

# CS 2727 Flexible Epoxy Joint Sealer

**Chem Seal**

meets Air Force Specifications  
meets AIRGAS pad requirements

*Technical Bulletin*  
*April 2013*

## PRODUCT DESCRIPTION

**Qualified U.S.A.F. QPL A.F.B.M.D. Letter 12/24/59  
(WDFN) U.S.A.F.**

The United States Air Force Ballistic Missile Division approves CS 2727 for sealing concrete joints located in liquid oxygen (LOX) spillage areas on missile launch facilities.

CS 2727 complies with all the requirements required by the medical gas providers for the construction of joints in concrete pads used for the storage of liquefied medical oxygen. The applicator is responsible for obtaining suitable joint designs from the provider of the medical or industrial gas equipment.

CS 2727 is a two component, flexible epoxy compound which is easily applied and cures at ambient temperature with excellent adhesion to concrete, wood, and other materials without a primer. CS 2727 withstands the LOX impact test and has excellent resistance to water, fuels, chemicals, and extreme weathering.

## SURFACE PREPERATION

The joint to be sealed with CS-2727 should be .250 to .500 inches in width and a maximum of 1.000-inch depth. A filler of non combustible inert material may be used to reduce the overall depth.

The surfaces to which CS 2727 is applied must be clean, dry and free of dirt, grease, wax, bond-breakers, rust, paint, and other surface contamination. To remove dust, alkalis, and some paints. Concrete must be at least 28 days old. Concrete can is etched with 5-10% muriatic acid (commercial Hydrochloric acid) The etched surface must be thoroughly neutralized with a basic wash such as household ammonia. Sandblasting, wire brushing or commercial concrete cleaners may also clean contaminated surfaces. Surface temperature below 70°F will significantly increase time required to cure.

## MIXING INSTRUCTIONS

CS 2727 has a limited application life. Do not mix the kit components until the surfaces have been prepared and the material is ready for use. CS 2727 comes packaged in kit form with pre-measured amounts of base compound and curing agent. Bring the temperature of the kit to 70°F - 80°F before mixing. Mix all of the two components together thoroughly either by hand or with a mechanical mixer.

Chem Seal Products

Manufactured By The Flamemaster Corporation  
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## Application and Physical Properties

<b>Application properties</b>		
Color		
Base compound		white
Curing agent		Clear-brown
Cured material		Off-white
Mixing ratio		
	Weight	100 : 20
	Volume	100 : 27
Viscosity # 7 spindle @ 2 RPM		150-200 poises
Solids content		99 %
Application time (work life)		15 min
Tack free time		6 hours
Cure to shore A 30		24 hours
<b>Cured material properties</b>		
Coverage	173 inch <sup>3</sup> / gallon kit (57 linear feet ) .250" X 1.00" joint	
Hardness Shore A		80 full cure
Specific gravity		1.35
Elongation		90 %
Tensile strength		370 psi
Adhesion to concrete and wood		excellent
Shrinkage		negligible
Resistance to fuel & water		Excellent
Properties reported are typical based on standard conditions as referenced in AS5127		

## CURE

CS 2727 cures to a 50 Shore (A) in 24 hours at 77°F. An accelerated cure is possible with the application of heat. (Do not exceed 120° F.) Note at temperatures below 77°F the time to cure is doubled with each 10° reduction of ambient temperature.

## CLEANING OF EQUIPMENT

Use CS-9900 cleaner, thinner to remove uncured CS 2727 from equipment. To remove cured CS 2727 requires the use of commercial epoxy/ polysulfide strippers.

## STORAGE LIFE

CS2727 has a storage life of nine months when stored at temperatures below 80°F in the original unopened container.

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## **SAFETY**

CS 2727 may produce allergic reactions in some persons. Persons handling this material should avoid skin contact, using gloves or protective creams.

Area ventilation is recommended when the material is being used in an enclosed area.

Consult a physician should allergic symptoms develop.

Before using CS 2727, 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**

Pre measured can kits ½ Pint – 1 Gallon

Bulk 5 Gallon pails

Contact Flamemaster for specialized packaging

Flamemaster does not warranty the performance of fuel tank sealants or coatings when 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." 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. Sellers 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 the 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. However since much of this information has been received from sources outside of the company, it is provided without any warranty expressed or implied regarding its correctness or suitability for specific situations. The conditions of handling, storage, use and disposal are beyond our control and may be beyond our knowledge.