CS 3204 Aircraft Integral Fuel Tank Sealant

Chem Seal

Technical Bulletin
January, 2007

PRODUCT DESCRIPTION **meets AMS-S-8802 formerly Mil-S-8802F, Type II**

CS 3204 is a fuel resistant sealant for use on integral fuel tanks and pressurized cabins as well as other areas subject to contact with aircraft fuels, lubricants, oils, water and/or weathering.

CS 3204 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 numerous other materials. CS 3204 is designed to withstand the attack of sulfur compounds that are present in jet fuels. When mixed, CS 3204 Class A is a self leveling liquid. CS 3204 Class B is a thixotropic paste that will not flow or sag on vertical or overhead surfaces.

	Class A	Class B
Color: Base Compound	off-white	off-white
Curing Agent	Gray	Gray
Mixed	Gray	Gray
Mixing Ratio (by weight)	100:10	100:10
(by volume)	100:8.3	100:8.3
Non Volatile Content	86%	96%
Viscosity-Base Compound (Brookfield RVF Spindle #6 @10 RPM)	250 poises	
Viscosity-Base Compound (Brookfield RVF Spindle #7 @ 2 RPM)		11,000 poises
Viscosity-Base Compound (Brookfield RVF Spindle #67 @10 RPM)	1,000 poises	1,000 poises

	Vertical Flow - Slump inches		
Class	initial	50 min	90 min
B 1/2	0.15	N/A	N/A
B 2	<0.25	0.20	0.20
B 4	<0.20	0.20	0.20

Ultimate Hardness, Shore A	50	50
Fungus Resistance	Non-nutrient	

(For a complete description of properties refer to AMS-S-8802 specification)

SURFACE PREPARATION

To obtain good adhesion, the surfaces must be free of all traces of oil, wax, grease, dirt or other contamination. Working in small area segments, wipe the surface using a clean rag doused in an oil free solvent. Before the solvent evaporates, wipe the surface dry with a second clean rag. Maintain a clean solvent supply by pouring the solvent on the washing cloth. CS 3204 will adhere tenaciously to most substrates providing the surface to be sealed is clean and sound.

MIXING INSTRUCTIONS

CS 3204 Parts A and B are carefully matched at the time of manufacture to provide optimum performance when cured. Care should be taken to assure that Parts A and B are combined as recommended on the container label. When mixing pre-measured kits do not thin CS 3204 with solvents. Prior to combining with the Part A component, 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 CS 3204. Violent stirring will also entrap air in the cured sealant.

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.

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°F. However care must be exercised to avoid the entrapment of solvent when heat is applied.

STORAGE LIFE

The storage life of CS 3204 is nine months when stored in the original unopened containers at temperatures below 80°F. Some change in work 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.

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APPLICATION

The work life of CS 3204 is indicated by the number following the class designation and varies from 1/4 hour to 4 hours. Work life is the minimum amount of time the material will maintain its application properties.

WORK LIFE	APPLICATION TIME	TACK FREE TIME	CURING RATE TO 35 SHORE A
**1/4	1/4 HOUR	6 HOURS	16 HOURS
½	½ HOUR	8 HOURS	30 HOURS
1	1 HOUR	15 HOURS	40 HOURS
2	2 HOURS	24 HOURS	72 HOURS
4	4 HOURS	36 HOURS	90 HOURS

** CS 3204 Class B-1/4 may be fuel immersed within two hours of application when cured at standard conditions of 77 mF ± 5% Relative Humidity.

CLEAN UP

For surface preparation as well as removing fresh or cured CS 3204, Methylene Chloride can be used. Cured CS 3204 will require a soaking period in Methylene Chloride bases stripper for satisfactory removal.

SAFETY

CS 3204 Class A contains toluene within the limits called out by AMS-S-8802. The maximum allowable concentration in the atmosphere of the work area is 200 ppm. CS 3204 Class A should be used with adequate ventilation. Avoid prolonged contact and wash with soap and water prior to eating or smoking. CS 3204 Class A has a flash point of 90°F. The flash point of CS 3204 Class B is over 200°F. The user should refer to the MSDS when determining what if any additional precautions are required. "Flamemaster supplied aviation fuel tank sealants and coating materials are tested for compatibility with reference fluids and fuels as specified by the applicable specification. Flamemaster does not warranty the performance of fuel tank sealants or coatings subjected to fluids or fuels other than those specified by the applicable specification." "It is the responsibility of the user to determine the suitability for use utilizing the information contained in the applicable specification."

PACKAGING

CS 3204 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 3204 is also available in 5-Gallon Kits and 50 Gallon Drum Kits.

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