

AERONAUTICAL MATERIAL SPECIFICATION

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SYNTHETIC RUBBER SPONGE (Firm)

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1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. FORM: Sheet, strip, molded shapes, or as ordered.
3. APPLICATION: This material shall be suitable for general applications using sponge rubber.
4. QUALITY: (a) The material shall be free from manufacturing imperfections, which will affect the serviceability, and shall conform to the requirements specified herein.
(b) Workmanship shall be in accordance with high grade commercial practice governing this type of material.
5. REQUIREMENTS: (a) Compression-Deflection.— Tests shall be conducted in accordance with ASTM D552-43T. The pressure required to compress the material to 75% of its original thickness at room temperature shall be within the limits of 15 to 22 psi.
(b) Compression Set.— Tests shall be conducted in accordance with ASTM D552-43T. Compression set shall not exceed 30%.
(c) Oven Aging.— Oven aging samples shall be 4 inches square, and shall be suspended in the oven by a wire attached to one corner of the sample. After heating the material in a convection current air oven for 22 hours at 212°F, the samples shall be removed from the oven and trimmed to 2 inches square by removing 1 inch from each edge. The sponge shall not be hard or brittle and shall show no surface cracks when bent 180° flat. The specific volume change shall be within the limits of $\pm 10\%$. The compressibility change shall be within the limits of $\pm 20\%$ of the original.
(d) Sizes.— Unless otherwise ordered, the thickness and specific volume shall be as specified below:

Thickness inches	Specific Volume cu. in. per pound
1/16	29
3/32	34
1/8	39
3/16	47
1/4	55
5/16	55
3/8	56
1/2	56
5/8	57

<u>Thickness</u> <u>inches</u>	<u>Specific Volume</u> <u>cu. in. per pound</u>
3/4	59
7/8	65
1	72
1 1/2	75

Note: A tolerance of $\pm 10\%$ is permissible on the above values of specific volumes.

(e) Weathering.- Unless otherwise specified, a weathering test shall be conducted as agreed between the purchaser and the vendor.

(f) Finish.- The finished material shall have rinds of finished surfaces on both the top and the bottom of the sheets.

(g) Color.- Unless otherwise specified, synthetic sponge rubber shall be furnished in black only.

6. SAMPLES: Sampling procedure shall conform to ASTM D552-43T. When the form in which the material is furnished is unsuitable for the proper preparation of the test specimens required, the vendor shall furnish sufficient sheet material for such specimens from production-run materials which he guarantees to be of equal quality to the material supplied.

7. TOLERANCES: Unless otherwise specified on the drawing or purchase order, the following tolerances apply; all dimensions are in inches:

(a) Sheet and Strip.-

<u>Nominal Thickness</u>	<u>Tolerance</u> <u>Plus and Minus</u>
1/8 and less	1/64
Over 1/8 to 1/2, incl.	1/32
5/8 and over	3/64

<u>Nominal Width</u>	<u>Tolerance</u> <u>Plus and Minus</u>
6 and less	1/16
Over 6 to 18, incl.	1/8
Over 18	1/4

(b) Molded Parts.-

<u>Nominal Dimension</u>	<u>Tolerance</u> <u>Plus and Minus</u>
1/4 and less	1/32
Over 1/4 to 3, incl.	1/16
Over 3	1/4