PR-1930, high temperature sealant

Description

PR-1930 is a high temperature sealant. It has a service temperature range of -75°C (-103°F) to 375°C (707°F) with intermittent excursions up to a range of 1100°C (2012°F) to 2800°C (5072°F). The cured sealant does not flow from vertical or overhead surfaces and has outstanding resistance to aging, ozone and humidity.

PR-1930 is a two-part, silicone, liquid polymer compound. Once mixed, the compound is a thixotropic paste suitable for application via extrusion gun or spatula. It cures at room temperature to form a resilient sealant that gives excellent adhesion to common aircraft substrates when used with primer JFP-7010.

Application properties (typical)

Colour	
Base	Red
Accelerator	Green
Mixed	Red
Mix Ratio	Base: Accelerator
by weight	10: 1
Base viscosity, (Brookfield #7@2rpm) Pa.s, (poise)	40-70, (400-700)

Application life and cure time at 23°C (73°F), 50% RH

	Application life (hours)	Tack free time (hours)
PR-1930-2	2	5

Cure Options:

For use at 150°C (302°F):
72h at 23°C (73°F) or 12h at 60°C (140°F)

For use at 230°C (446°F):
Cure as above + 8h at 150°C (302°F)

For use at 375°C (707°F):
Cure as above, but with 2h steps of 30°C (86°F) until the desired temperature is reached.

Performance properties (typical)

Cured specific gravity	1.4
Non-volatile content, %	100
Ultimate cure hardness, Shore A (after 5s)	
cured at 120°C (248°F)	55
cured at 135°C (275°F)	45
Peel Strength*, N/mm, 100% cohesive failure	
No exposure	
Aluminium (alclad 2024)	700
Shear Strength*, MPa, 100% cohesive failure	
No exposure	
Aluminium (alclad 2024)	2.5
*Primed with JFP-7010	
Tensile Strength, MPa	
Initial 14 days/23°C	2.5
Elongation, %	
Initial 14 days/23°C	110

Resistance to fluids: excellent resistance to SKYDROL® and ozone. Low resistance to fuels.

Low-temperature flexibility @ -75°C (-103°F) – no cracking, checking or loss of adhesion.

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. (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.

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To obtain maximum adhesion, after the surface has been cleaned, apply JFP-7010 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 for 1 hour. At lower temperature allow a proportionally longer time to dry. The sealant must be applied within 24 hours of the application of the adhesion promoter.

If this time is exceeded, the surface should be re-cleaned and the adhesion promoter re-applied. Do not use the 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

PR-1930 is supplied in a two-part kit. Mix according to 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.

CAUTION: Do not mix accelerator with the base until ready to use.

Storage life

The storage life of PR 1930 is 150 days at -20°C (-4°F), 100 days at 0°C (32°F), 60 days at 20°C (68°F), or 14 days at 50°C (122°F) when stored in original, unopened containers. During storage, slight variations in the application characteristics may occur. This does not affect either the overall application properties or the final performance properties of the product.

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 (2376649).

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