

CS 4406 Hole filling compound polysulfide

Chem Seal

Technical Bulletin
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PRODUCT DESCRIPTION **STM40-106 rev. E**

CS 4406 is a fuel resistant sealant for use on pressurized cabins as well as in areas that may subject to contact with aircraft fuels, lubricants, oils, water and/or weathering. CS 4406 has been formulated to plug through holes in airframe structures in order to maintain the pressure boundary.

CS 4406 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 4406 is designed to withstand the attack of sulfur compounds that are present in jet fuels. CS 4406 Class B is a thixotropic paste that will not flow or sag on vertical or overhead surfaces.

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 4406 will adhere tenaciously to most

Class B	
Color: Base Compound	off-white
Curing Agent	Gray
Mixed	Gray
Mixing Ratio (by weight)	100:10
Specific gravity	1.5
Non Volatile Content	97%
Viscosity-Base Compound (Brookfield RVF Spindle #7 @ 2 RPM)	11,000 poises
Vertical Flow	0.062
Ultimate Hardness, Shore A	50
Crazing factor	pass
Low temperature flex	pass
Pressure 12 psi / 180 F	pass
Shear strength 100 psi 98% 200 psi 100%	

(For a complete description of properties refer to STM40-106 specification) Published values are typical and may vary within the allowance of the specification

MIXING INSTRUCTIONS

CS 4406 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 Part A CS 4406 with solvents prior to combining with the Part B component. Stir the Part B component until the contents of the container are uniform. Place the entire 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 4406. 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. Heating up to 120°F may accelerate cure. However care must be exercised to avoid the entrapment of solvent when heat is applied.

STORAGE LIFE

The storage life of CS 4406 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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1 of 2 Supercedes December, 2003

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APPLICATION

The work life of CS 4406 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
½	½ HOUR	8 HOURS	30 HOURS
2	2 HOURS	24 HOURS	72 HOURS

** CS 4406 Class B-1/4 may be fuel immersed within two hours of application when cured at standard conditions.

CLEAN UP

For clean up during use, and also to remove partially cured CS 5530 use CS 9900 cleaner. Cured CS 5530 will require a soaking period in epoxy polysulfide stripper.

SAFETY

CS 4406 Class A should be used with adequate ventilation. For more information refer to Bulletin Number SD-63 of the Manufacturing Chemists Association. Avoid prolonged contact and wash with soap and water prior to eating or smoking. The flash point of CS 4406 Class B is over 200°F.

"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 4406 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 4406 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.

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, which proves to be defective. Neither seller nor manufacturer shall be liable to buyer or any third person for any injury, loss, or 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.