

FED. SUPPLY CLASS

9320

1. SCOPE

- 1.1 Purpose. The material covered by this specification is intended for use in a finned type air pressure grommet for control cables.

2. APPLICABLE DOCUMENTS

2.1 Specification

Military Specifications

MIL-PRF-5606 Hydraulic Fluid, Petroleum Base, Aircraft, Missile and Ordnance
MIL-G-21164 Grease, Molybdenum Disulfide, for Low and High Temperatures

- 2.2 Other Publications. The following documents form 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 Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation. The issues of documents which have not been adopted shall be those in effect on the date of the cited DoDISS.

American Society for Testing and Materials (ASTM) Standards

ASTM D 471 Rubber Property, Effects of Liquids, Test Method for
ASTM D 573 Rubber Deterioration in an Air Oven, Test Method for
ASTM D 2240 Rubber Property – Durometer Hardness, Test Method for
ASTM D 3951 Standard Practice for Commercial Packaging

Aerospace Industries Association of America, Inc. (AIA)

NAS1940 Grommet, Nonmetallic

3. REQUIREMENTS

- 3.1 Material. The material shall not cause deterioration of finished surfaces of wood, metal or fabric with which it may come in contact. It shall not become tacky when exposed to the most severe atmospheric or climatic conditions. It shall be uniform in quality and free from foreign materials or imperfections. Parts shall be smooth and free from flash.
- 3.2 Type and Grade. The material covered by this specification covers one Type and one Grade of oil and low temperature resistant synthetic rubber compound.
- 3.3 Form. The material shall be supplied in the form of a finned type cable grommet.
- 3.4 Shape and Dimensions. The grommet shall conform to the requirements of NAS1940.
- 3.5 Volume Change. The material as furnished in accordance with 3.3 shall show a volume increase not greater than 10 percent when tested under conditions specified in 4.3.2.
- 3.6 Hardness Requirements. The initial Shore A durometer of the material at 70 °F ± 5 °F shall be 40 ± 5 when tested in accordance with 4.3.1.

① COMPLETELY REVISED

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE RUBBER, SYNTHETIC, CABLE GROMMET MATERIAL	CLASSIFICATION SPECIFICATION NAS1941 SHEET 1 OF 5

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 09-01

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ISSUE DATE: DECEMBER 1996

3.7 Accelerated Aging. The material, as furnished in accordance with 3.3, shall show no visual signs of deterioration (cracking or crazing) when tested under conditions specified in 4.3.3.

3.8 Leakage and Breakout. The leakage and breakout between a cable and seal shall not exceed the requirements as listed in Table I, when conditioned and installed in accordance with the procedures outlined in 4.4.

TABLE I – TEST REQUIREMENTS

CONDITIONS	GROMMET	CABLE SIZE IN.	TEST TEMP (°F)	BREAKOUT PER GROMMET LBS. (MAX)	LEAKAGE PER GROMMET LBS/HR AT 8.6 PSIG (MAX)
AS RECEIVED	NAS1940-3	.094	70 ± 5 -65 ± 5	1.15 1.15	1.05 1.05
	NAS1940-4	.125	70 ± 5 -65 ± 5	.140 .140	1.35 1.35
AFTER IMMERSION FOR 70 ± 2 HRS AT 160 °F ± 5 °F IN MIL-PRF-5606	NAS1940-3	.094	70 ± 5 -65 ± 5	1.15 1.15	3.85 3.85
	NAS1940-4	.125	70 ± 5 -65 ± 5	.140 .140	1.67 1.67
OVEN-AGED IN AIR FOR 70 ± 2 HRS AT 160 °F ± 5 °F	NAS1940-3	.094	70 ± 5 -65 ± 5	1.15 1.15	1.05 1.05
	NAS1940-4	.125	70 ± 5 -65 ± 5	.140 .140	1.35 1.35

3.9 Endurance and Friction. The leakage and friction between the cable and grommet shall not exceed the requirements as listed in Table II, when tested in accordance with the procedures outlined in 4.4.4.

3.10 Interchangeability. Boeing part numbers are no longer noted.

TABLE II – ENDURANCE REQUIREMENTS

CONDITIONS	GROMMET	CABLE SIZE IN.	TEST TEMP (°F)	FRICTION PER GROMMET LBS. AT 0 PSIG (MAX)	MAX LEAKAGE PER GROMMET LBS/HR AT 6.0 PSIG	MAX LEAKAGE PER GROMMET LBS/HR AT 8.6 PSIG
6,250 CYCLES	NAS1940-3	.094	70 ± 5	.200	1.15	1.30
	NAS1940-4	.125	70 ± 5	.120	1.34	1.40
12,500 CYCLES	NAS1940-3	.094	0 ± 5	.240	1.15	–
	NAS1940-4	.125	0 ± 5	.140	1.35	–
6,250 CYCLES	NAS1940-3	.094	-65 ± 5	.380	–	1.17
	NAS1940-4	.125	-65 ± 5	.140	–	1.08

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified the supplier may use his own facility or any commercial laboratory acceptable to the user. The procuring activity reserves the right to perform any of the inspections set forth herein where such inspections are deemed necessary to assure that the grommet conforms to prescribed requirements.

① COMPLETELY REVISED

REVISION
1
NAS1941
SHEET 2



Documents

Document Sharing Hub