

FED. SUPPLY CLASS

5325

1. SCOPE

- 1.1 Scope. This specification covers three types of edging grommets; a plastic caterpillar style applied with an adhesive, and two spring-style, stainless steel based composite grommets requiring no adhesives. Edging grommets are used to provide abrasion protection of electrical current carrying wires and cable bundles routed through metal structures.

2. APPLICABLE DOCUMENTS

- 2.1 General. The documents listed in this section are specified in Sections 3 and 4 of this specification. This section does not include documents in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in Sections 3 and 4 of this specification, whether or not they are listed.
- 2.2 Government documents.
- 2.2.1 Specification, standards and handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

TT-I-735 Isopropyl Alcohol

DEPARTMENT OF DEFENSE

- ② MIL-PRF-5606 Hydraulic Fluid, Petroleum Base, Aircraft Missile and Ordnance
- MIL-PRF-87257 Hydraulic Fluid, Fire Resistant; Low Temperature, Synthetic Hydrocarbon Base, Aircraft And Missile
- MIL-PRF-83282 Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Metric, Nato Code Number H-537
- MIL-DTL-5624 Turbine Fuels, Aviation Grades JP-4, JP-5, and 5/JP-8 ST
- MIL-PRF-7808 Lubricating Oil, Aircraft Turbine Engine, Synthetic Base

STANDARDS

DEPARTMENT OF DEFENSE

- MIL-STD-129 Military Marking for Shipment and Storage (Part 1 of 4 Parts)
- MIL-STD-202 Electronic and Electrical Component Parts, Test Methods For
- MIL-STD-2073-1 Standard Practice for Military Packaging
- ~~MS21266 Grommet, Plastic, Edging~~
- ~~MIL-DTL-22529/1 Grommet, Composite, Edging~~
- ~~MIL-DTL-22529/2 Grommet, Cushion, Composite, Edging~~

(Unless otherwise indicated, copies of specifications, standards and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MIL-DTL-22529, REVISION D, AMENDMENT 2.

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 2
PROCUREMENT SPECIFICATION NONE	TITLE GROMMET, EDGING	CLASSIFICATION SPECIFICATION NSM22529 SHEET 1 OF 8

- 2.3 Non-Government publications. The following document forms a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issue of the documents cited in the solicitation (see 6.2).

AEROSPACE INDUSTRIES ASSOCIATION (AIA)

NASM21266	Grommet, Plastic, Edging
NASM22529/1	Grommet, Composite, Edging
NASM22529/2	Grommet, Cushion, Composite, Edging

(Copies of AIA publications may be obtained from the Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209. www.aia-aerospace.org)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D1457	Standard Specification for Polytetrafluoroethylene (PTFE) Molding and Extrusion Materials
ASTM D4066	Standard Classification System for Nylon Inspection and Extrusion Materials
ASTM D3951	Standard Practice for Commercial Packaging
ASTM D4894	Standard Specification for Polytetrafluoroethylene (PTFE) Granular Molding and Ram Extrusion Materials

(Copies of ASTM publications may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

MUNSELL COLOR COMPANY, INC.

Munsell Book of Color

(Copies of the Munsell Book of Color may be obtained from X-Rite, Inc. at www.xrite.com.)

- 2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

- 3.1 Specification sheets. The individual grommet requirements shall be in accordance with NASM21266 or NASM22529/1 and NASM22529/2. In the event of any conflict between requirements of this specification and the Part Standards, the latter shall govern.
- 3.2 Performance.
- 3.2.1 Dielectric withstanding voltage (dielectric strength). There shall be no disruptive discharge, nor any deterioration of the grommet when subjected to Dielectric Strength Test specified in 4.2.9. This requirement shall be modified per NASM22529/1 and NASM22529/2.
- 3.2.2 Immersion. The grommets shall show no evidence of cracking, pitting or material failure, after subjection to the immersion test specified in 4.2.5.
- 3.2.3 Temperature cycling. The grommets shall show no evidence of cracking, pitting or material failure, after subjection to the temperature test specified in 4.2.6.
- 3.2.4 High Temperature and load deformation. Dimension "T", shown on Figure 2 (Section "AA"), shall be not less than one-half that of an untested grommet of same type and size upon completion of the high temperature and load deformation test (4.2.7).

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- 3.2.5 Vibration. The grommets shall show no evidence of cracking, pitting or material failure, after subjection to the vibration test specified in 4.2.8.
- 3.2.6 Salt spray (Corrosion). The grommet shall show no evidence of corrosion after subjection to salt spray (corrosion) test specified in 4.2.10.
- a. Test samples shall be prepared by cutting approximately a seven inch length of grommet using MFE-100 shears. Then cut approximately one inch off the opposite end from the first cut, so that both ends are freshly cut. When trimming the grommet with the MFE-100 shears, support the grommet on both sides of the cut.
 - b. The samples shall be tested for 500 hours.
- 3.3 Color. The nylon grommets shall be white and shall have a value not less than 9.0 as specified by the Munsell Book of Color. The polytetrafluoroethylene (TFE) shall be neutral color (light gray) having a chroma not greater than 1.0 and having a value not less than 6.0 or greater than 8.0 as defined by the Munsell Book of Color. The composite Grommet type NASM22529/1 shall be brown per FED-STD-595, color number 10075, and the NASM22529/2 shall be black.
- 3.4 Identification of Product. Each grommet shall have the MS part number and the manufacturer's identification on the outer surface. Nylon and TFE grommet types will be molded on the outer surface. The composite grommet type printed.
- 3.5 Workmanship. The general appearance shall reflect highest standard of workmanship, uniformity of quality and freedom from defects or foreign matter which could adversely affect safety, performance, reliability or durability of the grommets.

4 VERIFICATION

- 4.1 Classification of inspection. The inspection of all grommets shall be classified as conformance inspections (see 4.2).
- 4.2 Conformance inspections. Quality conformance inspection shall be as specified in Table I. Sampling shall be based upon a zero-based acceptance plan outlined in Table II. ASQ Z1.4 shall be used as a guide in the development of contractors' statistical techniques to assure the grommets meet all requirements specified herein.

TABLE I – CONFORMANCE INSPECTION

Inspection	Level	Test Paragraph
Dimensions	Major	4.2.3
Immersion	Major	4.2.5
Temperature cycling	Major	4.2.6
High temperature and load deformation	Major	4.2.7
Vibration	Major	4.2.8
Dielectric withstand voltage	Major	4.2.9

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