SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3670/2B

Issued JAN 1981
Revised JAN 1992
Reaffirmed JAN 2006

Superseding AMS 3670/2A

Polyamide-Imide Bar, Rod, and Shapes
20 Graphite - 3 Polytetrafluorethylene (PTFE) Filled

1. SCOPE:

1.1 Form:

This specification covers a polyamide-imide plastic filled with graphite and polytetrafluoroethylene (PTFE) in the form of molded bar, rod, and shapes.

1.2 Application:

See AMS 3670.

2. APPLICABLE DOCUMENTS:

See 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 molded polyamide-imide polymer filled with nominally 20% graphite and 3% polytetrafluoroethylene (PTFE).

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3.3 Properties:

The product shall conform to the requirements shown in Table 1, 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 minutes 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.

3.4 Properties:

Shall be as shown in Table 2.

TABLE 2 - Properties

Paragraph	Property	Value
3.3.1	Color	Black, as approved on qualification
3.3.2	Tensile Strength, minimum average	
	At 23 °C ± 1 (73 °F ± 2)	18.0 ksi (124 MPa)
	At 250 °C ± 5 (482 °F ± 9)	5.0 ksi (34.5 MPa)
3.3.3	Elongation, minimum average	
	At 23 °C ± 1 (73 °F ± 2)	5%
3.3.4	Flexural Strength, minimum average	
	At 23 °C ± 1 (73 °F ± 2)	24.0 ksi (165 MPa)
	At 250 °C ± 5 (482 °F ± 9)	5.0 ksi (34.5 MPa)
3.3.5	Compressive Strength, minimum average	
	At 23 °C ± 1 (73 °F ± 2)	16.5 ksi (114 MPa)
3.3.6	Specific Gravity at 23/23 °C (73/73 °F)	1.48 - 1.53

4. QUALITY ASSURANCE PROVISIONS:

See AMS 3670.

5. PREPARATION FOR DELIVERY:

See AMS 3670.