

AEROSPACE  
MATERIAL  
SPECIFICATION

Submitted for recognition as an American National Standard

SAE AMS 3853/3

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CORD, AROMATIC POLYAMIDE, NONMELTING  
550 lb (2445 N), 165 ft per lb (110 m/kg)

1. SCOPE:

- 1.1 Form: This specification covers one type of aromatic polyamide in the form of cord.
- 1.2 Application: Primarily for use as personnel parachute suspension lines.
- 1.3 Classification: Breaking strength not lower than 550 lb (2445 N) and weight not lower than 165 ft per lb (110 m/kg).

2. APPLICABLE DOCUMENTS: See AMS 3853.

3. TECHNICAL REQUIREMENTS:

- 3.1 Basic Specification: The complete requirements for procuring the cord described herein shall consist of this document and the latest issue of the basic specification, AMS 3853.
- 3.2 Construction: Shall be as specified in Table I.

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TABLE I  
CONSTRUCTION

	Core	Sleeve
Yarns:		
Denier	200	200
Ply	First - 7 Final - 3	4
Twist, turns per in. (25.4 mm)		
Singles	Producers	7.0 to 9.5
Ply	First	10S - 16S
	Final	5 to 7
Number of Plied Yarns	6Z - 8Z	7 to 9
Picks per in. (25.4 mm)		24 to 26
Number of Carriers and Ends per Carrier		32/1

3.3 Properties: Cord shall conform to the following requirements, determined in accordance with test methods specified in the basic specification:

- 3.3.1 Breaking Strength, min 550 lb (2445 N)
- 3.3.2 Elongation, min 20%
- 3.3.3 Length per Unit Weight, min 165 ft per lb (110 m/kg)
- 3.3.4 Length on One Spool or Reel, min 2100 ft (640 m) or 1200 ft (365 m)
- 3.3.5 Extractable Matter: No material shall be added for the purpose of weighting the cord. The chloroform soluble material of the cord shall not exceed 2.0%.
- 3.3.6 Resistance to Light and Heat: The cord shall lose no more than 15% of its original breaking strength after exposure to light and to heat.
- 3.3.7 Color: Shall be natural except that when colored cord is specified, the color of the cord shall be obtained by yarn dyeing and shall match an approved standard shade.
- 3.3.7.1 Color Matching: When dyed cord is specified, the shade of the cord shall match the standard sample under natural (north sky) daylight or artificial daylight having a color temperature of 7500° K and shall be a good approximation to the standard sample under incandescent lamplight at 2800° K.