



AEROSPACE MATERIAL SPECIFICATION

AMS3818™**REV. B**

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Superseding AMS3818A

Braid, Flat, Polyester, Lacing and Tying
Synthetic Rubber Coated, Low Outgassing

RATIONALE

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

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1. SCOPE:

1.1 Form: This specification covers a synthetic rubber-coated, high-tenacity, continuous-filament polyester in the form of flat braid.

1.2 Application: Primarily for tying and lacing electrical wire harness assemblies for use at -75° to $+175^{\circ}\text{C}$ (-100° to $+350^{\circ}\text{F}$) where fungus resistance is required in a spacecraft environment.

1.3 Classification: This specification covers four classes, by size, as follows:

Size 15 -- 15 lb (65 N) minimum breaking strength
Size 25 -- 25 lb (110 N) minimum breaking strength
Size 50 -- 50 lb (220 N) minimum breaking strength
Size 80 -- 80 lb (355 N) minimum breaking strength

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 D259 - Woven Tapes

ASTM E595 - Total Mass Loss and Collected Volatile Condensable Materials from Outgassing in a Vacuum Environment

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 Standards:

Federal Test Method Standard No. 191 - Textile Test Methods

2.3.2 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

3. TECHNICAL REQUIREMENTS:

3.1 Material and Fabrication:

3.1.1 Yarn: Braid shall be made from high-tenacity, continuous-filament polyester yarn which has been pretreated to give minimum outgassing characteristics.

3.1.2 Impregnation: Finished braid shall contain 7 - 15% by weight of a non-toxic, non-corrosive, non-slip, non-flaking fungistatic synthetic rubber finish. Fungicide containing mercury or copper, or compounds of mercury or copper, shall not be used.

3.1.3 Construction: Shall be as specified in Table I, determined in accordance with ASTM D259.

TABLE I

	Size Designation			
	15	25	50	80
Nominal Width, in.	0.050	0.060	0.085	0.110
Nominal Thickness, in.	0.010	0.012	0.014	0.015
Yards per lb, min	1800	1150	900	600
Total Ends, min	17	13	17	25
Picks per in., min	24	20	20	20