SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS3571/6 REV. C

Issued 1976-07
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Stabilized 2011-09

Superseding AMS3571/6B

Resin, Polyether Urethane (EU) Casting Flexible, Solid, Unfilled 95 Durometer "A"

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

STABILIZED NOTICE

This document has been declared "Stabilized" by SAE AMS P, Polymeric Materials Committee, and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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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:

95 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.

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 Durometer "D" or equivalent	 95 ± 5 95 ± 5	 ASTM D 2240
3.3.2	Tensile Strength, minimum	2500 psi (17.2 MPa)	ASTM D 412
3.3.3	Elongation, minimum	275%	ASTM D 412
3.3.4	Tensile Stress at 100% Elongation, minimum	900 psi (6.20 MPa)	ASTM D 412
3.3.5	Compression Set, Method B, after 22 hours ± 0.5 at 70°C ± 2 (158°F ± 4), maximum	55%	ASTM D 395
3.3.6	Tear Strength, minimum	320 pounds force per inch (56.0 kN/m)	ASTM D 624 Die C
3.3.7	Bond Strength to Metal, Shear Test, minimum	500 psi (3.45 MPa)	ASTM D 1002

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 at 25°C (77°F) at 120°C (245°F)	 100,000 megohms 750 megohms	ASTM D 257
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