

TECHNICAL INFORMATION

WS-8032S Class B Ultra Light Weight, Fast Cure, High Temperature Resistant Fuel Tank and Fuselage Sealant

PRODUCT DESCRIPTION

WS-8032S Class B is a two component ultra light weight manganese dioxide cured polysulfide sealant designed to meet the stringent requirements of BAMS 552-008 & BAMS 552-009 specifications. In addition to light weight, WS-8032S is a fast cure sealant that provides non-chromate corrosion inhibitive protection. It has outstanding adhesion to the common aerospace substrates as well as excellent sealing characteristics at temperatures ranging from -65°F (54°C) to 250°F (121°C), including intermittent exposure up to 360°F (182°C). WS-8032S Class B exhibits excellent elastomeric properties and retention after prolonged exposure to jet fuel and aviation gasoline. The uncured product is a low sag thixotropic paste suitable for application by extrusion gun or spatula.

SPECIFICATIONS:

- ◆ AMS-3281 Type 2 Meets Requirements
- ◆ BAMS 552-008 Qualified
- ◆ BAMS 552-009 Qualified

APPLICATION PROPERTIES

| Typical @77°F (25°C) | 50%RH | | |
|----------------------|----------------|--------------|--------------|
| Slump, inches (mm) | <u>Initial</u> | <u>50min</u> | <u>90min</u> |
| B-1/2 | 0.1(2.54) | | |
| B-2 | 0.1(2.54) | 0.1(2.54) | 0.1(2.54) |

Base Viscosity Poise (pa-s), Brookfield #7 spindle @ 2 rpm 11,000 (1100)

| Color | |
|--------|-----------|
| Part A | Black |
| Part B | White |
| Mixed | Dark gray |

| Mix Ratio | |
|-----------|----------------------------------------------------------|
| by weight | 100 parts base (Part B) to 13 parts accelerator (Part A) |
| by volume | 100 parts base to 7.63 parts accelerator |

| Cure Profile: | B-1/2 | B-2 |
|-----------------------------------|-------|-----|
| Application Life (hrs) | ½ | 2 |
| Tack free time (hrs) | <4 | <6 |
| Cure time to 35 A Durometer (hrs) | <6 | <10 |

PERFORMANCE PROPERTIES

Typical 14 days @ 77°F (25°C), 50% RH (Tested per AMS-3281)

| | |
|---------------------------------------------|------------------------------|
| Color | Dark gray |
| Specific Gravity | 1.1 |
| Final hardness | 48 shore A |
| Nonvolatile content | >97% |
| Low temperature flexibility @ -65°F (-54°C) | No cracking or adhesion loss |

Resistance to AMS2629 JRF Hydrocarbon 7 days 140° F exposure
 Weight loss <6%
 Thermal rupture resistance Negligible deformation at 10 psi before and after fuel exposure in AMS2629 JRF.

Repairability Excellent to itself and other sealant fresh or aged cure.

Excellent resistance to other fluids such as: water, alcohols, synthetic oils and petroleum based hydraulic fluids.
 Fungus resistance Non-nutrient
 Sanding Good

Peel Strength

pli, 100% cohesion, 7 days immersion @ 140°F (60°C) AMS2629 JRF and AMS2629 JRF/3% saltwater:

| Substrate | Conditioning | Adhesion* |
|-----------------------------------|--------------|-----------|
| Mil-C-5541 (Alodine aluminum) | JRF | 25 |
| AMS 2471 (Anodized aluminum) | JRF/SW | 25/26 |
| AMS 4901 (Titanium) | JRF | 24 |
| AMS 5516 (Stainless steel) | JRF/SW | 26/26 |
| MIL-PRF-27725 (Fuel tank coating) | JRF | 25 |
| Graphite epoxy (AS 4/3501-6) | JRF/SW | 26/26 |
| | JRF | 25 |
| | JRF/SW | 26/25 |

Peel Strength (Cont.)

| <u>Substrate</u> | <u>Conditioning</u> | <u>Adhesion*</u> |
|------------------|---------------------|------------------|
| BMI | JRF | 26 |
| (IM7/5250-4) | JRF/SW | 25/25 |
| MIL-PRF-23377 | DI water | 26 |
| (Primer coating) | SW | 26 |

*Specification requirements- 20pli/100% cohesion

Tensile Strength and Elongation

Tensile Strength PSI (KPa) 260 (1793)
77°F (25°C) 50% RH
Elongation 370%

Tensile Strength Psi (Kpa) 240 (1654)
after 7 days exposure in
JRF at 140° F
Elongation 320%

Note: All values are typical and are not intended for specification use or for acceptance inspection criteria.

SURFACE PREPARATION

Surfaces must be cleaned with solvent. Use appropriate solvent and cloth in accordance with AMS 3281 specification.

PACKAGING

WS-8032S Class B is supplied in two part kit containers and cartridges for the purpose of facilitating mixing and application.

MIXING INSTRUCTIONS

Mix the two part kits and two part sealant cartridges as indicated on the container label. Do not forget to mix Part A and Part B of the two part kits to uniformity before blending them. Avoid leaving unmixed material around the side and bottom of the mixing container.

STORAGE LIFE

The shelf life of WS-8032S Class B is 9 months from the date of shipment when stored below 80°F (27°C) in the original unopened container. The storage life of premixed and frozen material is a minimum of 30 days at temperatures below -40°F (-40°C).

HEALTH PRECAUTIONS

proper care. Read the MSDS (Material Safety Data Sheet) for information on handling precautions, hazardous ingredients and first aid procedures. After use of his product, always wash your hands before eating or smoking. If you need an MSDS, this is always available on request. In case of overexposure, be sure to obtain medical care.

Keep away from children. This product is intended for industrial use only.

ADDITIONAL INFORMATION

Visit our web site at:

www.royaladhesives.com

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NOTE

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