

# 3M™ Aerospace Sealant AC-770 Class B

## Product Description

3M™ Aerospace Sealant AC-770 Class B are fast cure, low density two-component, manganese dioxide cure, polysulfide fuselage sealants. 3M AC-770 Class B Sealants have outstanding resistance to aviation gasoline and jet fuel, as well as resistance to chemicals and petroleum products common to the aircraft industry. 3M AC-770 Class B Sealants maintain flexibility and bond strength on most metal substrates such as; aluminum, titanium, steel, stainless steel, and many coatings under extremes of temperature, weathering and stress. The mixed compound is a thixotropic paste easily applied by extrusion, injection gun or spatula, and exhibits superb tooling properties.

## Applications

- Sealing fuselages
- Filling voids

## Typical Physical and Application Properties

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

<b>Color</b>	
<b>Base:</b>	Off White
<b>Accelerator:</b>	Brown
<b>Mix Ratio</b>	100 base / 10 accelerator (by weight)
<b>Nonvolatile Content</b>	98.5%
<b>Base Viscosity</b> (RVF Brookfield #7 spindle) @ 2 rpm, 77°F)	9,500 - 13,000 poise

## Application Life and Cure Time

(@ 77°F, 50% Relative Humidity)

Extrusion Rate at Application Life 88 gpm

	Minimum Application Life <sup>1</sup>	Typical Tack-Free Time <sup>2</sup>	Typical Cure Time <sup>3</sup>
B-1	1 hour	3-4 hours	5-6 hours
B-2	2 hours	7-8 hours	9-11 hours

<sup>1</sup>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 77°F with a relative humidity level of 50%. In general, for every 20°F rise in temperature, the application life is halved; and for every 20°F drop, it is doubled. High humidity levels, greater than 65%, during the mixing process will shorten application life.

<sup>2</sup>Tack-free time is the length of time after which a mixed sealant will no longer tightly adhere to LP-P-690 standard low density polyethylene film.

<sup>3</sup>Cure time is defined as the length of time it takes 3M™ Aerospace Sealant AC-770 Class B 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, apply heat up to (but not more than) 120°F.

## Typical Physical and Performance Properties of Cured Compound after 14 Days @ 77°F/50% RH

<b>Color</b>	Dark Brown
<b>Specific Gravity</b>	1.10
<b>Hardness</b>	42-48 Shore "A"
<b>Low Temperature Flexibility</b>	No cracking, checking or adhesion loss when tested at -65°F (-54°C)
<b>Service Temperatures</b>	-65° to +250°F (-54° to +121°C)
<b>Corrosion</b>	None
<b>Repairability</b>	34 piw / 100% cohesive failure



# 3M™ Aerospace Sealant AC-770 Class B

## Typical Values of 3M™ Aerospace Sealant AC-770 Class B

### Tensile Strength and % Elongation

ASTM Fuel B in ASTM D471 Reference Fuel B

Conditioning	Specification Requirements	Results
Standard Cure - 14 days	150 psi / 150%	250 psi / 310%
7 days @ 120°F in ASTM Fuel B 48 hours @ 120°F	150 psi / 150%	265 psi / 330%

### Peel Strength\*

Substrate	Conditioning	Load / % Cohesion
AMS 4049	7 days @ room temp	34 lbs/100%
	7 days @ 120°F in ASTM Fuel B	30 lbs/100%
	7 days @ 120°F in 3% NaCl	27 lbs/100%
BMS 10-11 tyI	7 days @ room temp	35 lbs/100%
	7 days @ 120°F in ASTM Fuel B	27 lbs/100%
	7 days @ 120°F in 3% NaCl	35 lbs/100%
BMS 10-20 tyII	7 days @ room temp	30 lbs/100%
	7 days @ 120°F in ASTM Fuel B	32 lbs/100%
	7 days @ 120°F in 3% NaCl	29 lbs/100%
MIL-C-5541	7 days @ room temp	44 lbs/100%
	7 days @ 120°F in ASTM Fuel B	34 lbs/100%
	7 days @ 120°F in 3% NaCl	32 lbs/100%
MIL-A-8625	7 days @ room temp	33 lbs/100%
	7 days @ 120°F in ASTM Fuel B	31 lbs/100%
	7 days @ 120°F in 3% NaCl	27 lbs/100%
MIL-S-5059	7 days @ room temp	33 lbs/100%
	7 days @ 120°F in ASTM Fuel B	30 lbs/100%
	7 days @ 120°F in 3% NaCl	26 lbs/100%
MIL-T-9046	7 days @ room temp	37 lbs/100%
	7 days @ 120°F in ASTM Fuel B	26 lbs/100%
	7 days @ 120°F in 3% NaCl	25 lbs/100%
BMS 10-60 tyII	7 days @ room temp	29 lbs/100%
	7 days @ 120°F in ASTM Fuel B	27 lbs/100%
	7 days @ 120°F in 3% NaCl	31 lbs/100%
BMS 10-103 tyI	7 days @ room temp	33 lbs/100%
	7 days @ 120°F in ASTM Fuel B	30 lbs/100%
	7 days @ 120°F in 3% NaCl	33 lbs/100%

\*Tested per BMS-5-142

ASTM Fuel B is ASTM D471 Reference Fuel B

## Health and Safety Precaution

3M™ Aerospace Sealant AC-770 Class B are safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request.

## Storage

The shelf life of 3M™ Aerospace Sealant AC-770 Class B is 9 months from date of packaging, when stored at temperatures below 80°F in its original container.

Mixed 3M AC-770 Class B Sealants may be stored under refrigeration as follows:

15 days at -10°F

30 days at -40°F

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 application time.

# 3M™ Aerospace Sealant AC-770 Class B

## For Additional Information

In the U.S., call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M office or one of the following branches:

<b>Australia</b> 61-2-498-9711 tel 61-2-498-9710 fax	<b>Austria</b> 01-86686-298 tel 01-86686-229 fax	<b>Brazil</b> 55 19 3838-7876 tel 55 19 3838-6892 fax	<b>Canada</b> 800-410-6880 ext. 6018 tel 800-263-3489 fax
<b>China</b> 86-21-62753535 tel 86-21-62190698 fax	<b>Denmark</b> 45-43-480100 tel 45-43-968596 fax	<b>France</b> 0810-331-300 tel 30-31-6195 fax	<b>Germany</b> 02131-14-2344 tel 02131-14-3647 fax
<b>Italy</b> 02-7035-2177 tel 02-7035-2125 fax	<b>Japan</b> 03-3709-8245 tel 03-3709-8743 fax	<b>Korea</b> 02-3771-4114 tel 02-786-7429 fax	<b>Netherlands</b> 31-71-5-450-272 tel 31-71-5-450-280 fax
<b>South Africa</b> 11-922-9111 tel 11-922-2116 fax	<b>Spain</b> 34-91-321-6000 tel 34-91-321-6002 fax	<b>Switzerland</b> 01-724-9114 tel 01-724-9068 fax	<b>United Kingdom</b> (0) 161-237-6174 tel (0) 161-237-3371 fax

## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

## Warranty, Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

## Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

---

These products were manufactured under a 3M Quality Management System registered to the AS9100 standard.



### Aerospace and Aircraft Maintenance Department

3M Center, Building 223-1N-14  
St. Paul, MN 55144-1000  
1-800-235-2376  
www.3M.com/aerospace

3M is a trademark of 3M Company.  
Please recycle. Printed in U.S.A.  
©3M 2012 (2/12) All rights reserved.  
60-9700-0353-3

