PPG Aerospace
PRC-DeSoto

TECHNICAL DATA

P/S 872 Class B Conductive Lightning Strike Sealant

Description

P/S 872 Class B is a conductive lightning strike, corrosion inhibitive sealant. It has a service temperature range from -67°F (-55°C) to 250°F (121°C), with intermittent excursions up to 275°F (135°C). The cured sealant maintains electrical continuity in a highly torqued fay surface for certain aircraft applications. This material acts an effective barrier against the common causes of corrosion on aluminum alloys or between dissimilar metals. The cured material is resistant to intermittent exposure to both jet fuel and aviation gas.

P/S 872 Class B is a two part, aluminum filled, 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.

The following tests are in accordance with Lockheed STM40-114 Class B specification test methods.

Application Properties (typical)

Color	
Part A	Black
Part B	White
Mixed	Light gray
Mixing ratio By weight	Part A:Part B 17:100
Base viscosity (Brookfield #7 @ 2 rpm), Poise (Pa-s)	10,000 (1000)

Slump, inches (mm)

	Initial	50 Minutes	90 Minutes
B-1/2	0.25 (6.35)	——	——
B-2	0.20 (5.08)	0.20 (5.08)	0.20 (5.08)

Application life and cure time @ 77°F (25°C),50% RH

	Application life (hours)	Tack free time (hours)	Cure time to 30 A Durometer (hours)
B-1/2	1/2	<10	30
B-2	2	<36	72

Performance Properties (Typical)

Cured 3 days @ 77°F (25°C), 50% RH

Cured specific gravity	1.58
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-S-5059 (Stainless steel)*	27 (120)
MIL-T-9046 (Titanium comp. C)*	27 (120)
QQ-A-250/13 (Alclad)	27 (120)
JRF/NaCl-H_2O immersion, 7 days @ 140°F (60°C)	
MIL-S-5059 (Stainless steel)*	25 (111)
MIL-T-9046 (Titanium comp. C)*	25 (111)
QQ-A-250/13 (Alclad)	25 (111)

*Primed with PR-148 Adhesion Promoter

Tensile strength, psi (KPa)	
Standard cure, 28 days @ 77°F (25°C), 50% RH	250 (1724)
7 days @ 250°F (121°C)	200 (1379)
Elongation, %	
Standard cure, 28 days @ 77°F (25°C), 50% RH	200
7 days @ 250°F (121°C)	150

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, %	5.5

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.

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Surface Preparation

Immediately before applying sealant to primed substrates, the surfaces should be cleaned with solvents. Contaminates 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.

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 872 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 P/S 872 Class B 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.ppgaerospace.com

For sales and ordering information call 1-800-AEROMIX (237-6649).

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