

TECHNICAL DATA

PR-1422 Class B Fuel Tank Sealant

Description

PR-1422 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 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-1422 Class B is a two-part, dichromate 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-S-8802 Class B specification test methods.

Application Properties (Typical)

Color			
Part A	Black		
Part B	Light brown		
Mixed	Brown		
Mixing ratio			
By weight	13.3:100		
Base viscosity			
(Brookfield #7 @ 2 rpm),			
Poise (Pa-s)	13,000 (1300)		
Slump, inches (mm)			
	Initial	50 Minutes	90 Minutes
B-1/2	0.15 (3.81)	_____	_____
B-2	0.10 (2.54)	0.15 (3.81)	0.20 (5.08)
Application life and cure time @ 77°F (25°C), 50% RH			
	Application	Tack free	Cure time
	life	time	to 35 A
	(hours)	(hours)	Durometer
			(hours)
B-1/2	1/2	<8	24
B-2	2	<20	36

Performance Properties (Typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.45
Nonvolatile content, %	92
Ultimate cure hardness, Durometer A	55
Peel strength, pli (N/25 mm), 100% cohesion	
JRF immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	38 (169)
MIL-C-5541 (Alodine aluminum)	39 (173)
MIL-C-27725 (IFT coating)	39 (173)
MIL-S-5059 (Stainless steel)*	36 (156)
MIL-T-9046 (Titanium comp. C)*	32 (142)
QQ-A-250/13 (Alclad)	35 (156)
JRF/NaCl-H ₂ O immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	38 (169)
MIL-C-5541 (Alodine aluminum)	39 (173)
MIL-C-27725 (IFT coating)	39 (173)
MIL-S-5059 (Stainless steel)*	35 (156)
MIL-T-9046 (Titanium comp. C)*	30 (133)
QQ-A-250/13 (Alclad)	32 (142)
*Primed with PR-148 Adhesion Promoter	
Tensile strength, psi (KPa)	
Standard cure, 14 days @ 77°F (25°C), 50% RH	370 (2551)
14 days immersion in JRF @ 140°F (60°C)	200 (1379)
7 days @ 250°F (121°C)	500 (3448)
72 hours immersion in JRF @ 140°F (60°C), + 72 hours @ 120°F (49°C), + 7 days @ 250°F (121°C)	500 (3448)
24 hours @ 250°F (121°C), + 7 days immersion in JRF @ 140°F (60°C)	200 (1379)
Elongation, %	
Standard cure, 14 days @ 77°F (25°C), 50% RH	310
14 days immersion in JRF @ 140°F (60°C)	320
7 days @ 250°F (121°C)	210
72 hours immersion in JRF @ 140°F (60°C), + 72 hours @ 120°F (49°C), + 7 days @ 250°F (121°C)	170

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Elongation, %

24 hours @ 250°F (121°C), + 7 days immersion in
JRF @ 140°F (60°C) 230

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/Jet reference test fluid at 140°F.

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.

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 lubricat-
ing oils, and petroleum-base hydraulic fluids.

Fungus resistance	Non-nutrient
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Note: The application and performance property
values 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.

Mixing Instructions

PR-1422 Class B is supplied in a two-part kit. Mix
according to the ratios indicated in the application
properties section. Mix Part A and Part B separately
to uniformity, then thoroughly mix entire contents of
both parts of the 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-1422 Class B is at least 9 months
when stored at temperatures between 40°F (5°C) and
80°F (27°C) in original, unopened containers.

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).

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

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