

TECHNICAL DATA

PR-2870 Class A Non-Chromate Corrosion Inhibitive Sealant

Description

PR-2870 Class A 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 A is a two-part, epoxy cured Permapol® P-3.1 polythioether compound. The uncured material is suitable for application by brush up to a thickness of 25 mils. 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 I, 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		17.3:100
Base viscosity			
	(Brookfield #7 @ 2 rpm),		
	Poise (Pa-s)		350 (35)
Application life and cure time @ 77°F (25°C), 50% RH			
			Cure time
	Application	Tack free	to 30 A
	life	time	Durometer
	(hours)	(hours)	(hours)
A-1/2	1/2	6	10
A-2	2	8	18

Performance Properties (Typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.1
Nonvolatile content, %	91
Ultimate cure hardness, Durometer A	42

Peel Strength, pli, Cohesive Failure

Std. Conditioning	
MIL-C-81706 (Alodine)	43, 100%
MIL-A-8625 (Anodized)	42, 100%
QQ-P-416 (Cadmium-plated steel)	46, 100%
AMS4376 (Alodine magnesium)	35, 100%
MIL-T-9046 (Titanium C)	32, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	37, 100%
Gr. BMI composite	43, 100%

48 hours @ 140°F in MIL-PRF-83282 (Hydraulic Fluid)	
MIL-C-81706 (Alodine)	39, 100%
MIL-A-8625 (Anodized)	36, 100%
QQ-P-416 (Cadmium-plated steel)	31, 100%
AMS4376 (Alodine magnesium)	27, 100%
MIL-T-9046 (Titanium C)	28, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	29, 100%
Gr. BMI composite	30, 100%

48 hours @ 140°F in MIL-PRF-7808 (Lubricating Oil)	
MIL-C-81706 (Alodine)	34, 100%
MIL-A-8625 (Anodized)	34, 100%
QQ-P-416 (Cadmium-plated steel)	35, 100%
AMS4376 (Alodine magnesium)	26, 100%
MIL-T-9046 (Titanium C)	27, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	35, 100%
Gr. BMI composite	35, 100%

48 hours @ 140°F in MIL-PRF-23699 (Lubricating Oil)	
MIL-C-81706 (Alodine)	32, 100%
MIL-A-8625 (Anodized)	31, 100%
QQ-P-416 (Cadmium-plated steel)	36, 100%
AMS4376 (Alodine magnesium)	23, 100%
MIL-T-9046 (Titanium C)	26, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	29, 100%
Gr. BMI composite	32, 100%

48 hours @ 140°F in 3% NaCl	
MIL-C-81706 (Alodine)	41, 100%
MIL-A-8625 (Anodized)	36, 100%
QQ-P-416 (Cadmium-plated steel)	37, 100%
AMS4376 (Alodine magnesium)	29, 100%
MIL-T-9046 (Titanium C)	28, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	30, 100%
Gr. BMI composite	33, 100%

48 hours @ 140°F in AMS 2629 (JRF)	
MIL-C-81706 (Alodine)	25, 100%
MIL-A-8625 (Anodized)	26, 100%
QQ-P-416 (Cadmium-plated steel)	35, 100%
AMS4376 (Alodine magnesium)	27, 100%
MIL-T-9046 (Titanium C)	31, 100%
MIL-PRF-23377 (std. cure) (Epoxy primer)	24, 100%
Gr. BMI composite	33, 100%

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Tensile strength, psi (KPa)
Standard cure, 14 days
@ 77°F (25°C), 50% RH 270 (1862)

Elongation, %
Standard cure, 14 days
@ 77°F (25°C), 50% RH 395

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 39, 100%
PR-2870 to itself 38, 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 A is supplied in a two-part Semkit package or pre-mixed and frozen cartridge.

Storage Life

The storage life of PR-2870 Class A 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 A 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 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.

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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