

**AEROSPACE
MATERIAL
SPECIFICATION**

SAE AMS3587

REV. E

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Superseding AMS3587D

Plastic Tubing, Electrical Insulation
Irradiated Polyolefin, Pigmented, Very Flexible, Heat-Shrinkable
Low Recovery Temperature
2 to 1 Shrink Ratio

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature. Design authorities may determine that this document is no longer to be used for new design. This determination should be made by each design authority.

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1. SCOPE:

1.1 Form:

This specification covers an irradiated, thermally-stabilized, modified polyolefin plastic in the form of a thin-wall, heat-shrinkable tubing with a low recovery temperature.

1.2 Application:

This tubing has been used typically as a very flexible, electrical insulation tubing whose diameter can be reduced to a predetermined size by heating to 100 °C (212°F) or higher, but usage is not limited to such applications. This tubing is stable for continuous exposure from -55 to +135 °C (-67 to +275 °F).

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 471 Rubber Property - Effect of Liquids
ASTM D 2671 Testing Heat-Shrinkable Tubing for Electrical Use
ASTM G 21 Determining Resistance of Synthetic Polymeric Materials to Fungi

2.2 U.S. Government Publications:

Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

UU-T-450 Tissue, Facial
MIL-H-5606 Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance
MIL-T-5624 Turbine Fuel, Aviation, Grades JP-4 and JP-5
MIL-STD-104 Limit for Electrical Insulation Color
MIL-STD-2073-1 DOD Materiel, Procedures for Development and Application of Packaging Requirements

3. TECHNICAL REQUIREMENTS:

3.1 Material:

Shall be an irradiated, thermally-stabilized, flame-resistant, modified polyolefin plastic.

3.2 Color:

Shall be black, white, red, yellow, or blue, as ordered. Colors shall be in accordance with MIL-STD-104.

3.3 Properties:

Tubing shall conform to the following requirements; reported values shall be the average of all specimens tested for each requirement. Except as otherwise specified herein, tests shall be performed in accordance with ASTM D 2671.

3.3.1 Recovered Tubing: The requirements shown in Table 1 apply to tubing after being shrunk by heating to $125\text{ }^{\circ}\text{C} \pm 3$ ($257\text{ }^{\circ}\text{F} \pm 5$) in a convection-current air oven with an air velocity of 100 to 200 feet/minute (0.5 to 1.0 m/second) past the tubing, holding at heat for not less than three minutes, removing from the oven, and conditioning for not less than four hours at $23\text{ }^{\circ}\text{C} \pm 2$ ($73\text{ }^{\circ}\text{F} \pm 4$) and 45 to 55% relative humidity.