

CS 3202 Optical Sealant

Chem Seal

Technical Bulletin
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PRODUCT DESCRIPTION

meets A-A 59293 formerly Mil-S-11031B

CS 3202 is a thixotropic, curing type, adhesive sealing compound suitable for use by injection in bonding metal to glass in optical instruments or fire control instruments.

CS 3202 is a two-part, polysulfide base compound which cures at room temperature to a flexible, resilient rubber with excellent adhesion to aluminum, magnesium, titanium, steel and glass. Mixed CS 3202 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 100 parts by weight of Part A to 10 parts by weight of Part B. Part A and Part B are carefully matched in production for optimum performance characteristics. Care should be taken to assure that the Part B packaged with a given Part A isn't separated and used with a different Part A. The lip of the base compound container should be removed to facilitate mixing. Next, stir Part B in its original container until it is homogenous. Add Part B to Part A and mix thoroughly seven to ten minutes or until uniform in color. Scrape sides and bottom of the container to assure a complete mix. CS 3202 may be mixed by hand or with a mechanical mixer. When using a mechanical mixer, use low speeds since high speeds will generate heat and reduce application life.

Application properties

Color		black
Base compound		black
Curing agent		red-brown
Mixed color		black
Viscosity spindle # 7 - 2 RPM		11,000 poises
Mixing ratio		
	Weight	100 : 10
	Volume	100 : 6.5
Application time (life)		3 hours
Tack free time		16 hours
Time to 30 REX hardness		48 hours
Vertical flow (slump)		< 0.15"
Non volatile content (min)		98 %

Cured properties

Water vapor permeability		.005 gms. /hr.
Specific gravity		1.45
Hardness Shore A		45
Tensile strength		300 psi
Elongation		450 %
Low temperature flexibility		-65 ⁰ F
Fungus resistance		Non-nutrient
Corrosion resistance		excellent
	Fluid resistance	
MIL-S-3136 type III fuel		excellent
Water		excellent
Alcohol		excellent
Petroleum oil		excellent
Synthetic oil		excellent

Adhesion minimum 45 lbs./inch

Aluminum	SS steel	Steel
Magnesium	Tin	Copper
Glass	Polyester	Carbon fiber
Nylon	Chromate	Epoxy primer
Water borne primers		Repairability

Radiation resistance:

(Gamma) 3×10^7 Roentgens less than 25% change in tensile and elongation.

Standard conditions 77⁰ F and 50% RH apply unless noted for a specific test

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APPLICATION

CS 3202 may be applied with a pressure gun or a spatula within the specified application life. Specified application lives are based on the standard conditions of 77 deg F and 50% relative humidity. For every 10 deg F rise, the application life 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.

STORAGE LIFE

The storage life of CS 3202 is one year when stored at temperatures below 80 deg. 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 the product.

CLEANING OF EQUIPMENT

Tools and equipment may be cleaned prior to cure by use of solvent. Cured sealant may be removed from equipment by soaking and scrubbing with polysulfide/epoxy stripper.

SAFETY

CS 3202 has 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.

The curing agent contains a lead compound, refer to the applicable Material Safety Data Sheet prior to use of this product.

PACKAGING CS 3202 is packaged in the following kit sizes:

- 24 ea. per case 2 1/2 oz. and 6 oz. cartridges
- 16 ea. per case Pint Kit
- 16 ea. per case Quart Kit
- 4 ea. per case Gallon Kit

CS 3202 is also available in 5-gallon Kits and 50 Gallon Drum Kits.

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 warranty, 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 manufacturers sole responsibility shall be to replace that portion of the product of this manufacturer that proves to be defective. Neither seller nor manufacturer shall be liable to buyer or any third person for any injury, loss, 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.