

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 3570

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SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

Revised

FLEXIBLE POLYURETHANE FOAM Open Cell, Medium Flexibility 2.5 lb per cu ft

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Sheet, strip, or as ordered.
3. APPLICATION: Primarily for general interior padding, cushioning, and vibration insulation.
4. TECHNICAL REQUIREMENTS:
 - 4.1 General:
 - 4.1.1 Weathering: When specified, the product shall have weather resistance acceptable to the purchaser as determined by a procedure agreed upon by purchaser and vendor.
 - 4.1.2 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.
 - 4.1.3 Finish: All surfaces of sheet and strip shall have a cut finish unless otherwise specified.
 - 4.1.4 Color: Unless otherwise specified, the material shall be furnished in the natural color.
 - 4.1.5 Non-Toxicity: The foam shall be non-toxic and shall not cause any harmful effects when in prolonged contact with the skin.
 - 4.2 Properties: The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with listed ASTM methods, insofar as practicable:
 - 4.2.1 As Received:
 - 4.2.1.1 Density, lb per cu ft 2.5 ± 0.4
 - 4.2.1.2 Indentation, lb per 50 sq in. to compress to 75% original thickness $50 - 80$ ASTM D1055-54T
 - 4.2.1.3 Resiliency, time to recover to 95% original thickness, sec, max 5 See 4.2.1.3.1
 - 4.2.1.3.1 Specimen to be tested shall have a top and bottom surface dimension greater than the height of sample and the entire specimen shall be compressed to 25% of original thickness, held for 1 min., and allowed to recover under no load.

4.2.1.4 Flame Resistance

Self Extinguishing See 4.2.1.4.1
within 3 sec

4.2.1.4.1 Support specimen and ignite once as in ASTM D635-44 except time of exposure to flame to be 15 seconds. Count time for extinguishing from instant of removal of burner.

4.2.2 Dry Heat Resistance:

ASTM D1055-54T

Temperature: $212\text{ F} \pm 2$

Time: 48 hr

See Note 1

4.2.2.1 Thickness 1 min. after
compression for 1 min. to
75% original thickness,
% of original thickness, min 88

4.2.2.2 Tackiness None

4.2.3 Low Temperature Recovery:

ASTM D1055-54T

Temperature: $-40\text{ F} \pm 2$

Time: 5 hr

See Note 2

4.2.3.1 Thickness 1 min. after
compression for 1 min.
to 75% original thickness,
% of original thickness, min 80

Note 1. Test performed after sample has cooled to $70 - 85\text{ F}$.

Note 2. Test performed at $-40\text{ F} \pm 2$.

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

5.1 Void: The product shall contain no surface voids of a size larger than one times the sheet thickness, or 1/2 in., whichever is smaller.

6. TOLERANCES: Thickness of sheet shall not vary from the nominal by more than $\pm 1/16$ inch.

7. REPORTS:

7.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product meets the requirements of this specification. This report shall include the purchase order number, material specification number, vendor's compound 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, 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.