Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

AEROSPACE MATERIAL SPECIFICATION

AMS 3195C
Superseding AMS 3195B
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SILICONE RUBBER SPONGE
Closed Cell, Medium

1. SCOPE:

1.1 Form: This specification covers a silicone rubber sponge in the form of sheet, strip, extrusions, and molded shapes.

1.2 Application: Primarily for general applications requiring closed cell medium sponge rubber that will be flexible from -75° to +205°C (-105° to +400°F). Compression set may be high at the higher temperature.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications (AMS) shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods
AMS 2810 - Identification and Packaging, Elastomeric Products

2.2 ASTM Publications: Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D736 - Low Temperature Flexure Test
ASTM D1056 - Sponge and Expanded Cellular Rubber Products

2.3 Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of

3. TECHNICAL REQUIREMENTS:

3.1 Material: Shall be a compound based on a silicone rubber, suitably cured to produce a product meeting the requirements of 3.2 and 3.3.

3.2 Finish: The top and bottom surfaces of sheet and strip and the exterior surfaces of molded parts and extrusions (except ends) shall have a natural finish, unless otherwise specified.

3.3 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with specified ASTM methods insofar as practicable:

Printed in U.S.A.

3.3.1	As Received:		ASTM D1056 Temperature: 25°C ± 5 (77°F ± 9)
3.3.1.1	Compression-Deflection	6 - 14 psi (41.4 - 96.5 kPa)	
3.3.1.2	Density, max		
	Nominal Thickness		
	Under 0.25 in. (6.35 mm)	0.025 lb per cu in. (0.692 Mg/m^3)	
	0.25 in. (6.35 mm) and over	0.020 lb per cu in. (0.554 Mg/m^3)	
3.3.2	Compression Set:		ASTM D1056 Temperature: 100°C ± 1 (212°F ± 2) Time: 22 hr ± 0.2
3.3.2.1	Percent of Original Deflection, max	60	
3.3.3	Low-Temperature Brittleness: (See 8.2)	Pass	ASTM D736 Temperature: -75°C ± 3 (-103°F ± 5) Time: 5 hr ± 0.2

3.3.4 Weathering: When specified, the product shall have weather resistance acceptable to the purchaser, determined by a procedure agreed upon by purchaser and vendor.

3.3.5 Corrosion: The product shall not have a corrosive effect on other materials when exposed to conditions normally encountered in service. Discoloration of metal shall not be considered objectionable. Method of test and standards for acceptance shall be as agreed upon by purchaser and vendor.

3.4 Quality: The product shall be uniform in quality and condition, clean, smooth, as free from foreign materials as commercially practicable, and free from internal and external imperfections detrimental to fabrication, appearance, or performance of parts.

3.5 Tolerances: Unless otherwise specified, the following tolerances shall apply; measurements shall be made in accordance with ASTM D1056:

3.5.1 Sheet and Strip:

3.5.1.1 Thickness:

TABLE I

Nominal Thickness Inches	Tolerance, Inch	
	plus	minus
0.063	0.016	0.016
0.125, 0.188	0.031	0.031
0.250, 0.312	0.047	0.031
0.375, 0.500	0.047	0.047

TABLE I (SI)

Nominal Thickness Millimetres	Tolerance, Millimetres plus	minus
1.60	0.41	0.41
3.18, 4.78	0.79	0.79
6.35, 7.92	1.19	0.79
9.52, 12.70	1.19	1.19

3.5.1.2 Length and Width:

TABLE II

Nominal Length and Width Inches	Tolerance, Inch plus and minus
Up to 6, incl	0.125
Over 6 to 18, incl	0.250
Over 18	0.375

TABLE II (SI)

Nominal Length and Width Millimetres	Tolerance, Millimetres plus and minus
Up to 152, incl	3.18
Over 152 to 457, incl	6.35
Over 457	9.52

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection: The vendor of the product shall supply all samples and shall be Ø responsible for performing all required tests. Results of such tests shall be reported to the purchaser as required by 4.5. Purchaser reserves the right to perform such confirmatory testing as he deems necessary to ensure that the product conforms to the requirements of this specification.

4.2 Classification of Tests: Tests to determine conformance to all technical requirements of this Ø specification are classified as acceptance tests and as qualification tests.

4.2.1 For direct U.S. Military procurement, substantiating test data and, when requested, qualification test material shall be submitted to the cognizant qualification agency as directed by the procuring activity, the contracting officer, or the request for procurement.

4.3 Sampling: Sufficient product shall be taken at random from each lot to perform all required tests in triplicate.

4.3.1 A lot shall be all product from the same batch of compound processed in one continuous run and Ø submitted for vendor's inspection at one time.

Ø 4.3.2 A batch shall be the quantity of compound run through a mill or mixer at one time.

4.4 Approval:

4.4.1 Sample material shall be approved by purchaser before material for production use is supplied, unless such approval be waived. Results of tests on production material shall be essentially equivalent to those on the approved sample.