

PR-1426 quick repair fuel tank sealant

Description

PR-1426 is a quick repair, 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 275°F (135°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-1426 is a two-part, dichromate cured polysulfide compound. The uncured material is suitable for application by extrusion gun or brush. This sealant cures at temperatures from 20°F (-7°C) upward to form a resilient sealant. It has excellent adhesion to common aircraft substrates when correctly primed with PR-1426 Adhesion Promoter.

The following tests are in accordance with MIL-S-83318 Class A specification test methods.

Application properties (typical)

Color		
Part A		Black
Part B		White
Mixed		Olive green
Mixing ratio		Part A:Part
By weight		13.3:100
Base viscosity		
(Brookfield #6 @ 10 rpm),		
Poise (Pa-s)		3,000 (300)
Application life @ 77°F (25°C), 50% RH		10 Min.
	Tack free	Cure time
	time	to 30 A
	(hours)	Durometer
	(hours)	(hours)
77°F (25°C)	<3	8
40°F (4°C)	<12	24
20°F (-7°C)	<48	96

Performance properties (typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.45
Nonvolatile content, %	93
Ultimate cure hardness,	
Durometer A	56
Peel strength, pli (N/25 mm), 100% cohesion,	
primed with PR-1426 Adhesion Promoter	
JRF immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	20 (89)
MIL-C-5541 (Alodine aluminum)	20 (89)
MIL-C-27725 (IFT coating)	18 (80)
MIL-S-5059 (Stainless steel)	20 (89)
MIL-T-9046 (Titanium comp. B)	20 (89)
QQ-A-250/13 (Alclad)	20 (89)
JRF/NaCl-H ₂ O immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	20 (89)
MIL-C-5541 (Alodine aluminum)	20 (89)
MIL-C-27725 (IFT coating)	22 (98)
MIL-S-5059 (Stainless steel)	20 (89)
MIL-T-9046 (Titanium comp. B)	20 (89)
QQ-A-250/13 (Alclad)	20 (89)
Tensile strength, psi (KPa)	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	300 (2069)
14 days immersion in JRF @ 140°F (60°C)	240 (1655)
7 days @ 250°F (121°C)	350 (2413)
Elongation, %	
Standard cure, 14 days @ 77°F (25°C),	
50% RH	175
14 days immersion in JRF @ 140°F (60°C)	110
7 days @ 250°F (121°C)	60
Thermal rupture resistance - Retains pressure of	
10 psi with only negligible deformation, both before and	
after immersion in 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 20-day immersion in	
2-layer salt water/JRF @ 140°F (60°C).	
Resistance to hydrocarbons - 7 days	
@ 140°F (60°C) immersed in JRF.	
Weight loss, %	5.0
Flexibility - No cracks after bending 180 degrees	
over 0.125 inch (3.18 mm) mandrel.	

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Repairability to itself - Excellent to both freshly 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

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 the appropriate solvents and 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 re-deposition 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.

After the surface has been cleaned, apply PR-1426 Adhesion Promoter with a clean brush or a gauze pad. Care must be taken to obtain a uniform thin coat.

At standard temperature, allow the adhesion promoter to dry 30 minutes. It is not recommended to apply adhesion promoter below 45°F (7°C). The sealant must be applied within 8 hours of the application of the adhesion promoter. If this time is exceeded, the surface should be recleaned and the adhesion promoter reapplied. Do not use adhesion promoter if it contains particles or precipitate.

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.

Mixing instructions

PR-1426 is supplied in a Semkit® package accompanied by an appropriate amount of PR-1426 Adhesion Promoter. See the container for specific mixing instructions. The mix ratio is very critical.

Storage life

The storage life of PR-1426 is at least 6 months when stored at temperatures between 40°F (4°C) and 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 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.

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