

# AEROSPACE MATERIAL SPECIFICATION

**SAE** AMS3271

REV. B

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Superseding AMS3271A

Cloth, Knitted Nylon Stretch  
Polychloroprene Coated

## 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 a polychloroprene-coated, one side only, nylon knit in the form of cloth.
  - 1.2 Application: Primarily for use in fabrication of protective clothing.
  - 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 U.S. Government Publications: Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.
    - 2.1.1 Federal Specifications:

PPP-P-1136 – Packaging of Coated (Plastic; Rubber) and Laminated Fabrics
    - 2.1.2 Federal Standards:

FED-STD-191 – Textile Test Methods  
FED-STD-601 – Rubber: Sampling and Testing

2.1.3 Military Specifications:

MIL-A-5540 – Adhesive, Polychloroprene

2.1.4 Military Standards:

MIL-STD-105 – Sampling Procedures and Tables for Inspection by Attributes

3. TECHNICAL REQUIREMENTS:

3.1 Material:

3.1.1 Base Cloth: Shall be plain jersey, circular-knit nylon 6-6 stretch yarns made from hexamethylene diamine and adipic acid.

3.1.2 Coating Compound: Shall contain not less than 60% by volume of polychloroprene (See 4.5.1), the remainder consisting of softeners, curing agents, anti-oxidants, and reinforcing materials. The coating shall be suitably pigmented during compounding so that the cured compound shall meet the requirements of 3.2. The compound shall be compatible with the base cloth and shall contain no waxes or other ingredients that may bloom to the surface to adversely affect the coating adhesion and cementability of the finished cloth. The ingredients of the compound shall be water insoluble after curing. The coating compound, when cured in sheet form to the same degree of cure and in the same manner as the finished product, shall have properties specified in Table I.

3.1.2.1 After application of the foundation coat, which shall be compatible with the base cloth and the remainder of the coating compound to produce the adhesion specified, the coating compound shall be applied by a spreader or calender coating operation on the side showing lengthwise ribs, crosswise courses.

3.1.2.2 The cured polychloroprene coating may be lightly dusted. The dusting powder shall be whiting, talc, zinc stearate, or other finely divided mineral matter which does not support mildew growth.

3.2 Properties: Cloth shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with specified test methods, insofar as practicable:

3.2.1 Base Cloth:

3.2.1.1 Color

Natural

3.2.1.2 Weight

2.2 – 2.5 ounces/  
square yard  
(78 - 85 g/m<sup>2</sup>)

FED-STD-191,  
Method 5041

3.2.2 Coating Compound

3.2.2.1 Tensile Strength