

TECHNICAL DATA

P/S 860 Class B-1/6 Quick Repair Fuel Tank Sealant

Description

P/S 860 Class B-1/6 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.

P/S 860 Class B-1/6 is a two-part, manganese dioxide cured polysulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun. It has excellent adhesion to common aircraft substrates when correctly primed with PR-148 Adhesion Promoter.

The following tests are in accordance with AMS-S-83318 Class B specification test methods.

Application Properties (Typical)

Color		
Part A		Black
Part B		Beige
Mixed		Gray
Mixing ratio		
By weight		Part A:Part B 17:100
Base viscosity		
(Brookfield #7 @ 2 rpm), Poise (Pa-s)		13,200 (1320)
Application life @ 77°F (25°C), 50% RH		
		20 Minutes
	Tack free time (hours)	Cure time to 30 A Durometer (hours)
77°F (25°C)	<3	8
40°F (4°C)	<12	24
20°F (-6°C)	<48	96

Performance Properties (Typical)

Cured 14 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.65
Nonvolatile content, %	98
Ultimate cure hardness, Durometer A	45
Peel strength, pli (N/25 mm), 100% cohesion	
JRF immersion, 7 days @ 140°F (60°C)	
AMS 2471 (Anodized aluminum)	31 (138)
MIL-C-5541 (Alodine aluminum)	27 (120)
MIL-C-27725 (IFT coating)*	30 (133)
MIL-S-5059 (Stainless steel)	28 (125)
AMS 4901 (Titanium)*	36 (159)
QQ-A-250/13 (Alclad)	25 (111)
JRF/NaCl-H ₂ O immersion, 7 days @ 140°F (60°C)	
AMS 2471 (Anodized aluminum)	37 (164)
MIL-C-5541 (Alodine aluminum)	36 (159)
MIL-C-27725 (IFT coating)*	35 (155)
MIL-S-5059 (Stainless steel)	25 (111)
AMS 4901 (Titanium)*	33 (147)
QQ-A-250/13 (Alclad)	27 (120)

*Primed with PR-148 Adhesion Promoter

Tensile strength, psi (KPa)	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	405 (2790)
14 days immersion in JRF	
@ 140°F (60°C)	202 (1392)
7 days @ 250°F (121°C)	610 (4202)

Elongation, %	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	291
14 days immersion in JRF	
@ 140°F (60°C)	242
7 days @ 250°F (121°C)	75

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 JRF immersion	
Weight loss, %	3.2

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.

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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 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.

After the surface has been cleaned, apply PR-148 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 re-cleaned and the adhesion promoter reapplied. Do not use adhesion promoter if it contains particles or precipitate.

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

P/S 860 Class B-1/6 is supplied in two-part can 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 together taking care to avoid leaving unmixed areas around the sides or bottom of the mixing container.

Storage Life

The storage life of P/S 860 Class B-1/6 is at least 6 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.

For emergency medical information call 1-800-228-5635.

Additional information can be found at: www.bergdahl.com

For sales and ordering information call 775-323-7542

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Authorized Distributor:
Bergdahl Associates, Inc.
2990 Sutro Street
Reno, Nevada 89512-1616
775-323-7542
www.bergdahl.com

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