

AEROSPACE MATERIAL SPECIFICATION



AMS 3801/3A

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Superseding AMS 3801/3

Cloth, Parachute, Meta-Aramid, Low Modulus 12.0(407) Weight, Special 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:

12.0 ounces per square yard (407 g/m²) low-modulus meta-aramid cloth with special 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 \pm 15 and shall consist of 100 filaments \pm 10.

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3.2.1.2 Ply: The yarn shall be 5 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 as shown in Figure 1.

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 12.0 ounces per square yard (407 g/m²).

3.2.2.6 Breaking Strength: Breaking strength of the unaged cloth shall be not less than 425 pounds force per inch (74,429 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 15% in the warp and fill directions.

3.2.2.8 Tearing Strength: Shall be not less than 75 pounds force (334 N) in the warp and fill directions.

3.2.2.9 Thickness: Shall not exceed 0.032 inch (0.81 mm).

3.2.2.10 Air Permeability: Shall be 40 - 80 cubic feet per minute for each square foot (12.0 - 24.5 m³/minute for each m²) of surface tested.

3.2.2.11 Count: Warp ends and filling picks shall be not less than 38 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.

6. ACKNOWLEDGMENT:

See AMS-3801.

7. REJECTIONS:

See AMS-3801.

8. NOTES:

See AMS-3801.

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