

GROMMETS, RUBBER, HOT-OIL AND COOLANT RESISTANT

FED. SUPPLY CLASS

5325

1. SCOPE

1.1 Scope. This specification covers two compositions of grommet suitable for use in applications requiring resistance to hot petroleum-based oil, coolant, fungus or ozone and for use in less severe applications.

1.2 Classification. The grommets shall be of the following composition (see 6.2):

Composition A. - Synthetic rubber

Composition B. - Silicone rubber

2. APPLICABLE DOCUMENTS

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

SPECIFICATIONS

COMMERCIAL ITEM DESCRIPTIONS

A-A-52624 Antifreeze, Multi Engine Type

MILITARY

MIL-STD-2073-1 Standard Practice for Military Packaging

MIL-STD-129 Marking for Shipment and Storage

MIL-STD-177 Rubber Products, Terms for Visible Defects of

MIL-HDBK-454 Standard General Guidelines for Electronic Equipment

② MS35489 Grommets, Synthetic and Silicone Rubber, Hot-Oil and Coolant Resistant

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

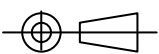
ASTM International

ASTM D395 Standard Test Methods for Rubber Property - Compression Set

ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MIL-G-3036, REVISION C, AMENDMENT 1.

THIRD
ANGLE
PROJECTION



CUSTODIAN
NATIONAL AEROSPACE STANDARDS COMMITTEE

REVISION
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PROCUREMENT
SPECIFICATION

TITLE

CLASSIFICATION
SPECIFICATION

NONE

GROMMETS, RUBBER, HOT-OIL AND COOLANT RESISTANT

NASM3036

SHEET 1 OF 7

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE.

FORM 12-01

REVISION DATE: SEPTEMBER 19, 2014

ISSUE DATE: MARCH 1998

ASTM D471	Standard Test Method for Rubber Property - Effect of Liquid
ASTM D573	Standard Test Method for Rubber Deterioration in an Air Oven
ASTM D746	Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
ASTM D1149	Standard Test Methods for Rubber Deterioration - Cracking in an Ozone Controlled Environment
(2) ASTM D1974/D1974M	Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes
ASTM D2000	Standard Classification System for Rubber Products in Automotive Applications
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D5118/D5118M	Standard Practice for Fabrication of Fiberboard Shipping Boxes
ASTM D5486/D5486M	Standard Specification for Pressure-Sensitive Tape for Packaging, Box Closure, and Sealing

(Application for copies should be addressed to ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

American Society for Quality (ASQ)

ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

(Application for copies should be addressed to American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI, 53203)

SAE International

ARP5316 Storage of Elastomer Seals and Seal Assemblies Which Include an Elastomer Element Prior to Hardware Assembly

(Application for copies should be addressed to SAE International, 400 Commonwealth Drive Warrendale, PA, 15096-0001)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to National Motor Freight Traffic Association, Inc., 1001 North Fairfax Street, Suite 600, Alexandria, VA 22314).

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

(Application for copies should be addressed to Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, Illinois 60606).

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies).

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3. REQUIREMENTS

3.1 Design. The design, dimensions, tolerances and sizes shall conform to MS35489.

3.2 Material. Material used in the manufacture of the grommets shall conform to ~~MIL-R-3065~~ ASTM D2000 and the requirements stated herein. The classification of compositions A and B materials shall be BG515A14B24C32E036F19Z and FC512A18B24C32E016F1-11Z, respectively, in accordance with ASTM D2000.

3.2.1 Composition A. Composition A grommets shall be black synthetic rubber.

3.2.2 Composition B. Composition B grommets shall be red or orange silicone rubber.

3.3 Chemical and physical properties. The chemical and physical properties of the grommets shall be in accordance with TABLE I when tested as specified in 4.4.

3.3.1 Flexibility. Grommets shall withstand insertion into a panel of thickness "G" through a hole of diameter "C" as shown on MS35489, while at any temperature between -18 and 65 °C without being cut or damaged.

TABLE I – CHEMICAL AND PHYSICAL PROPERTIES

Property	Composition A	Composition B
Hardness number (Shore A)	50 ± 5	50 ± 5
Tensile Strength, psi (Mpa),min	1500 (10.5)	1200 (8.5)
Ultimate elongation, %, min	400	500
Compression set, %, max	35	40
Heat resistance		
Hardness change, points, max	+15	+10
Tensile strength change, %, max	-20	-40
Elongation change, %, max	-40	-50
Oil resistance		
Hardness change, points, max	±10	-15
Volume change, %, max	+15	+15
Coolant resistance		
Hardness change, points, max	± 15	±15
Ozone resistance	pass	pass
Brittleness temperature, °C, max	-55	-75

3.3.2 Fungus resistance. Grommets shall be made from a compound which is fungus resistant in accordance with guideline 4 of MIL-HDBK-454.

3.4 Left blank intentionally.

3.5 Conflicting requirements. This standard takes precedence over documents referenced herein.

3.6 Workmanship. The grommets shall be hand or machine trimmed or suitably tumbled to remove flash. They shall be free of dirt, oil, or other foreign matter. They shall be free of defects listed in TABLE II.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the buyer. The buyer reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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