

TECHNICAL DATA

PR-1750 Class A Fuel Tank Sealant

Description

PR-1750 Class A 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 360°F (182°C). This material is designed for brush sealing of fasteners in 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-1750 Class A is a two-part, manganese dioxide cured polysulfide compound. The uncured material is suitable for application by brush in thickness up to 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 AMS 3276 Class A specification test methods.

Application Properties (Typical)

Color			
Part A			Black
Part B			Beige
Mixed			Dark gray
Mixing ratio		Part A:Part B	
By weight		10:100	
Base viscosity			
(Brookfield #6 @ 10 rpm),			
Poise (Pa-s)		300 (30)	
Application life and cure time @ 77°F (25°C), 50% RH			
	Application life (hours)	Tack free time (hours)	Cure time to 35 A Durometer (hours)
A-1/2	1/2	<10	24
A-2	2	<24	48
A-4	4	<30	90

Performance Properties (Typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.57
Nonvolatile content, %	86
Ultimate cure hardness, Durometer A	50
Peel strength, pli (N/25 mm), 100% cohesion	
AMS 2629 JRF immersion, 7 days @ 140°F (60°C)	
AMS 2471 (Anodized aluminum)	35 (156)
AMS 4901 (Titanium)*	37 (165)
AMS 5516 (Stainless steel)*	34 (151)
MIL-C-5541 (Alodine aluminum)	35 (156)
AMS-C-27725 (IFT coating)	36 (160)
AMS 2629 JRF/NaCl-H ₂ O immersion, 7 days @ 140°F (60°C)	
AMS 2471 (Anodized aluminum)	37 (165)
AMS 4901 (Titanium)*	34 (151)
AMS 5516 (Stainless steel)*	34 (151)
MIL-C-5541 (Alodine aluminum)	34 (151)
AMS-C-27725 (IFT coating)	35 (156)

*Primed with PR-148 Adhesion Promoter

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, %	5.0
Swell, %	10.1

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 lubricating oils, and petroleum-base hydraulic fluids.

Fungus resistance Non-nutrient

Shaving and sanding - No rolling or tearing

Paintability - No separation from sealant

PR-1750 Class A Fuel Tank Sealant

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-1750 Class A is supplied in two-part kits and Semco® cartridges.

Mixing Instructions

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 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-1750 Class A 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 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).

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PR-1750 Class B fuel tank sealant

Description

PR-1750 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 360 °F (182 °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-1750 Class B is a two-part, manganese dioxide 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.

PR-1750 Class B is available in preformed parts using PPG's proprietary Ambient Reactive Extrusion (PPG ARE™) additive printing technology.

The following tests are in accordance with AMS 3276 Class B specification test methods, unless otherwise noted.

Application properties (typical)

Color			
Part A	Black		
Part B	Beige		
Mixed	Dark Gray		
Mixing Ratio			
By weight	Part A: Part B 10:100		
Base Viscosity, Poise (Pa-s) (Brookfield #7 @ 2 rpm)			
	12,000 (1,200)		
Slump, inches (mm)			
	Initial	50 minutes	90 minutes
B-1/2	0.30 (7.62)	---	---
B-2	0.30 (7.62)	0.25 (6.35)	0.25 (6.35)
	Initial	2 hours	3.5 hours
B-4	0.30 (7.62)	0.25 (5.08)	0.20 (5.08)
	Initial	3 hours	5.5 hours
B-6	0.25 (6.35)	0.20 (5.08)	0.20 (5.08)
Application life and cure time @ 77 °F (25 °C), 50% RH			
	Application life	Tack free time	Cure time to 30 Durometer A
	(hours)	(hours)	(hours)
B-1/2	1/2	< 4	8
B-2	2	< 8	11
B-4	4	< 36	90
B-6	6	< 48	120

Performance properties (typical)

Cured 14 days @ 77 °F (25 °C), 50% RH	
Cured specific gravity	1.58
Nonvolatile content, %	97
Ultimate cure hardness, Durometer A	50
Peel strength, pli (N/25 mm), 100% cohesion	
AMS 2629 JRF immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	34 (151)
AMS 4901 (Titanium)*	35 (156)
AMS 5516 (Stainless steel)*	34 (151)
MIL-C-5541 (Alodine aluminum)	34 (151)
MIL-PRF-27725 (IFT coating)	35 (156)
AMS2629 Type I fuel/3% saltwater immersion, 7 days @ 140 °F (60 °C)	
AMS 2471 (Anodized aluminum)	39 (173)
AMS 4901 (Titanium)*	41 (182)
AMS 5516 (Stainless steel)*	39 (173)
MIL-C-5541 (Alodine aluminum)	39 (173)
MIL-PRF-27725 (IFT coating)	37 (164)
*Primed with PR-148 Adhesion Promoter	
Tensile Strength, psi (kPa)	
Standard Cure	420 (2896)
12 days immersion in AMS2629 JRF @ 140 °F (60 °C) + 60 hours @ 160 °F (71 °C) + 6 hours @ 180 °F (82 °C)	300 (2069)
Elongation, %	
Standard Cure	250
12 days immersion in AMS2629 JRF @ 140 °F (60 °C) + 60 hours @ 160 °F (71 °C) + 6 hours @ 180 °F (82 °C)	325
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, %	4
Swell, %	8.9

PR-1750 Class B fuel tank sealant

Flexibility - No cracks after bending 180 degrees over 0.125 inch (3.18 mm) mandrel.

Repairability to itself - Excellent to both fresh 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

Shaving and Sanding No rolling or tearing

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. (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-1750 Class B is supplied in two-part can kits, Semkit® injection kits, and pre-mixed and frozen Semco® cartridges.

PR-1750 Class B is also available in preformed parts using PPG ARE technology.

Storage life

The storage life of PR-1750 Class B stored in two-part can kits and Semkits is at least 6 months when stored at temperatures below 80 °F (27 °C) in original, unopened containers.

The storage life of PR-1750 Class B in pre-mixed and frozen Semco cartridges is at least 30 days when stored at temperatures below -40 °F (-40 °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 upon 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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This document has been reviewed by the PPG Aerospace Export Control Department and has been determined to contain only EAR99 controlled data.

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