

CS 5306 Polythioether fast cure sealant

Chem Seal

Technical Bulletin
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DESCRIPTION qualified to AMS 3277, Type 1

CS 5306 cures rapidly at low temperatures. CS 5306 is an excellent sealant for use when sealing on aircraft to yield weather tightness and fuel resistant seals. CS 5306 is a non-flow material and may be utilized on vertical and overhead surfaces. CS 5306 is a thixotropic and fuel resistant sealant.

CS 5306 is a two-part, sealant based on Permapol P-3 polymers covered under U.S. Patent 4,366,307. CS 5306 cures to a flexible, resilient rubber which has excellent adhesion to aluminum, magnesium, and titanium. Most surfaces require CS 5306 primer for optimum adhesion.

SURFACE PREPARATION

To obtain good adhesion, remove all traces of oil, wax, grease, dirt, or other contamination. This is done by wiping with a clean oil free solvent. Clean only small areas at one time and wipe dry with a clean cloth before the solvent evaporates. Maintain a clean solvent supply. Apply CS 5306 primer and let air dry for 30 minutes before applying sealant. Primer is included with the cartridge kit.

MIXING INSTRUCTIONS

When mixing always follow the instructions printed on the sealant cartridge packaging. When machine mixing use caution not to overheat cartridge or contents

APPLICATION INSTRUCTIONS

CS 5306 may be applied with a pressure gun or a spatula within the specified application life. Specified application lives are based on the standard condition of 77°F and 50% relative humidity.

CURE

The cure period is dependent on the application life and temperature. Cure may be accelerated by heating up to 160°F.

Application Properties

| | | | |
|----------------------|---------|---------------------|--------|
| Color | | | |
| Part A base compound | | | White |
| Part A curing agent | | | Black |
| Air content | | | < 2% |
| Chalking | | | Pass |
| Base viscosity | | 12000 - 16000 poise | |
| Slump | Initial | 50 min | 90 min |
| B 1/4 | 0.25 | N/A | N/A |
| B 1/2 | 0.30 | N/A | N/A |
| B 2 | .20 | .35 | .50 |

Application time and cure to Shore A 35 at 77F and 50% RH

| | | | |
|-------|-------------|-----------|-----------|
| | application | Tack free | Cure 35 A |
| B 1/4 | 1/4 hour | 1/2 hour | 1 hour |
| B 1/2 | 1/2 hour | 1 hour | 2 hour |
| B 2 | 2 hour | < 12 hour | < 16 hour |

Application and cure to Shore A 35 at 40F

| | | | |
|-------|----------|----------|-----------|
| B 1/4 | 1/4 hour | < 3 hour | 4 hour |
| B 1/2 | 1/2 hour | < 6 hour | 8 hour |
| B-2 | 2 hour | < 8 hour | < 24 hour |

Application and cure to Shore A 35 at 20F

| | | | |
|-------|----------|----------|-----------|
| B 1/4 | 1/4 hour | < 6 hour | < 12 hour |
| B 1/2 | 1/2 hour | < 8 hour | < 16 hour |
| B 2 | 2 hour | N/A | N/A |

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STORAGE LIFE

The storage life of CS 5306 is 9 months minimum when stored at temperatures below 80°F in the original unopened containers. Some change in application life, viscosity and curing rate may occur during this period. However, such changes are slight and in no way affect the end performance of the product.

CLEANING OF EQUIPMENT

Tools and equipment may be cleaned prior to cure by the use of Deso-clean 45; Mil-C-38726 cleaner or equivalent. Cured CS 5306 may be removed by soaking in Epoxy and/or Polysulfide stripper.

HEALTH PRECAUTIONS

The uncured combined components may produce irritation following contact with the skin. When handling CS 5306 avoid ingestion and all contact with the body especially open breaks in the skin. Always wash hands before eating or smoking. Obtain medical attention in case of extreme exposure or ingestion. Refer to the applicable Material Safety Data Sheet prior to using this product.

PACKAGING

CS 5306 packaged in injection kits only.
24 ea. per case
2 fl. oz. in 2 1/2 oz. cartridge
3.5 fl. oz. in 6 oz. cartridge

Application Properties

at 77F and 50% RH

| | |
|----------------------------|---------|
| Specific Gravity | 1.48 |
| Ultimate hardness, Shore A | 60 |
| Nonvolatile content | 98% |
| Tensile (standard cure) | 400 PSI |
| Tensile (heat cycle) | 290 |
| Elongation (standard cure) | 350% |
| Elongation (heat cycle) | 230% |

Peel strength 100% cohesive failure primed with CS-5306 primer or AMS-3100 primer AMS 2529 JRF 7 days 140F

| | |
|-------------------------------|----|
| AMS 2471 (anodized aluminum) | 50 |
| AMS 4901 (Titanium) | 45 |
| AMS 5516 (stainless steel) | 47 |
| MIL-C-5541 (Alodine aluminum) | 46 |
| MIL-C-27725 | 40 |

Peel strength 100% cohesive failure primed with CS-5306 primer or AMS-3100 primer AMS 2529 JRF and Salt Water 7 days 140F

| | |
|-------------------------------|----|
| AMS 2471 (anodized aluminum) | 55 |
| AMS 4901 (Titanium) | 50 |
| AMS 5516 (stainless steel) | 58 |
| MIL-C-5541 (Alodine aluminum) | 55 |
| MIL-C-27725 | 50 |

| | |
|---|--------------|
| Temperature Operating Range | +400 Deg. F |
| Low Temperature Flexibility | -80 deg. F |
| Fungus Resistance | Non Nutrient |
| Thermal rupture (after immersion in JRF AMS2629) | Pass |

Repairability Excellent

| | |
|--|-----------|
| Corrosion Resistance (after immersion) | Excellent |
| Salt water and JRF 12 days @ 140F + 60 hrs. + 6 hrs. @ 180F | |

| | |
|--|-----------|
| Resistance to Hydrocarbons AMS 2629 | Excellent |
| Fluid Resistance | Excellent |

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warrant, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and user assumes all risk and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to buyer or third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.