AC–®250 Class B-1/6 Quick Repair, Low Temperature Curing Sealant

SIN #834-100

Description

AC-250 Class B is a two-part, polysulfide, quick repair sealant for integral fuel tank and fuselage sealing applications. The mixed compound is a thixotropic paste and can be readily applied with a spatula or extrusion gun. It will cure to a fuel-resistant rubber at temperatures above 20°F. AC-250 Class B exhibits excellent tooling properties.

Applications

- Quick repair sealant for integral fuel tanks
- Quick repair of fuselage structure

Specifications

AMS-S-83318A - Qualified
TAPS 1163 Ty V - Qualified

Typical Physical and Application Properties

Color	
Base:	White
Accelerator:	Dark Brown
Mixing Ratio	100 base /10 accelerator (by weight)
Nonvolatile Content	95%
Base Viscosity (Brookfield #7 spindle @ 2 rpm)	9,000-13,000 poise
Application Life[1]	10 minutes

Tack-free Time and Cure Time

	Typical Tack-Free Time[2]	Typical Cure Time[3]
@ 77°F	1 hour	2 hours
@ 40°F	5 hours	8 hours
@ 20°F	10 hours	14 hours

Typical Physical and Performance Properties of Cured Compound when tested per AMS-S-83318

Color	Gray
Specific Gravity	1.62
Hardness	55 Shore "A"
Temperature Range	-65°F to 250°F
Low Temperature Flexibility	No cracking, checking or loss of adhesion when tested at -65°F (-54°C)
Fluid Rupture Resistance	Retains Jet Reference Fluid 24 hours at 10 psig
JRF Immersed Cure Rate (hardness A)	6 hours – 42A 24 hours – 45A
Repairability	Peel strength to AMS-S-83318A sealant is 35 piw
Corrosion Resistance	Does not cause corrosion
Fungus Resistance	Non-nutrient

[1]Application life refers to the length of time the mixed compound remains at a consistency suitable for application with spatula or caulking gun. Application life is always measured at a standard temperature of 77°F with a relative humidity level of 50%. In general, for every 20°F rise in temperature, the application life is halved; and for every 20°F drop, it is doubled. High humidity levels during the mixing process will shorten application life.

[2]Tack-free time is the length of time after which a mixed sealant will no longer tightly adhere to L-LP-690 standard low density polyethylene film.

[3]Cure time is defined as the length of time it takes AC-250 Class B sealant to reach 30A hardness. It depends on three factors: remaining application life, temperature and relative humidity. To a certain extent, the temperature/humidity factors for application life also apply to curing. To accelerate the curing process, apply heat up to (but not more than) 120°F.

Advanced Chemistry & Technology, Inc

7341 Anaconda Avenue Garden Grove, CA 92841 T: 714.373.2837 F: 714.373.1913

Tensile Strength and Elongation

	Tensile Strength	Ultimate Elongation, %
Standard Cure--14 days	400 psi	340%
JRF--14 days @ 140°F	200 psi	380%
--7 days @ 250°F	490 psi	280%

Peel Strength**

Substrate	Conditioning	Load/% Cohesion
MIL-C-27725	7 days @ 140°F in JRF	55 piw/100%
	7 days @ 140°F in JRF/SW	53 piw/100%
Stnless Steel	7 days @ 140°F in JRF	60 piw/100%
	7 days @ 140°F in JRF/SW	55 piw/100%
Anodized	7 days @ 140°F in JRF	52 piw/100%
	7 days @ 140°F in JRF/SW	58 piw/100%
Alodine	7 days @ 140°F in JRF	63 piw/100%
	7 days @ 140°F in JRF/SW	53 piw/100%
Titanium	7 days @ 140°F in JRF	65 piw/100%
	7 days @ 140°F in JRF/SW	60 piw/100%

**Substrates primed with AC-135 or AC-145 adhesion promoter, using monel peel tab

Two-Part Sealant Cartridges:

1. Holding the cartridge, grasp the dasher rod and pull back approximately one inch.

2. Insert the ramrod into the hollow of the dasher rod, break the piston loose, and inject about 1/3 of the contents into the cartridge.

Note: Do not inject all of catalyst in one location. Distribute evenly throughout base material.

3. Repeat steps 2 and 3 until all the contents of the rod are emptied into the cartridge. Remove the ramrod.

4. Mix for the required number of strokes (hand mixing) or for the required amount of time (machine mixing) indicated in the kit instructions.

5. When mixing is complete, remove bottom cap.

6. Pull the dasher rod back to the neck of the cartridge, grasp the cartridge firmly at the neck, unscrew the dasher rod and remove.

7. Screw the nozzle into the cartridge, insert into the extrusion gun and use as required. For hand extrusion, press the used dasher rod against the plunger to force the material from the cartridge.

Storage Life

The shelf life of AC-250 Class B sealant is 6 months from date of packaging, when stored at temperatures between 40°F and 80°F in its original container.

Health and Safety Precautions

AC-®250 Class B-1/6 sealant 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.

All values are typical and are not intended for specification use. **AC-250B-1/6-01/09**

.

Advanced Chemistry & Technology, Inc

7341 Anaconda Avenue Garden Grove, CA 92841 T: 714.373.2837 F: 714.373.1913