

CS 3201 Integral Fuel Tank and Cabin Sealant

Chem Seal

Technical Bulletin

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PRODUCT DESCRIPTION meets AMS-7124 formerly Mil-S-7124, and Mil-S-7502

CS 3201 is a two-part, polysulfide based compound which cures at room temperature to a flexible, resilient rubber with excellent adhesion to aluminum, titanium, stainless steel, steel, magnesium, and other materials. Proper mixing of CS 3201 is assured by the contrasting colors of the two parts. Mixed CS 3201, Class A is flowable and easily applied with a brush. CS 3201, Class B is a thixotropic paste which is easily applied with an extrusion gun or spatula, but will not flow from vertical or overhead surfaces. The cured sealant is resistant to aircraft fuels, lubricants, oils, water, and weather, and remains flexible at low temperatures.

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.

MIXING INSTRUCTIONS

When mixing pre-packaged kits the entire contents of base compound (Part A) and curing agent (Part B) should be used. For small quantities mix by weight to ratio indicated in Fig. 1 Applications Properties. The lip of Part A container should be removed to facilitate mixing. Next stir Part B in its original container until it is homogeneous. Add Part B to Part A and mix thoroughly for seven to ten minutes or until uniform in color. Scrape sides and bottom of the container to assure a complete mix. CS 3201 may be mixed by hand or with a mechanical mixer. When using a mechanical mixer, use low speeds since high speeds will generate internal heat and reduce application life.

APPLICATION INSTRUCTIONS

CS 3201, Class A may be applied with a brush. CS 3201, Class B may be applied with a pressure gun or a spatula. Specified application lives are based on the standard conditions of 77 deg. F and 50% relative humidity. Higher humidity will reduce the application life. Lower temperatures or lower humidity will extend the application life. For every 10 deg. F rise the application is reduced by one half, for every 10 deg. F drop, it is doubled.

CURE

The cure period is dependent on the application life, temperature, and relative humidity. Increased temperature and increased relative humidity will speed cure. Reduced temperature and reduced relative humidity will slow cure. Cure may be accelerated by heating up to 120 deg. F. Material should be firm rubber in 3 hours.

	Class A	Class B
Color:		
Base Compound	White or Black	White
Curing Agent	Brown	Brown
Mixed	Tan or Black	Tan

Non Volatile Content 90% 98%

Viscosity: Base Compound
(Brookfield
Spindle #5 @ 10 RPM) 200 Poises

(Brookfield Spindle #7 @ 2 RPM) 11,000 Poises

Mixing Ratio 100:7.5 100:10
Vertical Flow 0.15 inches

Hours Application Life	Tack Free Time Hours		Cure to 30 REX Hours	
	Class A	Class B	Class A	Class B
1/4	6	3	24	24
1/2	9	6	30	30
2	24	24	44	48
4	30	30	60	72

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STORAGE LIFE

The storage life of CS 3201 is one year, 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 effect the end performance of this product.

TOP COAT

When using CS 3201, in integral fuel tanks or oil tanks, a protective top coating to Mil-S-4383B is necessary in order to assure the maximum service life in accordance with Mil-S-7502C. Brush topcoat onto the cured surface or utilize the fill and drain technique.

CLEANING OF EQUIPMENT

Tools and equipment may be cleaned prior to cure by the use of CS 9900 Cleaner. Cured CS 3201 may be removed by soaking in CS 9900 Cleaner.

SAFETY

CS 3201, Class A and Class B have not been found to have any toxic effect in normal usage. However, because some individuals may be sensitive to chemicals used in the manufacturing of the curing agent, excessive contact should be avoided. CS 3201, Class A contains toluene and is flammable. The maximum allowable concentration is 100 PPM. For more information see Safety Data Sheet SD-83 by the Manufacturing Chemists Association. Local exhaust ventilation is recommended for enclosed areas. The curing agent contains a lead compound. In case of contact, the curing agent should be washed off as soon as possible with soap and water.

PACKAGING

CS 3201 is packaged in the following Kit sizes:

24 ea. per case 2 ½ oz. and 6 oz. cartridges
16 ea. per case Pint Kits
16 ea. per case Quart Kits
4 ea. per case Gallon Kits

CS 3201 is also available in 5-Gallon Kits and 50 Gal Drum Kits.

Refer to the applicable Material Safety Data Sheet prior to using this product.

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.

Color: Tan or Black
Specific Gravity 1.45

Adhesion to other materials
Adheres to stainless steel, mild steel, magnesium, tin, copper, glass, polyester resin, nylon, epoxies, porcelain, enamel, and others.

Repair ability Fresh sealant bonds to cured sealant to form an inseparable bond.

Corrosion Resistance Excellent

Resistance to Hydrocarbons
(Mil-S-3136 Type III Fuel) Excellent
Fluid Resistance Excellent- resistance to water, alcohol, petroleum and synthetic lubricating oils, and petroleum based hydraulic oils.

Radiation Resistance 3 x 10⁷ Roentgens - less than 25% change in tensile strength and elongation

	Class A	Class B
Hardness Shore A	40	45
Tensile Strength	250 psi	300 psi
Elongation	400%	450%

Adhesion to Aluminum 30 lbs/in 45 lbs/in