

AEROSPACE MATERIAL SPECIFICATION



AMS 3801/4A

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Superseding AMS 3801/4

Cloth, Parachute, Meta-Aramid, Low Modulus 7.0(237) Weight, Plain Weave

1. SCOPE:

1.1 Form:

This specification covers one weight and one weave of low-modulus meta-aramid cloth.

1.2 Application:

Primarily for use in construction of parachutes.

1.3 Classification:

7.0 ounces per square yard (237 g/m²) low-modulus meta-aramid cloth with plain weave.

2. APPLICABLE DOCUMENTS:

See AMS-3801.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification:

The complete requirements for procuring the cloth described herein shall consist of this document and the latest issue of the basic specification, AMS-3801.

3.2 Construction and Properties:

3.2.1 Yarn: Yarn used in weaving the cloth shall be a low-modulus meta-aramid with a carbonization (char) temperature not lower than 355°C (671°F).

3.2.1.1 Denier and Filament Count: The yarn shall be 200 denier ± 15 and shall consist of 100 filaments ± 10.

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3.2.1.2 Ply: The yarn shall be 2 ply.

3.2.1.3 Twist: The final ply of yarn shall be twisted 2.5 to 2.8 turns per inch (25.4 mm).

3.2.2 Cloth:

3.2.2.1 Weave: Shall be plain 1-up, 1-down.

3.2.2.2 Color: Shall be Sage Green 1565 as shown in FED-STD-595. The color shall be obtained by the use of melt spun solution dyed yarn.

3.2.2.3 pH: Shall be 5.0 to 8.0, incl, determined on the water extract of the finished cloth.

3.2.2.4 Width: The width, inclusive of selvage, shall be as ordered.

3.2.2.5 Weight: Shall not exceed 7.0 ounces per square yard (237 g/m²).

3.2.2.6 Breaking Strength: Breaking strength of the unaged cloth shall be not less than 250 pounds force per inch (43,782 N/m) in both warp and fill directions. Breaking strength after heat aging shall be not less than 85% of the unaged values in both the warp and fill directions.

3.2.2.7 Elongation: Shall be not less than 35% in the warp and not less than 25% in the fill directions.

3.2.2.8 Tearing Strength: Shall be not less than 15 pounds force (66.7 N) in the warp and fill directions.

3.2.2.9 Thickness: Shall not exceed 0.015 inch (0.38 mm).

3.2.2.10 Air Permeability: Shall be not greater than 8 cubic feet per minute for each square foot (2.45 m³/minute for each m²) of surface tested.

3.2.2.11 Count: Warp ends shall be not less than 60 per inch (25.4 mm). Filling picks shall be not less than 45 per inch (25.4 mm).

3.3 Length and Put-up:

The cloth shall be put up in rolls in accordance with PPP-P-1133. Each roll shall contain not less than 80 yards (73 m) nor more than 200 yards (182 m). Each roll of 100 yards (91 m) or less shall contain not more than 2 pieces and each roll over 100 yards (91 m) shall contain not more than 3 pieces. Each piece shall contain not less than 40 yards (37 m).

4. QUALITY ASSURANCE PROVISIONS:

See AMS-3801.

5. PREPARATION FOR DELIVERY:

See AMS-3801.