

CS 5500 Class B High Temperature Fuel Tank Sealant

Chem Seal

Technical Bulletin
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PRODUCT DESCRIPTION meets AMS 3276, MIL-S-83430A Amendment 1, FMS 1044 Amendment 3, Type V

CS 5500 can be used in applications where temperatures of up to 360°F are encountered.

CS 5500 is a two part, high temperature resistant fuel tank and fuselage sealant based on Permapol P-5 polymers, an improved chemical modification of Thiokol LP* polymers. Permapol P-5 polymers are covered under U.S. Patent 4,623,711. When cured CS 5500 is a flexible, resilient rubber which has excellent adhesion to aluminum, magnesium, titanium, steel and other materials.

SURFACE PREPARATION

To obtain good adhesion, all traces of oil, wax, grease, dirt or other contamination must be removed. Wiping with a clean oil free solvent (Mil-C-38736 or MEK/Toluene) and cleaning a small area at a time and wiping the cleaned area with a clean rag before the solvent evaporates is usually sufficient. Maintain a clean solvent supply by pouring the solvent on the washing cloth. CS 5500 will adhere to most substrates, providing the area to be sealed is clean and dry.

* LP - is a trade name of Morton Thiokol.

MIXING INSTRUCTIONS

Do not thin CS 5500 with solvents when mixing pre-measured kits. The entire amount of the Part A and Part B should be used. Thoroughly mix Part B in its container until a smooth paste is obtained. For mixing bulk materials, or small quantities, stir into 100 parts of Part A 10 part of Part B, by weight. Mix thoroughly for seven to ten minutes to obtain an even, streakless, uniform gray color. Scrape the sides and bottom of the mixing container and also scrape down the mixing tool several times to insure proper mixing. When using a mechanical mixer, use low speeds since a high-speed mixer will generate internal heat thereby reducing the application life. Violent stirring also entraps air in the mixed CS 5500.

APPLICATION

CS 5500 Class B is an extrudable (gun grade) non-sagging thixotropic sealant suitable for fuel tanks or pressure cabin applications.

Color:	Base Compound White	Curing Agent Black
Viscosity:	Base Compound 12000 poises	Curing Agent 1000 poises
mix ratio:	Weight 100:10	Volume 100:8.2
Vertical Flow		0.3 inch
Application Life		1/2 hr, 2hr, 6hr
Tack Free		B2 16 hr
Cure	48hr Shore 30	72hr Shore 45
Non Volatile		97%
Shipping		Not regulated
Fungus Resistance		Non nutrient
Testing performed at standard conditions 77° F 50% RH. Unless otherwise stipulated by the specification. The results obtained are typical and may vary in subsequent batches		

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STORAGE LIFE

The storage life of CS 5500 is 9 months minimum 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 affect the end performance of the product.

CLEANING OF EQUIPMENT

Tools and equipment may be cleaned prior to cure by using Mil-C-38726 cleaner or equivalent. Cured sealant may be removed by soaking in Epoxy and/or Polysulfide stripper.

SAFETY

The uncured combined components may produce irritation following the contact with the skin. When handling CS 5500 avoid ingestion and all contact with the body especially open breaks in the skin. Always wash hands before eating or smoking. Obtain medical attention in case of extreme exposure or ingestion. For additional information see the Material Safety Data Sheet.

PACKAGING

CS 5500 is packaged in the following kit sizes:

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

CS 5500 is also available in 5-Gallon and 50 Gallon Drum Kits.

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Mixed Color		Grey
Specific Gravity:	Base Compound 1.56 Mixed 1.60	Curing Agent 1.92
Hardness	ultimate	60 REX
Tensile Strength	Standard cure 500 psi	8hr / 360 F 600 psi
Elongation	400 %	150%
Peel Strength	14 days / 77F 55 lbs. / 100%CF	70 days 140 JRF 45 lbs./ 100%CF
Corrosion Resistance		Passes
Low Temperature Flex		passes
Thermal Rupture		0.15 inch @ 360 deg. F
Hydrolytic Stability		50 Shore "A"
Repair ability		Excellent (50 PLI/100% C.F.)
Testing performed at standard conditions 77° F 50% RH. Unless otherwise stipulated by the specification. The results obtained are typical and may vary in subsequent batches		