

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 3815

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Revised

BRAID, FLAT, NYLON
Electrical Tying, Synthetic Rubber Coated

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for tying and lacing electrical wire harness assemblies, especially for miniature devices or where maximum fungus resistance is required.
3. MATERIAL AND FABRICATION:
 - 3.1 Yarn: Braid shall be made from high tenacity bright nylon continuous filament yarn, free from weighting materials, twisted 3/4 to 1 turn per inch.
 - 3.2 Impregnation: Finished braid shall contain 15 to 25% by weight of a non-flaking fungistatic synthetic rubber dispersion. No fungicide containing mercury or copper compounds shall be used.

4. TECHNICAL REQUIREMENTS:

4.1 General:

- 4.1.1 Color: Shall be natural, unless otherwise specified.
- 4.1.2 Construction: Unless otherwise specified, the finished braid shall conform to the following requirements, when tested in accordance with ASTM D259-44:

	Size Designation			
	15	25	50	80
Nominal Width, in.	0.050	0.060	0.080	0.120
Nominal Thickness, in.	0.007	0.007	0.011	0.011
Yards per lb, min	2800	2000	900	600
Total Ends, min	17	17	17	25
Picks per in., min	22	22	20	20

- 4.2 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with ASTM D259-44, insofar as practicable.

	Size Designation			
	15	25	50	80
4.2.1 Breaking Strength, lb, min	15	25	50	80
4.2.2 Ultimate Elongation, %, max	25	25	40	40

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- 4.2.3 Slip Resistance: Breaking strength test applied to a square knot made in the braid shall result in no slippage of the knot at loads up to 2/3 the specified breaking strength of the braid.
- 4.2.4 Fray Resistance: A freshly cut end of the material shall not fray open when held 1/4 in. from the end and firmly tamped several times on a hard surface.
- 5. QUALITY: Material shall be uniform in quality and condition, clean, smooth, and free from foreign materials and from imperfections detrimental to fabrication or to performance of parts.
- 6. TOLERANCES: Unless otherwise specified, width tolerance shall be $\pm 15\%$ and thickness tolerance shall be ± 0.003 inch.
- 7. REPORTS: Unless otherwise specified, the vendor of the material shall furnish with each shipment three copies of a report stating that the material meets the requirements of this specification. This report shall include the purchase order number, material specification number, size designation, vendor's number, and quantity.
- 8. IDENTIFICATION: Each spool of braid shall be marked with the manufacturer's name or trade mark, AMS 3815, and size designation.

9. PACKAGING:

9.1 Unless otherwise specified, the braid shall be wound on heavy cardboard spools or tubes approximately 1-1/2 in. in OD, in such a manner as to prevent the braid from becoming unwound during ordinary use. Each spool shall have the following length and contain the following quantity of braid.

Size Designation	Spool or Tube Length, in.	Yards per Spool, min
15, 25	2-1/4 to 4	250 or 500
50, 80	4 to 6-1/4	500

- 9.2 Individual spools or tubes of braid shall be identified in accordance with 9.4 and then wrapped with suitable paper, or packaged in a snugly fitting, folding carton. Each wrapped or packed roll shall be sealed with gummed paper or pressure sensitive adhesive tape.
- 9.3 Packaging shall be accomplished in such a manner as to ensure that the product, during shipment and storage, will be protected against damage from exposure to moisture or weather or any normal hazard.
- 9.4 Each package shall be permanently and legibly marked to give the following information:

NYLON FLAT BRAID, ELECTRICAL TYING
 AMS 3815
 SIZE _____
 LENGTH _____
 MANUFACTURER'S NAME _____
 MANUFACTURER'S DESIGNATION _____