SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3571/5B

Issued JUL 1976
Revised APR 1991
Reaffirmed JAN 2001

Superseding AMS 3571/5A

Resin, Polyether Urethane (EU) Casting Flexible, Solid, Unfilled 85 Durometer "A"

1. SCOPE:

1.1 Form:

This specification covers one type of polyether-type urethane (EU) resin and hardener which, when mixed and cured, produce elastomeric polyurethane products.

1.2 Application:

See AMS 3571.

1.3 Classification:

85 Durometer "A".

2. APPLICABLE DOCUMENTS:

See AMS 3571.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification:

The complete requirements for procuring the product described herein shall consist of this document and the latest issue of the basic specification, AMS 3571.

3.2 Material:

See AMS 3571.

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3.3 Properties of Cured Product:

The product, mixed and cured in accordance with manufacturer's instructions, shall conform to the following requirements, determined in accordance with specified test methods:

3.3.1	Hardness, Durometer "A" or equivalent	85 ± 5	ASTM D 2240
3.3.2	Tensile Strength, minimum	2000 psi (13.8 MPa)	ASTM D 412
3.3.3	Elongation, minimum	300%	ASTM D 412
3.3.4	Tensile Stress at 100% Elongation, minimum	450 psi (3.10 MPa)	ASTM D 412
3.3.5	Compression Set, Method B, after 22 hours ± 0.5 at 70°C ± 2 (158°F ± 4), maximum	50%	ASTM D 395
3.3.6	Tear Strength, minimum	200 pounds force per inch (35 kN/m)	ASTM D 624 Die C
3.3.7	Bond Strength to Metal, Peel Test, minimum	20 pounds force per inch (3.5 kN/m)	ASTM D 903

3.3.7.1 The use of a primer is optional. Tests shall be run on grit blasted aluminum specimens with the nominal 1/2 inch (12.7 mm) overlap. Grit size shall be 100 - 200 mesh (150 - 75 µm).

3.3.8	Specific Gravity	1.00 to 1.20	ASTM D 792
3.3.9	Modulus of Rigidity at -55°C (-67°F), maximum	100 ksi (689 MPa)	ASTM D 1053
3.3.10	Electrical Insulation Resistance, minimum		ASTM D 257
	at 25°C (77°F)	100,000 megohms	
	at 120°C (248°F)	750 megohms	
3.3.11	Hydrolytic Stability at 70°C ± 2 (158°F ± 4) and 95% ± 5 RH	25% decrease, in 120 days, of Durometer hardness, maximum	MIL-M-24041