AEROSPACE MATERIAL SPECIFICATION

AMS3644™	REV. H

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Stabilized 2022-09

Superseding AMS3644G

Plastic: Polyimide for Molded Rod, Bar, and Tube, Plaque, and Formed Parts

RATIONALE

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

STABILIZED NOTICE

AMS3644H has been declared “STABILIZED” by SAE AMS Committee 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 a polyimide plastic in the form of isostatically molded rod, bar, and tube, unidirectionally molded plaque, and direct formed parts.

1.2 Application

These products are used typically for bushings, bearings, seals, and thermal-electrical insulators requiring a combination of toughness, low coefficient of friction, low wear, low creep, and good solvent resistance, but usage is not limited to such applications. Each application should be considered separately. Polyimide covered by this specification has a service temperature range of cryogenic to 500 °F (260 °C). These materials have no observable glass transition temperature (Tg) or melt temperature (Tm).

1.3 Classification

Product is classified on the amount of filler used with the base polyimide polymer as follows:

Class 1 Unfilled
Class 2 15% ± 3 by weight graphite
Class 3 37% ± 3 by weight graphite
Class 4 15% ± 3 by weight graphite plus 10% ± 3 by weight polytetrafluoroethylene (PTFE)
Class 5 15% ± 3 by weight molybdenum disulfide

and by the process used to produce the product as follows:

Form M Isostatically molded rod, bar, and tube
Form P Unidirectional molded plaque
Form D Direct formed parts

1.3.1 The class and form of product supplied shall be as ordered by purchaser.