



# AC-<sup>®</sup>240 Class B Fuel Tank and Fuselage Sealant (Quick Cure)

SIN #834-100

## Description

AC-<sup>®</sup>240 Class B is a two-part, polysulfide-based product for use as a long application life, quick cure sealant for integral fuel tanks and fuselages. The mixed compound has a thixotropic non-sag consistency and can be readily applied with a spatula or extrusion gun or vertical surfaces. It will cure to a fuel-resistant rubber at temperatures above 30°F and exhibits excellent tooling properties with very low shrinkage.

## Applications

- Long application life, quick cure integral fuel tank and fuselage sealant

## Specifications

|                   |   |
|-------------------|---|
| AMS-S-8802        | B-1/2, B-2, B-4 Qualified               |
| BMS 5-26U Type II | Meets Requirements                      |
| CML 09-043        | B-1/2, B-2 Qualified                    |
| GAMPS 7115        | B-1/2, B-2 Qualified                    |
| MB 1218AF         | B-1/2, B-2 Qualified                    |
| MEP-09-069        | B-1/2, B-2 Qualified                    |
| NA-66-1032        | B-1/2, B-2 Qualified                    |
| P.S. 11346        | B-1/2 Qualified                         |
| P.S. 2            | B-1/2, B-2 Qualified                    |
| P.S. 3            | B-1/2, B-2 Qualified                    |
| RIL 8-20-005      | Approved                                |
| RIL-84-51-002     | Approved                                |
| RLD.JA.001        | B-1/2, B-2 Qualified                    |
| TAPS 1163 Type I  | Qualified                               |
| STRP 5960 rev E   | B-1/2, B-2 Qualified                    |
| STM 40-113        | B <sup>1</sup> / <sub>4</sub> Qualified |
| Vought 206-6-466  | B-1/2, B-2 Qualified                    |

## Typical Physical and Application Properties

### Color

|   |   |
|---|---|
| Base:                                       | White   |
| Accelerator:                                | Dark Brown  |
| Mixing Ratio                                | 100 base / 10 accelerator<br>(by weight and volume) |
| Nonvolatile Content                         | 98%   |
| Viscosity<br>(Brookfield #7 spindle@ 2 rpm) | 9,000-12,000 poise                                  |

<sup>1</sup>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 as 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.

## Application Life and Cure Time

|       | Minimum Application Life <sup>1</sup> | Typical Tack-Free Time <sup>2</sup> | Typical Cure Time <sup>3</sup> |
|-------|---------------------------------------|-------------------------------------|--------------------------------|
| B-1/4 | 1/4 hour                              | 90 minutes                          | 90 minutes                     |
| B-1/2 | 1/2 hour                              | 4 hours                             | 4 hours                        |
| B-2   | 2 hours                               | 9 hours                             | 10 hours                       |
| B-4   | 4 hours                               | 26 hours                            | 26 hours                       |

## Typical Physical and Performance Properties of Cured Compound After 14 Days @ 77°F/50% RH when tested per AMS-S-8802

|   |  |
|---|--|
| Color   | Gray   |
| Specific Gravity                              | 1.61   |
| Hardness                                      | 60 Shore "A"   |
| Low Temperature Flexibility                   | No cracking, checking or adhesion loss when tested at -65°F (-54°C)  |
| Service Temperatures Intermittent Exposure To | -65° to +250°F (-54 to +121°C)<br>360°F (182°C)  |
| Thermal Rupture Resistance                    | Does not blister or sponge   |
| Corrosion                                     | None   |
| Repairability                                 | 35 piw to itself and other AMS-S-8802 qualified sealants   |
| Weight loss and Flexibility                   | No cracking when bent 180° over a 1/8 inch mandrel. No more than 6% loss of the sealant compound after fluid immersion |
| Fungus Resistance                             | Meets MIL-STD 810 requirement  |
| Crazing                                       | No effect on acrylic or polycarbonate  |

<sup>2</sup>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.

