WS-8070 Class B

Corrosion Inhibitive Sealant

WS-8070 Class B is a two-part Manganese cured polysulfide sealant designed to provide excellent corrosion inhibitive characteristics. Typical applications include fillet and butt joint surface sealing of aircraft structure to prevent the effects of corrosion from occurring through water intrusion and dissimilar metal interaction.

WS-8070 Class B has excellent retention of physical properties when exposed to aviation fuel and oils. It is a thixotropic paste with non-sag characteristics an able to be applied by an extrusion gun or with a spatula.

WS-8070 conforms to the requirements of MIL-PRF-81733, and CMNP007 specifications.

Technology / Base	Polysulfide
Type of Product	Sealant
Components	Two Component
Curing	Room Temperature
Appearance / Color	Dark Grey
Consistency	Extrudable
Recommended Application	Fillet and butt joint surface sealing of aircraft structure

Features and Benefits

- Excellent corrosion protection for aluminum alloys and between dissimilar metals
- Fast curing system significantly increasing productivity
- Excellent elastomeric properties and strength retention after limited exposure to jet fuel, aviation gasoline, hydraulic fluids, oils, and lubricants
- No cracking, checking or loss of adhesion at -65°F
- Outstanding adhesion to multiple metals, composites, primers and coatings used in modern aircrafts
- Non-nutrient containing, fungus resistant

Technical Data

Physical Properties (uncured)	Part A (base)	Part B (hardener)	Mixed
Viscosity	8,000 – 12,000 poise	< 3,000 poise	8,000 – 12,000 poise
Color	Yellowish	Black	Light Grey
Mix Ratio by Volume Part A	100	8.39	-
Mix Ratio by Weight Part A	100	10	-

Physical Properties (cured)	Results	Notes
Specific Gravity - Mix	1.44	Maximum
Non-Volatile Content	95%	Minimum value
Slump	0.2 inches, max	B-1/2, B-2
Ultimate Hardness	53	Shore A
Tensile Strength	> 350 psi	Standard Cure (14 days at 77°F)
Ultimate Elongation	> 210%	Standard Cure (14 days at 77°F)
Service Temperature (continuous)	-54 °F to 250 °F	Operational range
Service Temperature	Up to 320 °F	Intermittent exposure
Low Temperature flexibility	-65 °F	No loss of adhesion or cracking
Thermal Stability	Conforms	Hardness within -5 to +15 Shore A

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Peel Strength

Substrate	Strength	Mode	Notes
MIL-A-8625/AMS2471 (Anodized Alum)	43 pli	100% CF	AMS2629 JRF 2-day immersion @ 140°F(60°C)
	24 pli	100% CF	MIL-PRF-83282 2-day immersion @140°F(60°C)
	24 pli	100% CF	MIL-PRF-7808 2-day immersion @140°F(60°C)
AMS4911 (Titanium)	40 pli	100% CF	AMS2629 JRF 2-day immersion @ 140°F(60°C)
	25 pli	100% CF	MIL-PRF-83282 2-day immersion @140°F(60°C)
	25 pli	100% CF	MIL-PRF-7808 2-day immersion @140°F(60°C)
MIL-C-5541 (Alodine 1200)	43 pli	100% CF	AMS2629 JRF 2-day immersion @ 140°F(60°C)
	30 pli	100% CF	MIL-PRF-83282 2-day immersion @140°F(60°C)
	31 pli	100% CF	MIL-PRF-7808 2-day immersion @140°F(60°C)

Note: All peel test were performed to the requirements of MIL-PRF-81733D. Values are typical and not intended for specification use or for acceptance inspection criteria.

Cure Profile

Work Life	B-1/2	B-2
Application Life (hrs.)	½	2
Tack free time (hrs.)	4-5	6-7
Cure time to 35 A Durometer (hrs.)	<9	<36

Application Instructions

Clean the surface of substrates with appropriated cleaning solutions per specification(s) using an OEM approved lint-free cloth to remove, dirt, grease and processing oils just before the application of sealant. Pour solvent onto cloth to avoid contamination of solvent supply. Clean in small areas at a time. Wipe with a second dry cloth after application to prevent redeposition of contaminants on the surface. Repeat at least three times or more if required. Use fresh wiping cloth every time! Substrate composition and surface characteristics can greatly vary, which can affect sealant adhesion. It is recommended to determine adhesion characteristics of specific substrates prior to application of sealant to get consistency.

Storage Conditions

The shelf life of WS-8070 Class B is 9 months from the date of manufacturing when stored below 80°F (27°C) in the original unopened container.

The storage life of premixed and frozen material (PMF) is a minimum of 30 days at temperatures below -40°F (-40°C).

Safety and Disposal

Please see the Material Safety Data Sheet (SDS) for proper handling and disposal instructions.

Specifications and Approvals

- MIL-PRF-81733 Qualified (see QPL)
- CMNP007 Qualified (see QPL)

Note

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