CS 3201 Integral Fuel Tank and Cabin Sealant

Chem Seal

Technical Bulletin

August 2018

PRODUCT DESCRIPTION

Qualified to AMS-S-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

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 CS3201 prior to combining Parts A and B. Before combining parts A and B stir 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 CS3201. 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.

APPLICATION

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.

Physical and Application Properties are Typical

Application Properties

	Class A	Class B
Color:		
Base Compound	White or Black	White
Curing Agent	Brown	Brown
Mixed	Tan or Black	Tan
Specific Gravity	1.45	1.45
Non Volatile Material	90%	98%
Viscosity Base: Brookfield		
Spindle #7 @ 2 RPM		11000 poises
Spindle #5 @ 10 RPM	200 poises	
Vertical Flow:		0.15 inches
Mixing ratio:	Weight	Weight
	100 : 7.5	100 : 10

Application Time hour	Tack Free hour		Cure 30REX hour	
	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

Physical Properties

	Class A	Class B
Hardness Shore A	30-45	30-50
Aluminum bare	30 lbs/in – 100%	45 lbs/in – 100%
Corrosion resistance	excellent	excellent

Resistance to Hydrocarbons:
(Mil-S-3136 Type III Fuel) Excellent

Resistance to fluids:
Excellent- resistance to water, alcohol, petroleum and synthetic lubricating oils, and petroleum based hydraulic oils.

Radiation Resistance
3 x 10^7 Roentgens - less than 25% change in tensile strength and elongation

Values obtained from AMS7124 (withdrawn)
Test protocol AS5127 All values observed are typical and the user should rely on their own testing for suitability of purpose.

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

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.

CKEAN-UP REMOVAL OF CURED MATERIAL

For clean-up as well as removing fresh CS 3104M, you may use IPA, aromatic solvents CS9900 cleaner. For removal of cured CS3201 material commercial polysulfide/ epoxy strippers are recommended.

SAFETY

Read and understand the Material Safety Data Sheet (MSDS) associated with this martial. CS 3201, Class A contains toluene and is flammable.

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

Keep out of the reach of children
For industrial use only

PACKAGING AVAILIBILITY

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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