<sup>3</sup>Cure time is defined as the length of time it takes AC-<sup>®</sup>240 Class B sealant to reach 30A hardness. It depends on three factors: remaining application life, temperature and relative humidity. The temperature/humidity factors for application life also apply to curing. To accelerate the curing process, apply heat up to (but not more than) 140°F.

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**Typical Values of AC-<sup>®</sup>240 Class B to AMS-S-8802**

**Tensile Strength and Percent Elongation**

| Conditioning   | Specification Requirements | Results      |
|--|----------------------------|--------------|
| Standard Cure--14 days                                       | 200 psi/200%               | 350psi/370%  |
| JRF--14 days @ 140°F   | 50 psi/200%                | 245 psi/296% |
| 7 days @ 250°F   | 125 psi/100%               | 416 psi/195% |
| JRF - 72 hrs @ 140°F and 72 hours @ 120°F and 7 days @ 250°F | 200 psi/75%                | 350 psi/380% |
| 24 hrs @ 250°F and JRF - 7 days @ 140°F                      | 100psi/150%                | 240 psi/290% |

**Peel Strength\*\***

| Substrate                  | Conditioning                | Load / % Cohesion |
|----------------------------|-----------------------------|-------------------|
| MIL-C-5541                 | 7 days @ 140°F in JRF       | 35lbs./100%       |
|                            | 7 days @ 140°F in JRF/SW    | 40lbs./100%       |
| AMS 2471 Anodized          | 7 days @ 140°F in JRF       | 42lbs./100%       |
|                            | 7 days @ 140°F in JRF/SW    | 45lbs./100%       |
| MIL-C-27725                | 7 days @ 140°F in JRF       | 45lbs./100%       |
|                            | 7 days @ 140°F in JRF/SW    | 48lbs./100%       |
| MIL-P-23377                | 7 days @ 140°F in DI Water  | 50lbs./100%       |
|                            | 7 days @ 140°F in SW        | 50lbs./100%       |
| Stainless Steel            | 7 days @ 140°F in JRF       | 38lbs./100%       |
|                            | 7 days @ 140°F in JRF/SW    | 45lbs./100%       |
| Graphite Epoxy AS 4/3501-6 | 7 days @ 140°F in JRF       | 38lbs./100%       |
|                            | 7 days @ 140°F in JRF/SW    | 48lbs./100%       |
| BMS10-11 type I grade E    | 7 days @ 140°F in JRF/SW    | 59lbs./100%       |
|                            | 7 days @ 140°F in JRF/water | 56lbs./100%       |
|                            | 7 days @ 120°F in Skydrol   | 41lbs./100%       |

\*\* Specification requirement - 20 lbs./100%, wire mesh

**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.*

All values are typical and are not intended for specification use.

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**AC-240B-01/09**

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**

The shelf life of AC-<sup>®</sup>240 Class B is 9 months from date of packaging, when stored at temperatures below 80°F in its original container.

Mixed AC-<sup>®</sup>240 Class B may be stored under refrigeration as follows:

- 15 days at -10°F
- 30 days at -40°F

It is important to remember that freezing, storing and thawing procedures reduce application life. Also, frozen storage will reduce application life by varying amounts depending on the storage temperature and length of storage time. All aspects of storage, freezing and thawing should be planned carefully and it is not recommended to mix and freeze with less than ½ hour application time.

**Health and Safety Precautions**

AC-<sup>®</sup>240 Class B 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.

*Seller and manufacturer make no warranty, express or implied, concerning this product, or its merchantability or fitness for any purpose, except that the product conforms to manufacturer's product specifications during its applicable shelf life. User shall determine the suitability of this product for the intended purpose and method of application. Seller and manufacturer's only obligation shall be to replace the quantity of the product proved to be defective. AC TECH shall not be liable for damages in excess of the purchase price of this product.*

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