

**AEROSPACE  
MATERIAL  
SPECIFICATION**

**SAE** AMS3623

REV. E

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Superseding AMS3623D

Tubing, Irradiated Polychloroprene Elastomer, Electrical Insulation  
Flexible, Heat-Shrinkable, 1.750 to 1 Shrink Ratio

RATIONALE

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## 1. SCOPE:

### 1.1 Form:

This specification covers an irradiated, thermally-stabilized, flame-resistant modified-polychloroprene rubber in the form of thin-wall tubing.

### 1.2 Application

This tubing has been used typically as a flexible, electrical insulation tubing whose diameter can be reduced to a predetermined size by heating to 135 °C (275 °F) or higher, but usage is not limited to such applications. This tubing is stable, after being heat shrunk, under the following conditions:

- 70 to +105 °C (-94 to +221 °F) Continuous
- 70 to +200 °C (-94 to +392 °F) 4 hours

### 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 910 Aviation Gasolines  
ASTM D 2240 Rubber Property-Durometer Hardness  
ASTM D 2671 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 DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-H-5606 Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance  
MIL-T-5624 Turbine Fuel, Aviation, Grades Jp-4, Jp-5, and Jp-5/Jp-8 St  
MIL-L-7808 Lubricating Oil, Aircraft Turbine Engine, Synthetic Base  
MIL-A-8243 Anti-Icing and Deicing-Defrosting Fluid  
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 polychloroprene rubber.

### 3.2 Color:

Shall be black.

### 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, insofar as practicable.

- 3.3.1 Recovered Tubing: Requirements shown in Table 1 apply to tubing after being shrunk by heating to  $175\text{ }^{\circ}\text{C} \pm 5$  ( $347\text{ }^{\circ}\text{F} \pm 9$ ) in a convection-current air oven with an air velocity of 100 to 200 feet per minute (0.5 to 1.0 m/s) past the tubing, holding at heat for not less than 10 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.