

PR-1824 Class B low weight, rapid cure aerodynamic smoothing sealant

Description

PR-1824 Class B is a light weight, rapid curing aerodynamic smoothing sealant. It has a service temperature range from -80°F (-62°C) to 300°F (149°C), with intermittent excursions up to 400°F (204°C).

PR-1824 Class B is a two-part, epoxy cured Permapol® P-3 polythioether compound. The uncured material is a low sag, non-crazing, thixotropic paste suitable for application by extrusion gun or spatula. Unlike standard polysulfide sealants, it can cure at low temperatures and is unaffected by changes in relative humidity. This sealant is sandable and has excellent adhesion to common aircraft substrates.

The following tests are in accordance with Northrop MS-482 specification test methods.

Application properties (typical)

Color		
Part A		Purple
Part B		White
Mixed		White
Mixing ratio		Part A:Part B
By weight		11.5:100
Base viscosity		
(Brookfield #7 @ 2 rpm),		
Poise (Pa-s)		20,000 (2000)
Slump, inches (mm)		
	Initial	50 Minutes
B-1/2	0.10 (2.54)	—
B-1	0.10 (2.54)	0.15 (3.81)
B-2	0.10 (2.54)	0.15 (3.81)
Application life and cure time @77°F (25°C), 50% RH		
		Cure time
	Application	Tack free
	life	time
	(hours)	(hours)
B-1/2	1/2	<3
B-1	1	<6
B-2	2	<20
		to 30 A
		Durometer
		(hours)

Performance properties (typical)

Cured 7 days @ 77°F (25°C), 50% RH	
Cured specific gravity	1.00
Nonvolatile content, %	98
Ultimate cure hardness,	
Durometer A	48
Peel strength, pli (N/25 mm), 100% cohesion	
Dry	
MIL-A-8625 (Anodized aluminum)	15 (67)
MIL-C-27725 (IFT coating)	14 (62)
JRF/NaCl-H ₂ O immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	12 (53)
MIL-C-27725 (IFT coating)	13 (58)
JRF immersion, 7 days @ 140°F (60°C)	
MIL-A-8625 (Anodized aluminum)	13 (58)
MIL-C-27725 (IFT coating)	12 (53)
Tensile strength, psi (KPa)	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	207 (1427)
7 days immersion in JRF	
@ 140°F (60°C)	276 (1903)
Elongation, %	
Standard cure, 14 days	
@ 77°F (25°C), 50% RH	175
7 days immersion in JRF	
@ 140°F (60°C)	175
Weight loss, %	2.0
Flexibility - No cracks after bending 180 degrees	
over 0.125 inch (3.18 mm) mandrel.	

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 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

PR-1824 Class B is supplied in a Semkit® package. See the container for specific mixing instructions. The mix ratio is very critical.

Storage life

The storage life of PR-1824 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.

For sales and ordering information call 775-323-7542

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