

**AEROSPACE
MATERIAL
SPECIFICATION**



AMS3615

REV. F

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Superseding AMS3615E

Plastic Tubing
Cotton Fabric Reinforced Phenol-Formaldehyde

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 one type of cotton fabric impregnated with a phenolic resin and supplied in the form of tubing.

1.2 Application:

This tubing has been used typically for electrical insulation at low voltages and for protection from galvanic corrosion, but usage is not limited to such applications. This tubing has good machining characteristics and good moisture resistance.

1.2.1 This tubing is a fungus nutrient; cut or machined edges may require suitable protective treatment to prevent attack by fungi.

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, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 348 Testing Rigid Tubes Used for Electrical Insulation

2.2 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-STD-2073-1 DOD Materiel, Procedures for Development and Application of Packaging Requirements

3. TECHNICAL REQUIREMENTS:

3.1 Material and Fabrication:

Tubing shall consist of laminations of fabric which have been impregnated with a thermosetting, phenol-formaldehyde resin, rolled on a mandrel between heated pressure rolls, and cured in an oven.

3.1.1 Fabric: Shall be fine weave cotton weighing not more than 4 ounces per square yard (136 g/m²). Thread counts, determined by inspection of finished tubing, shall be not less than 50 per inch (25 mm) in each direction (warp and fill) and not less than 140 total in both warp and fill directions.

3.1.2 Finish: Shall be buffed.

3.1.3 Color: Shall be natural, unless otherwise ordered. When colored tubing is ordered, color shall be substantially uniform throughout the tubing. Surfaces shall be substantially free from streaks and stains.

3.2 Properties:

Tubing shall conform to the requirements shown in Table 1, 3.2.5, 3.2.6, and 3.2.7; tests shall be conducted on the tubing supplied and in accordance with ASTM D 348, insofar as practicable.