

### PR-2870 Class B non-chromate corrosion inhibitive sealant

#### Description

PR-2870 Class B is a light weight, non-chromate corrosion inhibitive sealant. It has a service temperature range from -80°F (-62°C) to 250°F (121°C), with intermittent excursions up to 300°F (149°C). This material acts as an effective corrosion inhibitor when used with aluminum alloys or with dissimilar metals. The cured sealant maintains elastomeric properties after limited exposure to both jet fuel and aviation gas.

PR-2870 Class B is a two-part, epoxy cured PERMAPOL® P-3.1 polythioether 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

MIL-PRF-81733 Type II, Class 2, Grade B test methods.

#### Application properties (typical)

Color			
	Part A	black	
	Part B	white	
	Mixed	gray	
Mixing ratio			
		part A:part B	
	By weight	18.6:100	
Base viscosity			
	(Brookfield #7 @ 2 rpm),		
	Poise (Pa-s)	12,800 (1280)	
Slump, inches (mm)			
	Initial	50 minutes	90 minutes
B-1/2	0.10-0.20 (2.54-5.08)	----	----
B-2	.10-0.20 (2.54-5.08)	0.10-0.20 (2.54-5.08)	0.10-0.20 (2.54-5.08)
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	<7	12

#### Performance properties (typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.1
Nonvolatile content, %	98
Ultimate cure hardness, Durometer A	48
Peel strength, pli, cohesive failure	
Std. Conditioning	
MIL-C-81706 (alodine) 60, 100%	
MIL-A-8625 (anodized)	62, 100%
QQ-P-416 (cadmium-plated steel)	61, 100%
AMS4376 (alodine magnesium)	54, 100%
MIL-T-9046 (titanium C)	57, 100%
MIL-PRF-23377 (std.cure) (epoxy primer)	48, 100%
Gr. BMI composite	54, 100%
48 hours @ 140°F in MIL-PRF-83282 (hydraulic fluid)	
MIL-C-81706 (alodine)	43, 100%
MIL-A-8625 (anodized)	38, 100%
QQ-P-416 (cadmium-plated steel)	38, 100%
AMS4376 (alodine magnesium)	33, 100%
MIL-T-9046 (titanium C)	38, 100%
MIL-PRF-23377 (std.cure) (epoxy primer)	54, 100%
Gr. BMI composite	47, 100%
48 hours @ 140°F in MIL-PRF-7808 (lubricating oil)	
MIL-C-81706 (alodine)	42, 100%
MIL-A-8625 (anodized)	59, 100%
QQ-P-416 (cadmium-plated steel)	54, 100%
AMS4376 (alodine magnesium)	30, 100%
MIL-T-9046 (titanium C)	45, 100%
MIL-PRF-23377 (std.cure) (epoxy primer)	41, 100%
Gr. BMI composite	36, 100%
48 hours @ 140°F in MIL-PRF-23699 (lubricating oil)	
MIL-C-81706 (alodine)	40, 100%
MIL-A-8625 (anodized)	54, 100%
QQ-P-416 (cadmium-plated steel)	48, 100%
AMS4376 (alodine magnesium)	33, 100%
MIL-T-9046 (titanium C)	48, 100%
MIL-PRF-23377 (std. cure) (epoxy primer)	37, 100%
Gr. BMI composite	38, 100%
48 hours @ 140°F in 3% NaCl	
MIL-C-81706 (alodine)	57, 100%
MIL-A-8625 (anodized)	41, 100%
QQ-P-416 (cadmium-plated steel)	46, 100%
AMS4376 (alodine magnesium)	28, 100%
MIL-T-9046 (titanium C)	53, 100%
MIL-PRF-23377 (std.cure) (epoxy primer)	49, 100%
Gr. BMI composite	35, 100%

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48 hours @ 140°F in AMS 2629 (JRF)	
MIL-C-81706 (alodine)	46, 100%
MIL-A-8625 (anodized)	49, 100%
QQ-P-416 (cadmium-plated steel)	53, 100%
AMS4376 (alodine magnesium)	29, 100%
MIL-T-9046 (titanium C)	42, 100%
MIL-PRF-23377 (std.cure) (epoxy primer)	40, 100%
Gr. BMI composite	34, 100%

Tensile strength, psi (KPa)  
Standard cure, 14 days  
@ 77°F (25°C), 50% RH 262 (1806)

Elongation, %  
Standard cure, 14 days  
@ 77°F (25°C), 50% RH 517

Low temperature flexibility @ -80°F (-62°F) - No cracking, checking or loss of adhesion.

Repairability, pli, Cohesive Failure  
PR-2870 to P/S 870 B-2 58, 100%  
PR-2870 to itself 44, 100%

Salt spray (fog) test for 670 hrs. (ASTM B117) - No corrosion to base substrate or deterioration of sealant.

Fungus resistance Non-nutrient

**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-2870 Class B is supplied in a two-part SEMKIT® package or pre-mixed and frozen cartridge.

## Storage life

The storage life of PR-2870 Class B is at least 9 months when stored at temperatures between 40°F (4°C) and 80°F (27°C) in original, unopened containers.

The storage life of PR-2870 Class B in pre-mixed and frozen cartridges is at least 42 days when stored at temperatures below -80°F (-62°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 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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