Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

# AEROSPACE MATERIAL SPECIFICATION

AMS 3670/2

Issued 1-15-81
Revised

## POLYAMIDE-IMIDE BAR, ROD, AND SHAPES
## 20 Graphite - 3 Polytetrafluoroethylene 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: Primarily for parts requiring low coefficient of friction, 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 polyamide-imide polymer filled with nominally 20% graphite and 3% polytetrafluoroethylene (PTFE).

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 | Black, as approved on qualification |
| 3.3.2 | Tensile Strength, min avg | |
| | At 23°C ± 1 (73°F ± 2) | 18,000 psi (124 MPa) |
| | At 250°C ± 5 (482°F ± 9) | 5,000 psi (34.5 MPa) |
| 3.3.3 | Elongation, min avg | |
| | At 23°C ± 1 (73°F ± 2) | 5% |
| 3.3.4 | Flexural Strength, min avg | |
| | At 23°C ± 1 (73°F ± 2) | 24,000 psi (165 MPa) |
| | At 250°C ± 5 (482°F ± 9) | 5,000 psi (34.5 MPa) |
| 3.3.5 | Compressive Strength, min avg | |
| | At 23°C ± 1 (73°F ± 2) | 21,000 psi (145 MPa) |
| 3.3.6 | Specific Gravity at 23°/23°C (73°/73°F) | 1.42 - 1.47 |