AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 3315 B

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SILICONE RUBBER SHEET, GLASS FABRIC REINFORCED

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

2. FORM: Calendered sheet, or as ordered.

3. APPLICATION: Primarily for gaskets or seals requiring a thin, resilient, nonporous sheet material suitable for operating at temperatures from -65 to +400 F. The material is resistant to deterioration by weathering and engine oil and remains flexible over the temperature range noted. This material is not normally suitable for use in contact with gasoline or aromatic fuels and low aniline point petroleum base fluids due to excessive swelling of the elastomer.

4. MATERIAL AND FABRICATION: Sheet shall consist of a single ply of woven glass fabric impregnated and coated on both sides with a silicone rubber compound.

5. TECHNICAL REQUIREMENTS:

5.1 General:

5.1.1 Condition: Unless otherwise specified, a suitably cured product shall be furnished.

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

5.1.3 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 cause for rejection.

5.1.4 Coating: Shall be substantially uniform in thickness on both sides of the fabric.

5.2 Construction:

	Nominal Thickness, Inch				
	0.010	0.017	0.032		0.050
Fabric Type, Standard Glass Cloth Designation	116	128	162	or 164	184
Thread Count, per in.					
Warp	58-62	40-44	26-30	18-22	40-44
Fill	56-60	30-34	14-18	16-20	34-38
Yarn	ECD 450-1/2	ECE 225-1/3	ECE 225-2/5	ECE 225-4/3	ECE 225-4/3

5.3 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:

5.3.1	As Received:			ASTM D751-52T
5.3.1.1	Breaking Strength, lb per in., min			Cut Strip Method
	Nominal Thickness, in.	Warp	Fill	
	0.010	70	70	
	0.017	200	150	
	0.032	400	300	
	0.050	800	600	
5.3.1.2	Hydrostatic Pressure Resistance	No Leaks		Method B Pressure: 20 psi Time: 1 hr
5.3.1.3	Adhesion, lb per in. width, min	10.0		

Note. If it is impossible to strip adhesion test specimens so as to make the test properly, the sheet may be considered satisfactory.

5.3.2	Lubricating Oil Resistance: (Immediate Deteriorated Properties)		ASTM D471-52T Medium: ASTM Oil No. 1 Temperature: 350 F ± 2 Time: 70 hr
5.3.2.1	Volume Change (Method A), %	0 to +10	
5.3.2.2	Decomposition	None	
5.3.2.3	Surface Tackiness	None	
5.3.3	Dry Heat Resistance:		
5.3.3.1	Gasket Test		See Note 1
5.3.3.1.1	Decomposition or softening	None	
5.3.3.1.2	Surface Tackiness	None	
5.3.3.2	Bend (flat)	No cracking or checking	ASTM D573-52 Temperature: 450 F ± 2 Time: 24 hr
5.3.4	Low Temperature Brittleness:		ASTM D736-46T (See Note 2) Temperature: -70 F ± 2
5.3.4.1	Flex	Pass	Time: 5 hr
5.3.4.2	Delamination	None	

Note 1. A gasket specimen at least 1 sq in. in surface area shall be clamped finger tight between aluminum plates and conditioned at 450 F ± 2 for 2 hours. Examination shall be immediately upon removal from the oven and cooling to room temperature.

Note 2. To be used only until satisfactory replacement test and values are established.

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

7. SIZES AND TOLERANCES: Unless otherwise specified, coated fabric shall be Ø supplied in nominal thicknesses of 0.010, 0.017, 0.032 and 0.050 in., as ordered, and nominal width of 36 in.; tolerances shall be as specified below.

7.1 Thickness:

	Nominal Thickness Inch	Tolerance, Inch Plus and Minus
Ø	0.010	0.001
	0.017	0.002
	0.032	0.004
	0.050	0.005

7.2 Width: Plus and minus 1 inch.

8. REPORTS:

8.1 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.

8.2 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.

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

10. PACKAGING:

10.1 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.