



3M™ Aerospace Sealant AC-236 Class C

Polysulfide two-component sealant

Product Description

3M™ Aerospace Sealant AC-236 Class C is a manganese dioxide curing, liquid polysulfide polymer for fuel tank and fuselage sealing and repairs. These two-component sealants have outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals and petroleum products commonly used in the aircraft industry. 3M AC-236 Class C Sealants maintain flexibility and bond strength on most metal substrates like aluminium, stainless steel, steel, and many coatings under extremes of temperature, weathering and stress. Once mixed, the flowable compound is excellent for fay surface sealing and can easily be applied by brush, roller, spatula, or extrusion gun. The sealants exhibit superb tooling properties.

Key Features

- Less shrinkage due to low solvent formulation
- Easy to tool
- Non-chromate



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	White
Colour Accelerator	Black
Mix Ratio	100 base / 10 accelerator (by weight)
Non volatile Content	93%
Base viscosity (RVF Brookfield #7 spindle @ 2 rpm, 25°C)	1500 to 3500 poise
Base viscosity (RVF Brookfield #7 spindle @ 10 rpm, 25°C)	700 to 1600 poise

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

Grade	Minimum Assembly Time ¹	Typical Tack-Free Time ²
C-20	20 hours	60 hours
C-80	80 hours	96 hours

¹Assembly time refers to the length of time the mixed compound remains at a consistency suitable for assembly and squeeze out. Assembly time is always calculated for a standard temperature of 25°C with a relative humidity level of 50%. In general, for every 10°C rise in temperature, the assembly time is halved; and for every 10°C drop, it is doubled. High humidity levels during the mixing process will shorten assembly time.

²Tack-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.



Product Performance

Typical Values of 3M™ Aerospace Sealant AC-236 Class C to AMS-S-8802

Peel Strength*

Substrate	Conditioning	Load /% cohesion
MIL-C-5541	7days@60°C in JRF	156 N/25mm / 100%
	7 days @60°C in JRF/SW	200 N/25mm / 100%
AMS 2471 Anodized	7days@60°C in JRF	232 N/25mm / 100%
	7 days @60°C in JRF/SW	200 N/25mm / 100%
MIL-C-27725	7days@ 60°C in JRF	156 N/25mm / 100%
	7 days @ 60°C in JRF/SW	200 N/25mm / 100%
Stainless Steel	7days @ 60°C in JRF	205 N/25mm / 100%
	7 days @ 60°C in JRF/SW	214 N/25mm / 100%
MIL-P-23377	7days @ 60°C in JRF	200 N/25mm / 100%
	7 days @ 60°C in JRF/SW	200 N/25mm / 100%
Titanium (AMS 4911)	7days @ 60°C in JRF	223 N/25mm / 100%
	7 days @ 60°C in JRF/SW	232 N/25mm / 100%
Graphite Epoxy AS 4/3501-6	7days @ 60°C in JRF	187 N/25mm / 100%
	7 days @ 60°C in JRF/SW	196 N/25mm / 100%

*Specification requirement – 90N/25 mm./100%, wire mesh.

Typical Physical and Performance Properties of Cured compound After 14 Days @ 25°C/50% RH when tested per AMS-S-8802

Colour (mixed)	Grey
Specific Gravity	1.64
Hardness	60 Shore "A"
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)
Thermal Rupture Resistance	Does not blister or sponge
Shear Strength	1,97 MPa
Corrosion	None
Fuel Resistance	70 days at 60°C, 156 N/25 mm / 100% cohesive failure
Weight Loss and Flexibility	No cracking when bent 82°C over a 0.3 cm mandrel. No more than 6% loss of the sealant compound after fluid immersion.

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 constraints 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-236 Class C is 9 months from date of packaging, when stored at temperatures below 27°C in its original unopened container.

Mixed 3M AC-236 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.

Important Notice: All statements, technical information and recommendations in this data sheet are based on tests 3M believes to be reliable, but the accuracy or completeness of those tests is not guaranteed. All technical data and information should be considered typical or representative only and should not be used for specific purposes. Given the variety of factors that affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product before use to determine the suitability of the 3M product for the intended use and method of application. All questions of liability relating to the 3M product are governed by the terms of the sale subject to, where applicable, the prevailing law.



Aerospace and Aircraft Maintenance Department

European Aerospace Laboratory

www.3m.eu/aerospace

© 3M 2013. All rights reserved.

Reference: 170