

AEROSPACE MATERIAL SPECIFICATION



AMS- R-25988

Issued

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Submitted for recognition as an American National Standard

Rubber, Fluorosilicone Elastomer, Oil-and-Fuel-Resistant, Sheets, Strips, Molded Parts, and Extruded Shapes

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1. SCOPE:

1.1 Scope:

This specification covers oil-and-fuel-resistant fluorosilicone elastomer rubber sheets, strips, molded parts, and extruded shapes for aeronautical and aerospace applications.

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1.2 Classification:

The fluorosilicone elastomer rubber shall be of the following types, classes, and grades, as specified (see 6.2).

Type I - O-rings (available only in class 1, grades 60, 70, and 80 and class III, grade 75).

Type II - Molded parts (other than O-rings) sheets, strips, and extruded shapes.

Class 1 - General purpose.

Grade 40 - Nominal 40 type A durometer hardness, type II, only.

Grade 50 - Nominal 50 type A durometer hardness, type II, only.

Grade 60 - Nominal 60 type A durometer hardness, type I and II.

Grade 70 - Nominal 70 type A durometer hardness, type I and II.

Grade 80 - Nominal 80 type A durometer hardness, type I and II.

Class 2 - High-strength general purpose, type II, only.

Class 3 - High modulus, increased temperature resistance, type I and II.

2. APPLICABLE DOCUMENTS:

The following publications, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

2.1 U.S. Government Publications:

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

- TT-S-735 - Standard Test Fluids; Hydrocarbons.
- UU-P-268 - Paper, Kraft, Untreated Wrapping.
- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-636 - Box, Fiberboard.
- PPP-T-45 - Tape, Paper, Gummed (Sealing and Securing)
- MIL-P-4861 - Packing, Preformed, Rubber, Packaging of.
- MIL-R-25988/1 - Rubber, Fluorosilicone Elastomer, Oil and Fuel-Resistant, O-rings, Class 1, Grade 70.
- MIL-R-25988/2 - Rubber, Fluorosilicone Elastomer, Oil and Fuel-Resistant, O-rings, Class 3.
- MIL-R-25988/3 - Rubber, Fluorosilicone Elastomer, Oil and Fuel-Resistant, O-rings, Class 1, Grade 60.
- MIL-R-25988/4 - Rubber, Fluorosilicone Elastomer, Oil and Fuel-Resistant, O-rings, Class 1, Grade 80.
- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-190 - Identification Marking of Rubber Products.
- MIL-STD-289 - Visual Inspection Guide for Rubber Sheet Material.
- MIL-STD-298 - Visual Inspection Guide for Rubber Extruded Goods.

2.1 (Continued):

- MIL-STD-407 - Visual Inspection Guide for Rubber Molded Items.
- MIL-STD-413 - Visual Inspection Guide for Rubber O-rings.
- MIL-STD-831 - Test Report, Preparation of.

2.2 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 3021 - Reference Fluid for Testing Di-Ester (Polyol) Resistant Material.

2.3 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-5094.

- ASTM D 297 - Chemical Analysis of Rubber Products.
- ASTM D 395 - Tests for Compression Set of Vulcanized Rubber
- ASTM D 412 - Tension Testing of Vulcanized Rubber.
- ASTM D 471 - Test for Change in Properties of Elastomeric Vulcanizates Resulting from Immersion in Liquids.
- ASTM D 573 - Test for Accelerated Aging of Vulcanized Rubber by the Oven Method.
- ASTM D 624 - Tear Resistance of Vulcanized Rubber.
- ASTM D 1329 - Evaluation Low-Temperature Characteristics of Rubber and Rubber-Like Materials by a Temperature-Retracton Procedure.
- ASTM D 1414 - Testing of Rubber O-rings.
- ASTM D 2240 - Test for Indentation Hardness of Rubber and Plastics by Means of a Durometer.

2.4 United Freight Classification Rules:

Available from Uniform Classification Committee Agent, Tariff Publication Officer, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.

United Freight Classification Rules or Regulations of Common Carriers