3M™ Aerospace Sealant AC-730 Class C

Polysulfide two-component sealant

Product Description

3M™ Aerospace Sealant AC-730 Class C is a fast cure, two- part, non-chromated corrosion inhibiting sealant. Excellent for sealing faying surfaces of mating parts and sealing joints from passage of liquid or air, these manganese cured sealants provide an effective barrier against the common causes of corrosion on aluminium and between dissimilar metals. 3M AC-730 Class C Sealants have outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals, hydraulic fluids and petroleum products commonly used in the aircraft industry. The mixed compound is a flowable, fay surface grade material, easily applied by spatula, brush, roller or extrusion gun. They maintain flexibility and bond strength on most metal substrates under extremes of temperature, weathering, and stress.

Key Features

- Non-chromate corrosion inhibitive
- Fast cure
- Less shrinkage due to low solvent formulation
- Easy to tool

Product Characterization

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

General properties	
Colour Base	Beige (Off White)
Colour Accelerator	Black
Mix Ratio	100 base / 10 accelerator (by weight)
Non volatile Content	90%
Base viscosity (RVF Brookfield #7 spindle @ 2 rpm, 25°C)	2000 to 4000 poise

Application Life and Cure Time (@ 25°C, 50% Relative Humidity)

Grade	Minimum Application Life[1]	Typical Tack-Free Time[2]	Typical Cure Time[3]
C-8	8 hours	24 hours	7 days
C-48	48 hours	168 hours	5 weeks

[1]Application life refers to the length of time that mixed compound remains at a consistency suitable for application with spatula or caulking gun. Application life is always measured at a standard temperature of 25°C with a relative humidity level of 50%. In general, for every 10°C rise in temperature, the application life is halved; for every 10°C drop, it is doubled. High humidity levels during the mixing process will shorten application life.

[2]Tack-free time is the length of time after which a mixed sealant will no longer tightly adhere to L-LP-690 standard low density polyethylene film.

[3]Cure time is defined as the length of time it takes 3M™ Aerospace Sealant AC-730 Class C to reach 30A hardness. It depends on three factors: remaining application life, temperature, and relative humidity. To a certain extent, the temperature/ humidity factors for application life also apply to curing. To accelerate the curing process, heat may be applied up to (but not more than) 60°C.

Product Performance

Peel Strength *

Substrate	Conditioning	Load /% cohesion
MIL-C-5541	7days @ 60°C in JRF	187 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	156 N/25mm/100%
AMS2471 Anodized	7days @ 60°C in JRF	227 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	169 N/25mm/100%
AMS5516 Stainless Steel	7days @ 60°C in JRF	267 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	156 N/25mm/100%
AMS 4911 Titanium	7days @ 60°C in JRF	263 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	178 N/25mm/100%
MIL-C-27725	7days @ 60°C in JRF	245 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	174 N/25mm/100%
MIL-PRF-23377	7days @ 60°C in JRF	187 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	232 N/25mm/100%
AS 4/3501-6 (graphite/epoxy)	7days @ 60°C in JRF	258 N/25mm/100%
	7 days @ 60°C in JRF/NaCl	165 N/25mm/100%

*Tested per AMS3265

Typical Physical and Performance Properties of Cured compound After 14 Days @ 25°C/50%RH

Colour (mixed)	Dark Grey
Specific Gravity	1.5
Low Temperature Flexibility	No cracking, checking or adhesion loss when tested at -65°F (-54°C)
Service Temperature	-65° to +250°F (-54° to +121°C)
Short Term Service Temperature	-65° to +360°F (-54° to +182°C)
Corrosion	No softening, sponging, or loss of adhesion; no evidence of corrosion of metal under sealant
Repairability (to itself)	89 N/25 mm to itself and other AMS3265 and AMS-S-8802 sealants

Handling, Application, Storage

Precautionary information

Refer to product label and Material Safety Data Sheet (MSDS) for health and safety information before using this product. For MSDS visit our website: www.3M.com\msds.

Instructions for use

Refer to the 3M application guide on 3M polysulfide sealants and on the surface preparation guide for an adequate product use.

While this information is provided as general application guideline based upon typical conditions, it is recognized that no two applications are identical due to, among other things, different assemblies, methods of heat application, production equipment and other limitations. This document is not intended to substitute for engineering assembly and/or manufacture instructions. It is therefore suggested that experiments be run, within the actual environment imposed to determine optimum conditions for your specific application and to determine suitability of product for particular intended use.

Storage conditions

The shelf life of 3M™ Aerospace Sealant AC-3730 Class C is 9 months from date of packaging, when stored at temperatures below 27°C in its original unopened container.

Mixed 3M AC-730 Class C Sealants may be stored under refrigeration as follows:

- 15 days at –23°C
- 30 days at –40°C

It is important to remember that freezing, storing and thawing procedures reduce application life. Also, frozen storage will reduce application life by varying amounts depending on the storage temperature and length of storage time. All aspects of storage, freezing and thawing should be planned carefully and it is not recommended to mix and freeze with less than 1/2 hour of available application time.

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Reference: 179