Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10000

AEROSPACE MATERIAL SPECIFICATION

AMS 3307

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Revised

RUBBER, SILICONE, LOW COMPRESSION SET
Non-Oil Resistant (65 - 75)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. FORM: Sheet, strip, molded shapes, or as ordered, but excluding extrusions.

3. APPLICATION: Primarily for rubber-like parts required to operate or seal at temperatures from -55 to +200 C (-67 to +392 F), compounded especially for low compression set. Silicone rubber is resistant to deterioration by ozone, smog, and weathering and remains flexible over the temperature range noted. This material is not intended for use with fluids or lubricants having a petroleum base. Certain design applications may cause this material to be susceptible to cutting, tearing, and abrasion.

4. TECHNICAL REQUIREMENTS:

4.1 Condition: Unless otherwise ordered, the product shall be supplied in the cured condition. The achieved state-of-cure shall be similar to samples submitted for approval or any special samples required to establish conformance to the requirements of this specification.

4.2 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with the issue of specified ASTM methods listed in the latest issue of AMS 2350, insofar as practicable. Where it is physically impossible to prepare samples from the product, they shall be prepared from ASTM D15 standard test sheets from the same batch and achieved state-of-cure. Such samples, as required, shall also be supplied to the purchaser with the shipment.

4.2.1 As Received:

4.2.1.1	Hardness, Durometer A or equiv.	70 ± 5	ASTM D2240
4.2.1.2	Tensile Strength, psi, min	800	ASTM D412, Die C or D
4.2.1.3	Elongation, %, min	125	ASTM D412, Die C or D
4.2.1.4	Tear Resistance, lb per in., min	50	ASTM D624, Die B
4.2.1.5	Specific Gravity, variation from sample submitted for approval, max	±0.02	ASTM D297, Hydrostatic Method
4.2.2	Dry Heat Resistance:		ASTM D573 Temperature: 225 C ± 3 (437 F ± 5.4) Time: 22 hr
4.2.2.1	Hardness Change, Durometer A, points	± 10	
4.2.2.2	Tensile Strength Change, %, max	- 15	
4.2.2.3	Elongation Change, %, max	- 30	

4.2.2.4 Bend (flat)	no cracking or checking	
4.2.3 Compression Set:		ASTM D395, Method B
Percent of original deflection, max	20	Temperature: 175 C ± 3 (347 F ± 5.4) Time: 22 hr
4.2.4 Low Temperature Resistance:		
4.2.4.1 Temperature Retraction, TR-10 Point, max	- 45 C (- 49 F)	ASTM D1329, Elongate specimens 75%

5. QUALITY: The product shall be uniform in quality and condition, clean, smooth, and free from chalky spots and foreign materials and from imperfections detrimental to fabrication, appearance, or performance of parts.

6. TOLERANCES: Unless otherwise specified, the following tolerances apply:

6.1 Sheet and Strip:

Nominal Thickness Inches	Tolerance, Inch plus and minus
Up to 1/8, incl	1/64
Over 1/8 to 1/2, incl	1/32
Over 1/2	3/64

7. REPORTS:

7.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report showing the results of tests made on the product to determine conformance to the technical requirements of this specification. This report shall include the purchase order number, material specification number, vendor's compound number, batch number, form or part number, and quantity.

7.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number, contractor or other direct supplier of material, supplier's compound number, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

8. IDENTIFICATION: Unless otherwise specified, all material shall be identified in accordance with the latest issue of AMS 2810 except cure date is not required.

9. PACKAGING AND MARKING:

9.1 Packaging shall be accomplished in such a manner as to ensure that the product, during shipment and storage, will not be permanently distorted and will be protected against damage from exposure to weather or any normal hazard.

9.2 Each package shall be permanently and legibly marked in accordance with the latest issue of AMS 2810 except cure date is not required.