AERONAUTICAL MATERIAL SPECIFICATIONS

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

AMS 3270D

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SYNTHETIC RUBBER SHEET, COTTON FABRIC REINFORCED
Weather Resistant - Chloroprene Type

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

2. APPLICATION: Primarily for parts, such as gaskets, seals, and chafing strips, requiring resistance to weather, moderate heat, water, and petroleum base lubricating oil.

3. MATERIAL AND FABRICATION: Material shall consist of a single ply of woven cotton fabric impregnated and coated on both sides with a chloroprene type synthetic rubber compound. Thickness of coating shall be substantially uniform on both sides of the sheet.

4. TECHNICAL REQUIREMENTS:

4.1 General:

4.1.1 Color: Shall be black.

4.1.2 Surface Cleanliness: Material having evenly dusted surfaces will be acceptable. When specified, surfaces shall be capable of being cleaned without damage to the material and shall be cementable.

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

4.1.4 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.

4.2 Construction:

	Nominal Thickness, Inch				
	0.008	0.010	0.025	0.035	0.050
Fabric Type	Balloon Cloth	6.25 Sheeting	Grade A Airplane Cloth	#10 Duck	#10 Duck
Thread Count, per in., min					
Warp	120	60	80	45	45
Filling	120	48	80	27	27
Finished Weight, oz per sq yd	8.0 ± 1.5	10.0 ± 2.0	27.0 ± 2.5	35.0 ± 6.0	54.0 ± 5.0

Printed in U. S. A.

4.3 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.

4.3.1 As Received:

4.3.1.1 Breaking Strength, Grab Method, lb, min — ASTM D751-57T

Nominal Thickness, in.	Warp	Filling
0.008	40	40
0.010	37	19
0.025	90	90
0.035	250	170
0.050	250	170

4.3.1.2 Bursting Strength, Diaphragm Bursting Tester, psi, min — ASTM D751-57T

Nominal Thickness, in.	
0.008	70
0.010	50
0.025	125
0.035	350
0.050	350

4.3.1.3 Hydrostatic Pressure Resistance at 20 psi — No leaks in 1 hr — ASTM D751-57T

4.3.1.4 Adhesion, lb per in. ø width, min — 5 — ASTM D751-57T

4.3.2 Non-Aromatic Fuel Resistance: (Immediate Deteriorated Properties) — ASTM D471-57T; Medium: ASTM Ref. Fuel A; Temperature: 70 - 85 F; Time: 70 hr

4.3.2.1 Volume Change, % — 0 to +20

4.3.2.2 Surface Tackiness — None

4.3.3 Oil Resistance: (Immediate Deteriorated Properties) — ASTM D471-57T; Medium: ASTM Oil #3; Temperature: 212 F ± 2; Time: 70 hr

4.3.3.1 Volume Change, % — +20 to +65

4.3.3.2 Surface Tackiness — None

4.3.4 Dry Heat Resistance: — ASTM D573-53; Temperature: 212 F ± 2; Time: 70 hr

4.3.4.1 Surface Hardening — None

4.3.4.2 Bend (flat) — No cracking or checking

4.3.5 Low Temperature Brittleness: — Pass — ASTM D746-57T, Procedure B; Temperature: -20 F; Conditioning Time: 10 min. (See Note 1)

Note 1. Specimen to be one thickness of material

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

6. THICKNESSES AND TOLERANCES: Unless otherwise specified, finished sheet shall be supplied in nominal thicknesses of 0.008, 0.010, 0.025, 0.035, and 0.050 in., as ordered; tolerances shall be as specified below:

6.1 Thickness:

Nominal Thickness, Inch	Tolerance, Inch	
	Plus	Minus
0.008	0.002	0.001
0.010	0.002	0.002
0.025	0.003	0.003
0.035	0.004	0.004
0.050	0.005	0.005

6.2 Width: ± 1.0 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.

8. IDENTIFICATION: Unless otherwise specified, all material shall be identified in accordance with the latest issue of AMS 2810.

9. PACKAGING:

9.1 Packaging shall be accomplished in such a manner as to ensure that the material, 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.

10. APPROVAL:

10.1 To assure adequate performance characteristics, 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.