

CS 3202 Optical Sealant

Chem Seal

Technical Bulletin
November 2010

PRODUCT DESCRIPTION

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

Parts A and B are matched at the time of manufacture to provide optimum performance when cured. Assure that Parts A and B are combined at the recommended ratio printed on the container label. Do not thin CS3202 prior to combining Parts A and B. Before combining parts A and B stirring the Part B component until the contents of the container are uniform. Place all of the B component into the Part A container and continue stirring until a uniform gray color is achieved. There should be no white or black streaks in the properly blended material. Periodically scrape the sides and bottom of the container as well as the mixing tool to assure proper mixing. When using a mechanical mixer, avoid high speeds since the heat generated will reduce the application time of the mixed CS3202. Violent stirring will also entrap air in the cured sealant. Mixing instructions for plastic injection kits are provided on the packaging. When mixing materials packaged in bulk or when only a small quantity is required, stir 10 parts by weight of the Part B component into 100 parts by weight of the Part A component. Be sure to stir the Part B prior to weighing out the required amount.

Physical and Application Properties are Typical

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° 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 77° F and 50% RH apply unless noted for a specific test

APPLICATION

Application of CS 3202 is with a pressure gun or a spatula within the specified application life. 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.

Chem Seal Products

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CURE

Specified application and cure schedules are based on the standard conditions of 77°F and 50% relative humidity. Increased temperature and relative humidity will reduce the work life and speed up the cure while reduced temperatures and relative humidity will extend the work life and slow the cure. Cure may be accelerated by heating up to 120 deg. F

CLEAN-UP REMOVAL OF CURED MATERIAL

For clean-up as well as removing fresh CS3202, you may use IPA, aromatic solvents CS9900 cleaner. For removal of cured CS3202 material commercial polysulfide/ epoxy strippers are recommended.

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. Should a skin appear on the base compound, simply remove and discard the remaining material may then be mixed normally

SAFETY

Read and understand the Material Safety Data Sheet (MSDS) associated with this material.

**Emergency Contact Chemtrec 800-424-9300
Outside North America 703-527-3887**

**Keep out of the reach of children
For industrial use only**

PACKAGING AVAILABILITY

Two component plastic cartridges
Pre measured can kits ½ Pint – 1 Gallon
Bulk 5 Gallon pails and 50 Gallon drums
Pre-mixed and frozen cartridges
Contact Flamemaster for specialized packaging

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