3M™ Aerospace Sealant AC-350 Class A

Product Description

3M™ Aerospace Sealant AC-350 Class A are fast-cure, intermediate density two-component, manganese dioxide cure, brushable, polysulfide fuel tank and fuselage sealants. 3M AC-350 Class A 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-350 Class A 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 pourable liquid easily applied by brush or roller. It has excellent tooling properties.

Applications

- Sealing integral fuel tanks
- Repairing integral fuel tanks
- Sealing fuselages

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.

Color **Base:** **Accelerator:**	 White Dark Brown
Mix Ratio	100 base / 10 accelerator (by weight)
Nonvolatile Content	88%
Base Viscosity (RVF Brookfield #6 spindle) @ 10 rpm, 77°F)	250 to 500 poise

Application Life and Cure Time

(@ 77°F, 50% Relative Humidity)

	Minimum Application Life[1]	Typical Tack-Free Time[2]	Typical Cure Time[3]
A-1/2	1/2 hour	3 hours	4 hours
A-1	1 hour	5 hours	8 hours
A-2	2 hours	8 hours	12 hours

[1]Application life refers to the length of time that mixed compound remains at a consistency suitable for application with brush or roller. 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; for every 20°F 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 LP-P-690 low density polyethylene film.

[3]Cure time is defined as the length of time it takes 3M™ Aerospace Sealant AC-350 Class A to reach 30A hardness. It depends on three factors: remaining application life, temperature, and relative humidity. The temperature/humidity factors for application life also apply to curing. To accelerate the curing process, apply heat up to (but not more than) 140°F.

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

Color (mixed)	Light Gray
Specifc Gravity	1.4
Hardness	48-53 durometer “A”
Low Temperature Flexibility	No cracking, checking or adhesion loss when tested at -65°F (-54°C)
Weight Loss in JRF	3-4%
Service Temperatures	-65° to +250°F (-54° to +121°C)
Short Term Service Temperature	-65° to +360°F (-54° to +182°C)
Thermal Rupture Resistance (300°F, 30 minutes)	Conforms
Corrosion	None
Repairability (to itself) **To AMS-S-8802 sealants** **To AMS3276 sealants**	50 piw / 100% cohesive failure 67 piw / 100% cohesive failure 54 piw / 100% cohesive failure

Typical Values of 3M™ Aerospace Sealant AC-350 Class A

Tensile Strength and % Elongation

Conditioning	Requirements	Results
Standard Cure	250 psi / 250%	400 psi / 350%
14 days JRF @ 140°F	150 psi / 200%	230 psi / 340%
8 hours @ 360°F	200 psi / 75%	350 psi / 100%
72 hrs in JRF @ 140°F, + 72 hrs @ 120°F Air Drying + 7 days @ 250°F	200 psi / 100%	320 psi / 150%
Standard Heat Cycle + JRF - 7 days @ 140°F	100 psi / 50%	350 psi / 80%

Peel Strength*

Substrate	Conditioning	Load / % Cohesion
MIL-C-5541 Alodine	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	33 lbs./100% 37 lbs./100% 40 lbs./100%
AMS-2471 Anodized	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	40 lbs./100% 41 lbs./100% 44 lbs./100%
MIL-C-27725	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 70 days @ 140°F in JRF 70 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	41 lbs./100% 30 lbs./100% 32 lbs./100% 46 lbs./100% 38 lbs./100%
AMS 4911 Titanium (w/AMS3100)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 70 days @ 140°F in JRF 70 days @ 140°F in JRF/SW *6 temp cycles in JRF/SW	37 lbs./100% 43 lbs./100% 46 lbs./100% 34 lbs./100% 32 lbs./100%
AMS 5516 Stainless Steel (w/AMS3100)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW *6 temp cycles in JRF/SW	37 lbs./100% 45 lbs./100% 45 lbs./100%
MIL-P-23377	7 days @ 140°F in DI Water 7 days @ 140°F in SW	33 lbs./100% 46 lbs./100%
AS 4/3501-6 (epoxy graphite, peel)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	34 lbs./100% 46 lbs./100% 48 lbs./100%
AS 4/3501-6 (epoxy graphite, tool)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	38 lbs./100% 38 lbs./100% 42 lbs./100%
IM7/5250-4 (graphite/BMI, peel)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	39 lbs./100% 33 lbs./100% 38 lbs./100%
IM7/5250-4 (graphite/BMI, tool)	7 days @ 140°F in JRF 7 days @ 140°F in JRF/SW 6 temp cycles in JRF/SW	34 lbs./100% 42 lbs./100% 42 lbs./100%

**Specification requirement - 20 lbs./100%, wire mesh.*

Health and Safety Precaution

3M™ Aerospace Sealant AC-350 Class A 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-350 Class A is 9 months from date of packaging, when stored at temperatures below 80°F in its original unopened container.

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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:

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Technical Information

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

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