SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS3336	REV. E

Issued 1955-03
Revised 1994-09
Reaffirmed 2001-04
Stabilized 2011-11

Superseding AMS3336D

Silicone (PVMQ) Rubber
Extreme-Low-Temperature Resistant
55 - 65

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

STABILIZED NOTICE

This document has been declared "Stabilized" by SAE CE, Elastomers Committee, and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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1. SCOPE:

1.1 Form:

This specification covers a silicone (PVMQ) rubber in the form of sheet, strip, tubing, extrusions, and molded shapes.

1.2 Application:

These products have been used typically for parts required to operate or seal from -85 to +230 °C (-121 to +446 °F), compounded especially for operation at extreme low temperatures, but usage is not limited to such applications.

1.2.1 Silicone rubber is resistant to deterioration by weathering and by high-aniline-point petroleum-base oils and remains flexible over the temperature range noted.

1.2.2 These products are not normally suitable for use in contact with low-aniline-point petroleum-base fluids, including fuels, due to excessive swelling.

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 latest issue of SAE publications shall apply. The applicable issue of other documents shall be the issue in effect on the date of the purchase order.

2.1 SAE Publications:

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

AMS 2279 Tolerances, Rubber Products
MAM 2279 Tolerances, Metric, Rubber Products
AMS 2810 Identification and Packaging, Elastomeric Products

2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

ASTM D 297 Rubber Products - Chemical Analysis
ASTM D 395 Rubber Property - Compression Set
ASTM D 412 Rubber Properties in Tension
ASTM D 471 Rubber Property - Effect of Liquids
ASTM D 518 Rubber Deterioration - Surface Cracking
ASTM D 573 Rubber - Deterioration in an Air Oven
ASTM D 624 Rubber Property - Tear Resistance
ASTM D 797 Rubber Property - Young's Modulus at Normal and Subnormal Temperatures
ASTM D 1149 Rubber Deterioration - Surface Ozone Cracking in a Chamber (Flat Specimens)
ASTM D 2137 Rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics
ASTM D 2240 Rubber Property - Durometer Hardness

3. TECHNICAL REQUIREMENTS:

3.1 Material:

Shall be a compound, based on a silicone (PVMQ) rubber, suitably cured to produce a product meeting the requirements of 3.2.

3.2 Properties:

The product shall conform to requirements shown in Table 1; tests shall be performed on the product supplied and in accordance with specified ASTM methods, insofar as practicable.