.

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

Fungus resistant non-nutrient

Shaving or sanding - no rolling or tearing

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**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-1828 Class B is supplied in a Semkit® package. See the container for specific mixing instructions.

## Storage Life

The storage life of PR-1828 Class B is at least 9 months when stored at temperatures below 80°F (27°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 Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on 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](http://www.ppgaerospace.com)**

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

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