

TECHNICAL DATA

PR-2225 Class B High Temperature Electrically Conductive Sealant

Description

PR-2225 Class B is an electrically conductive, corrosion inhibitive sealant. It has a service temperature range from -65°F (-54°C) to 300°F (149°C), with intermittent excursions up to 400°F (204°C). The cured sealant provides excellent electrical conductivity and EMI/RFI shielding. This material acts as an effective barrier against the common causes of corrosion on aluminum alloys or between dissimilar metals.

PR-2225 Class B is a two-part, nickel filled, condensation cured silicone 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 and is compatible with polysulfide sealants.

The following tests are in accordance with PRC-DeSoto International specification test methods.

Application Properties (Typical)

| | |
|--------------------------|---------------|
| Color | |
| Part A | White |
| Part B | Olive |
| Mixed | Olive |
| Mixing ratio | Part A:Part B |
| By weight | 4:100 |
| Base viscosity | |
| (Brookfield #7 @ 2 rpm), | |
| Poise (Pa-s) | 15,000 (1500) |

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

| | Application life (hours) | Tack free time (hours) | Cure time to 40 A Durometer (hours) |
|-----|--------------------------|------------------------|-------------------------------------|
| B-1 | 1 | <4 | 24 |

Performance Properties (Typical)

| | |
|--|------------|
| Cured specific gravity | 2.20 |
| Nonvolatile content, % | 95 |
| Ultimate cure hardness, Durometer A | 68 |
| Shear strength, psi (KPa) | |
| Standard cure, 7 days @ 77°F (25°C), 50% RH | 90 (620) |
| Tensile strength, psi (KPa) | |
| Standard cure, 7 days @ 77°F (25°C), 50% RH | 220 (1517) |
| 30 minutes @ 425°F (218°C) | 210 (1448) |
| 30 minutes @ 485°F (252°C) | 195 (1344) |
| 10 minutes @ 540°F (282°C) | 166 (1144) |
| Elongation, % | |
| Standard cure, 14 days @ 77°F (25°C), 50% RH | 60 |
| 30 minutes @ 425°F (218°C) | 65 |
| 30 minutes @ 485°F (252°C) | 72 |
| 10 minutes @ 540°F (282°C) | 77 |

Electrical contact resistance, ohms
Standard cure, 7 days @ 77°F (25°C), 50% RH 0.04

Volume/Bulk resistivity (Alessi four point probe), ohm-cm
Standard cure, 7 days @ 77°F (25°C), 50% RH 0.10

Resistance to other fluids - Excellent resistance to water, alcohols, petroleum-base and synthetic lubricating oils, and petroleum-base hydraulic fluids.

Corrosion resistance - No corrosion or significant change of conductivity after 2000 hours salt spray.

Thermal stability - No blistering or cracking after environmental conditioning. Hardness retained within 15 Durometer A points.

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.

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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-2225 Class B is supplied in two-part can kits and Semkit® cartridges.

Mixing Instructions

The conductive pigments used in PR-2225 Class B may settle slightly with time. For this reason all Semkit® cartridges of PR-2225 Class B are supplied with a plugged dasher rod to pre-mix the base and assure good dispersion of the conductive material.

Storage Life

The storage life of PR-2225 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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