AEROSPACE MATERIAL SPECIFICATION

AMS3265™	REV. F
Issued 1996-03 Revised 2020-09 Superseding AMS3265E	

(R) Sealing Compound, Polysulfide (T) Rubber, Fuel Resistant, Non-Chromated Corrosion Inhibiting for Intermittent Use to 360 °F (182 °C)

RATIONALE

Five-Year Review. Deleted viscosity of curing agent requirement. Added Class B-6 application time requirements. Changed corrosion test - stress assembly requirement and procedure. Added additional informational clarifications.

1. SCOPE

1.1 Form

This specification covers polysulfide rubber sealing compounds containing only non-chromated corrosion inhibitors, supplied as a two-component system which cures at room temperature.

1.2 Application

This product has been used typically in applications requiring contact with air pressure, fuel, and water, and for fillets, fastener seals, and faying surface seals, as well as initial sealing of faying surfaces, overcoating of fasteners, and sealing of seams and joints, but usage is not limited to such applications. Polysulfide rubber has a service temperature range of -65 to +250 °F (-54 to +121 °C), with short-term recurring exposures (cumulative total of approximately 6 hours) to 360 °F (182 °C). AMS3100 adhesion promoter may be applied prior to application of the sealant in accordance with recommendations from the sealant manufacturer for specific substrates.

1.3 Classification

Sealing compounds covered by this specification are classified as follows:

Class A - Suitable for application by brush. Available with the following application times in hours:

A-1/2
A-2
A-4

Class B - Suitable for application by extrusion gun or spatula. Available with the following application times in hours:

B-1/4
B-1/2
B-1
B-2
B-4
B-6
B-12

Class C - Suitable for application by brush, extrusion gun, roller or spatula. Available with the following application times in hours:

Notation: ( ) Assembly time in hours.

C-2(2)
C-8(24)
C-12(48)
C-48(168)
C-96(336)

1.4 Precautions

1.4.1 Safety - Hazardous Materials

Shall be in accordance with AS5502 (1.1).

2. APPLICABLE DOCUMENTS

Shall be in accordance with AS5502 (Section 2).

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2629	Fluid, Jet Reference
AMS3020	Oil, Reference, for “L” Stock Rubber Testing
AMS3021	Fluid, Reference, for Testing Di-Ester (Polyol) Resistant Material
AMS3100	Adhesion Promoter for Polysulfide Sealing Compounds
AMS3276	Sealing Compound, Integral Fuel Tanks and General Purpose, Intermittent Use to 360 °F (182 °C)
AMS4045	Aluminum Alloy Sheet and Plate, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr, 7075: (-T6 Sheet, T651 Plate), Solution and Precipitation Heat Treated
AMS4049	Aluminum Alloy Sheet and Plate, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (Alclad 7075-T6 Sheet, T651 Plate), Solution and Precipitation Heat Treated
AMS4911	Titanium Alloy, Sheet, Strip, and Plate, 6Al - 4V Annealed
AMS5516	Steel, Corrosion-Resistant, Sheet, Strip, and Plate, 18Cr - 9.0Ni (SAE 30302), Solution Heat Treated

AMS-C-27725 Coating, Corrosion Preventative, for Aircraft Integral Fuel Tanks for Use to 250 °F (121 °C)

AS5127 Aerospace Standard Test Methods for Aerospace Sealants Methods for Preparing Aerospace Sealant Test Specimens

AS5127/1 Aerospace Standard Test Methods for Aerospace Sealants Two-Component Synthetic Rubber Compounds

AS5502 Standard Requirements for Aerospace Sealants and Adhesion Promoters

2.2 U.S. Government Publications

Copies of these documents are available online at https://quicksearch.dla.mil.

MIL-PRF-23377 Primer Coatings: Epoxy, High Solids

MIL-PRF-81733 Sealing and Coating Compound, Corrosion Inhibitive

MIL-PRF-85285 Coating, Polyurethane, Aircraft and Support Equipment

MIL-PRF-85582 Primer Coatings, Epoxy, Waterborne

2.3 PRI Publications

Available from Performance Review Institute, 161 Thorn Hill Road, Warrendale, PA 15086-7527, Tel: 724-772-1616, www.pri-network.org

PD2103 Aerospace Quality Assurance, Product Standards, Qualification Procedure, Sealants

PRI-QPL-AMS3265 Products Qualified Under AMS3265

3. TECHNICAL REQUIREMENTS

3.1 Materials

The basic ingredient used in the manufacture of these products shall be synthetic rubber of the polysulfide type with additive(s) for corrosion inhibition. The sealing compound shall cure by the addition of a curing agent to the base compound and shall not depend on solvent evaporation for curing. The material shall contain no lead compounds or hexavalent chromium compounds. The curing agent shall possess enough color contrast to the base compound to permit easy identification of an unmixed or incompletely mixed sealing compound. Neither the base compound nor the cured sealant shall be red or pink in color. The base compound shall be of uniform blend and shall be free of skins, lumps, and gelled or coarse particles.

3.2 Date of Packaging

Shall be in accordance with AS5502 (3.1).

3.3 Toxicological Formulations

Shall be in accordance with AS5502 (3.2).

3.4 Quality

Shall be in accordance with AS5502 (3.3).

3.5 Shelf Life

Shelf life shall be a minimum of 9 months from the date of packaging when stored below 80 °F (27 °C). Material may be retested for shelf life extension in accordance with 4.3.3.

3.5.1 Premixed and Frozen Material

Premixed and frozen material shall have a minimum storage life of 30 days at -40 °F (-40 °C) or lower, or 10 days at -10 to -40 °F (-23 to -40 °C) from date of mix/freeze. Recommendations for longer storage lives at lower temperatures may be provided by the manufacturer. The date of mix/freeze shall be within the shelf life of the unmixed material.

3.6 Properties

With the exception of the viscosity of base compound property, the base compound and the curing agent, when mixed in accordance with manufacturers' instructions and cured in accordance with 4.5.4.5, shall conform to the requirements shown in Table 1, when determined in accordance with the specified test methods.

Table 1 - Properties

Paragraph	Property	Requirement	Test Procedures (Paragraph)
3.6.1	Nonvolatile Content, by weight, min		AS5127/1 (5.1)
	Class A	84%	
	Class B	92%	
	Class C	88%	
3.6.2	Viscosity of Base Compound		AS5127/1 (5.3)
	Class A	100 to 600 poise	
	(Use No. 6 spindle at 10 rpm)	(10 to 60 Pa•s)	
	Class B	9000 to 16000 poise	
	(Use No. 7 spindle at 2 rpm)	(900 to 1600 Pa•s)	
	Class C	1500 to 4000 poise	
	(Use No. 6 spindle at 2 rpm)	(150 to 400 Pa•s)	
3.6.3	Flow (Class B only), max	0.75 inch (19 mm)	AS5127/1 (5.5.1)
3.6.4	Application Time, min		AS5127/1 (5.6)
	Class A - From the beginning of mixing, the viscosity shall not exceed 2500 poise (250 Pa•s)		AS5127/1 (5.6.1) (Use No. 7 spindle at 10 rpm)
	Class A-1/2	1/2 hour	
	Class A-2	2 hours	
	Class A-4	4 hours	
	Class B - From the beginning of mixing, not less than 15 g/min shall be extruded.		AS5127/1 (5.6.2)
	Class B-1/4	1/4 hour	
	Class B-1/2	1/2 hour	
	Class B-1	1 hours	
	Class B-2	2 hours	
	Class B-4	4 hours	
	Class B-6	6 hours	
	Class B-12	12 hours	