CS 5306 Polythioether fast cure sealant

Chem Seal

Technical Bulletin
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DESCRIPTION meets AMS 3277, Type I

CS 5306 cures rapidly at low temperatures.
CS 5306 is an excellent sealant for use when sealing on aircraft to yield weather tightness and fuel resistant seals. CS 5306 is a non-flow material and may be utilized on vertical and overhead surfaces. CS 5306 is a thixotropic and fuel resistant sealant.

CS 5306 is a two-part, sealant based on Permapol P-3 polymers covered under U.S. Patent 4,366,307. CS 5306 cures to a flexible, resilient rubber which has excellent adhesion to aluminum, magnesium, and titanium. Most surfaces require CS 5306 primer for optimum adhesion.

Application Properties

Color			
Part A base compound			White
Part A curing agent			Black
Air content			< 2%
Chalking			Pass
Base viscosity			12000 - 16000 poise
Slump			
	Initial	50 min	90 min
B 1/4	0.25	N/A	N/A
B 1/2	0.30	N/A	N/A
B 2	.20	.35	.50
Application time and cure to Shore A 35			
	at 77F and 50% RH		
	application	Tack free	Cure 35 A
B 1/4	1/4 hour	1/2 hour	1 hour
B 1/2	1/2 hour	1 hour	2 hour
B 2	2 hour	< 12 hour	< 16 hour
Application and cure to Shore A 35 at 40F			
B 1/4	1/4 hour	< 3 hour	4 hour
B 1/2	1/2 hour	< 6 hour	8 hour
B-2	2 hour	< 8 hour	< 24 hour
Application and cure to Shore A 35 at 20F			
B 1/4	1/4 hour	< 6 hour	< 12 hour
B 1/2	1/2 hour	< 8 hour	< 16 hour
B 2	2 hour	N/A	N/A

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. Apply CS 5306 primer and let air dry for 30 minutes before applying sealant. Primer is included with the cartridge kit.

MIXING INSTRUCTIONS

When mixing always follow the instructions printed on the sealant cartridge packaging. When machine mixing use caution not to overheat cartridge or contents

APPLICATION INSTRUCTIONS

CS 5306 may be applied with a pressure gun or a spatula within the specified application life. Specified application lives are based on the standard condition of 77°F and 50% relative humidity.

CURE

The cure period is dependent on the application life and temperature. Cure may be accelerated by heating up to 160□F.

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STORAGE LIFE

The storage life of CS 5306 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 the use of Deso-clean 45; Mil-C-38726 cleaner or equivalent. Cured CS 5306 may be removed by soaking in Epoxy and/or Polysulfide stripper.

HEALTH PRECAUTIONS

The uncured combined components may produce irritation following contact with the skin. When handling CS 5306 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. Refer to the applicable Material Safety Data Sheet prior to using this product.

PACKAGING

CS 5306 packaged in injection kits only.
24 ea. per case
2 fl. oz. in 2 1/2 oz. cartridge
3.5 fl. oz. in 6 oz. cartridge

Application Properties
at 77F and 50% RH

Specific Gravity	1.48
Ultimate hardness, Shore A	60
Nonvolatile content	98%
Tensile (standard cure)	400 PSI
Tensile (heat cycle)	290
Elongation (standard cure)	350%
Elongation (heat cycle)	230%
Peel strength 100% cohesive failure primed with CS-5306 primer or AMS-3100 primer AMS 2529 JRF 7 days 140F	
AMS 2471 (anodized aluminum)	50
AMS 4901 (Titanium)	45
AMS 5516 (stainless steel)	47
MIL-C-5541 (Alodine aluminum)	46
MIL-C-27725	40
Peel strength 100% cohesive failure primed with CS-5306 primer or AMS-3100 primer AMS 2529 JRF and Salt Water 7 days 140F	
AMS 2471 (anodized aluminum)	55
AMS 4901 (Titanium)	50
AMS 5516 (stainless steel)	58
MIL-C-5541 (Alodine aluminum)	55
MIL-C-27725	50
Temperature Operating Range	+400 Deg. F
Low Temperature Flexibility	-80 deg. F
Fungus Resistance	Non Nutrient
Thermal rupture (after immersion in JRF AMS2629)	Pass
Repairability	Excellent
Corrosion Resistance (after immersion) Salt water and JRF 12 days @ 140F + 60 hrs. + 6 hrs, @180F	Excellent
Resistance to Hydrocarbons AMS 2629	Excellent
Fluid Resistance	Excellent