Technical Data Sheet
Aerospace Sealants

PR-2200 Class B electrically conductive sealant

Description

PR-2200 Class B is an electrically conductive, rapid cure, corrosion inhibitive sealant. It has a service temperature range from -67 °F (-55 °C) to 250 °F (121 °C), with intermittent excursions up to 360 °F (182 °C). The cured sealant provides excellent electrical conductivity and EMI/RFI shielding effectiveness. This material acts as an effective barrier against the common causes of corrosion on aluminum alloys or between dissimilar metals. The cured sealant is resistant to exposure to both jet fuel and aviation gas.

PR-2200 Class B is a two part, nickel filled, epoxy cured, PERMAPOL® P-3.1 polythioether compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. This sealant has excellent adhesion to common aircraft substrates when correctly primed with PR-182 Adhesion Promoter.

The following tests are in accordance with PRC standard.

Application properties (typical)

Color		
Part A		Black
Part B		Gray
Mixed		Black
Mixing ratio by weight		Part A: Part B 6.58: 100

Slump, inches (mm)

	Intial	50 minutes	90 minutes
B-1/2	0.38 (9.65)	N/A	N/A
B-1	0.5 (12.7)	0.5 (12.7)	0.4 (10.16)

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

	Application life (hours)	Tack free time (hours)	Cure time to 30 A Durometer (hours)
B-1/2	1/2	<3	3
B-1	1	<5	6

Performance properties (typical)

Standard cure 7 days@ 77 °F (25 °C), 50% RH	
Cured specific gravity	1.98
Nonvolatile content, %	97
Ultimate cure hardness, Durometer A	75
Shear strength, psi (KPa)	185 (1276)
Tensile strength, psi (KPa)	180 (1240)
Elongation, %	100
Electrical contact resistance, ohms	0.16
Volume/bulk resistivity (Alessi four point probe), ohm-cm	
Standard cure,	
7 days @ 250 °F (121 °C)	0.20
7 days immersion in JRF @	0.20
77 °F (25 °C) + 4 days @ 140 °F (60 °C)	0.35
Volume shrinkage, %	7

Corrosion resistance - No corrosion or significant change of conductivity after 2000 hours salt spray.
Low temperature brittleness @ -65 °F (-54 °C) - No cracking or fractures.

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 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.

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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-182 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 recleaned 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.

Packing Options

PR-2200 Class B is supplied in a two-part SEMKIT® package or pre-mixed and frozen cartridge. See container for mixing instructions.

Storage life

The storage life of PR-2200 Class B in a *Semkit* package is at least 9 months when stored at temperatures below 80 °F (27 °C) in original, unopened containers.

The storage life of PR-2200 Class B Pre-mixed and frozen cartridges is a maximum of 30 days when stored at temperatures of -80 °F (-62°C) or below.

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 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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