

AEROSPACE MATERIAL SPECIFICATION



AMS 3801/5A

Issued APR 1984
Revised JUL 1990
Reaffirmed JAN 2001

Superseding AMS 3801/5

Cloth, Parachute, Meta-Aramid, Low Modulus
18.0(610) Weight, Basket Weave, Resin Treated

1. SCOPE:

1.1 Form:

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

1.2 Application:

Primarily for use in construction of parachutes.

1.3 Classification:

18.0 ounces per square yard (610 g/m²) low-modulus meta-aramid cloth with basket weave and resin coating.

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).

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- 3.2.1.1 Denier and Filament Count: The yarn shall be 200 denier \pm 15 and shall consist of 100 filaments \pm 10.
- 3.2.1.2 Ply: The yarn shall be 5 ply.
- 3.2.1.3 Twist: The final ply of yarn shall be twisted 5.0 to 5.5 turns per inch (25.4 mm).
- 3.2.2 Cloth:
- 3.2.2.1 Weave: Shall be 3 by 4 basket (3 ends weaving as 1, 4 picks per shed).
- 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 18.0 ounces per square yard (610 g/m²).
- 3.2.2.6 Breaking Strength: Breaking strength of the unaged cloth shall be not less than 950 pounds force per inch (166,370 N/m) in both warp and fill directions. Breaking strength after heat aging shall be not less than 85% of the unaged value in both the warp and fill directions.
- 3.2.2.7 Stiffness: The cloth shall have a stiffness after resin treatment of 0.45 to 0.65 inch-pound (0.05 - 0.07 N·m) in the warp and 0.65 - 0.85 inch-pound (0.07 - 0.10 N·m) in the fill directions.
- 3.2.2.8 Thickness: Shall not exceed 0.036 inch (0.91 mm).
- 3.2.2.9 Count: Warp ends shall be not less than 59 per inch (25.4 mm). Filling picks shall be not less than 60 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 120 yards (110 m). Each roll shall contain not more than 2 pieces and 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.