

3M AC-645 B-2 Aerospace Sealant

Category : Polymer , Thermoset

Material Notes:

3M Aerospace Sealant AC-645 B-2 is a low density, two-component, manganese dioxide cured, liquid polysulfide polymer system. It is suitable for use in fuel tanks, fuselage hole filling, cavity filling and fuel tank filleting applications. It has outstanding resistance to jet fuel, as well as resistance to chemicals, and petroleum products common to the aircraft industry. 3M AC-645 B-2 Sealant maintains its 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. It has excellent tooling properties. Information provided by 3M

Order this product through the following link:

http://www.lookpolymers.com/polymer_3M-AC-645-B-2-Aerospace-Sealant.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	cured 14 days @ 50% RH; STM 40-107
Volatiles	3.0 %	3.0 %	
Brookfield Viscosity	70000 - 160000 cP	70000 - 160000 cP	Accelerator, RVF #7 sp @ 10 rpm
	800000 - 1.20e+6 cP	800000 - 1.20e+6 cP	Base, RVF #7 sp @ 2 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	55	55	cured 14 days @ 50% RH; STM 40-107
Tensile Strength at Break	1.07 MPa	155 psi	Standard Cure; STM 40-107
	0.827 MPa @Temperature 60.0 °C, Time 605000 sec	120 psi @Temperature 140 °F, Time 168 hour	STM 40-107
Elongation at Break	170 %	170 %	Standard Cure; STM 40-107
	270 % @Temperature 60.0 °C, Time 605000 sec	270 % @Temperature 140 °F, Time 168 hour	STM 40-107
Peel Strength	3.16 kN/m	18.0 pli	Dry-Std, Alcad; STM 40-107
	2.10 kN/m @Temperature 60.0 °C, Time 605000 sec	12.0 pli @Temperature 140 °F, Time 168 hour	JRF, Alcad; STM 40-107
	2.10 kN/m @Temperature 60.0 °C, @Temperature 140 °F,	12.0 pli @Temperature 140 °F,	JRF, Alcad; STM 40-107

Mechanical Properties	Time 6.05e+6 sec Metric	Time 1680 hour English	Comments
Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	STM 40-107, cured 14 days @ 50% RH
Minimum Service Temperature, Air	-54.0 °C	-65.2 °F	STM 40-107, cured 14 days @ 50% RH

Processing Properties	Metric	English	Comments
Cure Time	1440 min	24.0 hour	Tack-Free Time
	1440 min	24.0 hour	
Shelf Life	9.00 Month @Temperature <=26.7 °C	9.00 Month @Temperature <=80.1 °F	

Descriptive Properties	Value	Comments
Appearance	Black	
	Black	Accelerator
	Off White	Base

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