

# P/S 860 Class B-1/6

## 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 MIL-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)		13,000 (1300)
Application life @ 77°F (25°C), 50% RH		
		20 Minutes
		Cure time
	Tack free	to 30 A
	time	Durometer
	(hours)	(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	1.60
Nonvolatile content, %	95
Ultimate cure hardness,	
Durometer A	45
Peel strength, pli (N/25 mm), 100% cohesion, primed with PR-148 Adhesion Promoter	
JRF immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	25 (111)
MIL-C-5541 (Alodine aluminum)	27 (120)
MIL-C-27725 (IFT coating)	29 (129)
MIL-S-5059 (Stainless steel)	28 (125)
MIL-T-9046 (Titanium comp. B)	25 (111)
QQ-A-250/13 (Alclad)	25 (111)
JRF/NaCl-H <sub>2</sub> O immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	27 (120)
MIL-C-5541 (Alodine aluminum)	32 (142)
MIL-C-27725 (IFT coating)	26 (116)
MIL-S-5059 (Stainless steel)	25 (111)
MIL-T-9046 (Titanium comp. B)	29 (129)
QQ-A-250/13 (Alclad)	27 (120)
Tensile strength, psi (KPa)	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	380 (2620)
14 days immersion in JRF @ 140°F (60°C)	
7 days @ 250°F (121°C)	270 (1863)
7 days @ 250°F (121°C)	320 (2206)
Elongation, %	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	250
14 days immersion in JRF @ 140°F (60°C)	
7 days @ 250°F (121°C)	130
7 days @ 250°F (121°C)	110
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, %	6.9
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

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**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 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.

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.

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

P/S 860 Class B-1/6 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 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.**

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.