



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 3670/1

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Revised

UNFILLED POLYAMIDE-IMIDE BAR, ROD, AND SHAPES

1. SCOPE:

1.1 Form: This specification covers an unfilled polyamide-imide plastic in the form of molded bar, rod, and shapes.

1.2 Application: Primarily for parts requiring good dielectric properties, thermal resistance, and toughness up to 250°C (480°F).

2. APPLICABLE DOCUMENTS: Shall be as shown in AMS 3670.

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 3670.

3.2 Material: Shall be a molded, unfilled (less than 5% additive) polyamide-imide polymer.

3.3 Properties: The product shall conform to the following requirements, determined on molded test specimens and in accordance with test methods specified in AMS 3670. Specimens for elevated temperature tests shall be held at the test temperature for not less than 30 min. prior to testing. Values for tensile strength elongation, flexural strength, and compressive strength shall be reported as the average of three determinations for each test; no individual value shall be less than 90% of the minimum average value specified.

3.3.1 Color Brown, as approved on qualification

3.3.2 Tensile Strength, min avg
At 23°C ± 1 (73°F ± 2) 23,000 psi (159 MPa)

At 250°C ± 5 (482°F ± 9) 6000 psi (41.4 MPa)

3.3.3 Elongation, min avg
At 23°C ± 1 (73°F ± 2) 9%

3.3.4 Flexural Strength, min avg
At 23° ± 1 (73°F ± 2) 28,000 psi (193 MPa)

At 250°C ± 5 (482°F ± 9) 8,500 psi (58.6 MPa)

3.3.5 Compressive Strength, min avg
At 23°C ± 1 (73°F ± 2),
2.0 in. (50 mm) specimen 24,000 psi (165 MPa)

3.3.6 Specific Gravity at 23°/23°C (73°/73°F) 1.37 - 1.42

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