



AEROSPACE MATERIAL SPECIFICATION

AMS3794™

REV. B

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Superseding AMS3794A

Thread, Aramid, Spun Staple

RATIONALE

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

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Documents

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1. SCOPE:

1.1 Form: This specification covers a spun staple, high temperature, aramid thread.

1.2 Application: Primarily for use in machine sewing of flight clothing.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

2.2 ASTM Publications: Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D2146 - Polypropylene Plastic Molding and Extrusion Materials

2.3 U. S. Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Federal Specifications:

- L-P-394 - Plastic Molding Material (Propylene Plastics, Injection and Extrusion)
- L-P-1183 - Plastic Molding Material, Acrylonitrile Butadiene Styrene (ABS), Rigid
- PPP-P-50 - Packaging and Packing of Thread for Domestic and Overseas Shipment

2.3.2 Federal Standards:

- FED-STD-191 - Textile Test Methods

2.3.3 Military Standards:

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

3. TECHNICAL REQUIREMENTS:

- 3.1 Material: The fiber used in the manufacture of the thread shall be aramid of 1.5 to 2.0 denier per filament and shall be 1.5 to 2.0 in. (38 to 50 mm) in staple lengths. The fiber shall not carbonize at lower than 357°C (675°F), determined in accordance with FED-STD-191, Method 1534.

- 3.1.1 Supplier's certificate of compliance will be acceptable for denier, staple length, and carbonization temperature of the aramid fiber.

- 3.2 Properties: Thread shall conform to the following requirements; properties specified apply to the average of determinations on a sample unit (See 4.3.1.1):

- 3.2.1 Twist: The direction of final twist shall "Z" for all thread. Each of the individual plies shall be initially twisted with no less than the number of turns per in. (25.4 mm) to be used in the final twist and in the opposite direction to the final twist. The final plied twist shall be not less than 18 turns per in. (25.4 mm).

- 3.2.2 Color: Shall be as specified by purchaser.

- 3.2.3 Ply, final 3

- 3.2.4 Length per unit weight
 min 11,000 yd per lb
 (22,175 m/kg)
 max 12,500 yd per lb
 (25,200 m/kg)

- 3.2.5 Breaking Strength, min
 Original 2.2 lb (10 N)
 Percent of Original After Aging 85%

- 3.2.6 Elongation, max 30%