

**AEROSPACE
MATERIAL
SPECIFICATION**

SAE AMS3791

REV. B

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Cloth, Marquisette, Nylon

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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1. SCOPE:
 - 1.1 Form: This specification covers nylon in the form of marquisette cloth.
 - 1.2 Application: Primarily for fabrication of parachutes.
 - 1.3 Safety - Hazardous Materials: While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.
2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The applicable issue of referenced publications shall be the issue in effect on the date of the purchase order.
 - 2.1 ASTM Publications: Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.
 - ASTM D 123 - Terminology Relating to Textile Materials
 - ASTM D 737 - Air Permeability of Textile Fabrics
 - ASTM D 1388- Stiffness of Fabrics
 - ASTM D 1777- Measuring Thickness of Textile Materials
 - ASTM D 2261- Tearing Strength of Woven Fabrics by the Tongue
(Single Rip) Method (Constant-Rate-of-Extension Tensile
Testing Machine)
 - ASTM D 3776- Mass per Unit Area (Weight) of Woven Fabric

2.2 U.S. Government Publications: Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 and as noted in 2.2.3.

2.2.1 Federal Specifications:

PPP-P-1133 - Packaging of Synthetic Fiber Fabrics

2.2.2 Federal Standards:

FED-STD-4 - Glossary of Fabric Imperfections
FED-STD-191 - Textile Test Methods

2.2.3 Other Publications: Available from the Federal Trade Commission, Washington, DC 20580.

Rules and Regulations Under the Textile Fiber Products Identification Act

3. TECHNICAL REQUIREMENTS:

3.1 Material: The cloth shall be woven from 70 denier, 34 filament, bright, multifilament nylon yarn.

3.1.1 Yarn: The nylon yarn used shall be a polyamide prepared from hexamethylene diamine and adipic acid or its derivatives. It shall have a melting point not lower than 250°C (482°F).

3.1.2 Weave: The weave pattern of the marquisette cloth shall be a 4-end leno as shown in Figure 1.
less than 1/4 inch (6.4 mm) nor more than 1/2 inch (12.7 mm) in width.

3.1.3 Finish: The cloth shall be finished with a resin treatment to impart a stiffness of 0.015 inch-pound \pm 0.005 (0.0017 N·m \pm 0.006), determined in accordance with 4.5.

3.2 Properties: The finished cloth shall conform to the following requirements:

3.2.1 Weight, maximum 1.0 ounce per square yard (34 g/m²)

3.2.2 Thickness 0.010 inch (0.25 mm)

3.2.3 Breaking Strength, minimum
Warp 35 pounds force/inch (6129 N/m)
Filling 25 pounds force/inch (4378 N/m)

3.2.4 Tearing Strength, minimum
Warp 3.0 pounds force (13.3 N)
Filling 3.0 pounds force (13.3 N)

3.2.5 Yarns per inch (25.4 mm), minimum
Warp 52
Filling 34