AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 3232F

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ASBESTOS AND SYNTHETIC RUBBER SHEET
Hot Oil Resistant

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 gaskets for sealing between metal surfaces, in contact with fuels or with lubricating oil at temperatures up to 300 F.

3. MATERIAL AND FABRICATION: Material shall be made from selected long fibre asbestos and heat resisting synthetic rubber compounds, bonded and felted together under pressure into a pliable, resilient product.

4. TECHNICAL REQUIREMENTS:

4.1 General:

4.1.1 Color: Shall be black or light gray, unless otherwise permitted. A deep tan or brown discoloration of light gray products will not be permitted. Ø

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

4.1.3 Delamination: The product shall not delaminate, due to sticking, when removed from an assembly.

4.1.4 Corrosion: The product shall not cause objectionable corrosion of aluminum, magnesium, steel and copper alloys.

4.2 Properties: The product shall conform to the following requirements; tests shall be conducted on the product supplied and, except as otherwise noted, in accordance with ASTM D733-50, insofar as practicable. Only specimens for tensile tests of the product as received shall be conditioned. Method A shall be used for all immersion tests. Ø

Property	Value	Test Method
4.2.1 As Received:		
4.2.1.1 Tensile Strength, psi, min		
Parallel to Direction of Rolling	4000	
Perpendicular to Direction of Rolling	2000	
4.2.1.2 Compressibility, %	5-20	Note 1
4.2.1.3 Chloride Content as Cl, %, max	0.35	Note 2
4.2.2 Non-Aromatic Fuel Resistance: (Immediate Deteriorated Properties)		

	Property	Value	Test Method
4.2.2.1	Thickness Change, %, max	0 to +15	Medium: ASTM Fuel No. 1 Temperature: 70-85 F Time: 5 hr
4.2.2.2	Thickness Change on Drying (after 5 hr non-aromatic fuel immersion) at 158 F ± 2 for 48 hr, %, max	-5	
4.2.2.3	Compressibility, %, max	25	Note 1
4.2.2.4	Disintegration	None	
4.2.3	Lubricating Oil Resistance: (Immediate Deteriorated Properties)		
4.2.3.1	Tensile Strength Reduction, %, max	20	Medium: ASTM Oil No. 1 Temperature: 300 F ± 2 Time: 5 hr
4.2.3.2	Thickness Change, %	0 to +10	
4.2.3.3	Compressibility, %, max	20	Note 1
4.2.3.4	Bend (180 degrees around diameter equal to 12T for thicknesses 1/16 in. and under or 16T for thicknesses over 1/16 in.)	No cracks	
4.2.4	Dry Heat Resistance:		Temperature: 212 F ± 2 Time: 16 hr
4.2.4.1	Compressibility, %	5-20	Note 1
4.2.4.2	Bend (180 degrees around diameter equal to 12T for thicknesses 1/16 in. and under or 16T for thicknesses over 1/16 in.)	No cracks	

Notes. (1) Test in accordance with ASTM D1147-51T, using 0.252 in. diameter penetrator, 5 lb preload and 250 lb major load, without conditioning specimens.

(2) Weigh out a 5 g sample, cut in 1/8 in. squares. Place in Erlenmeyer flask of suitable size. Add 150 ml of distilled water, boil for 1 hr and filter. Wash flask and sample with distilled water. Cool filtrate and washings to room temperature and dilute to 200 milliliters. Titrate with 0.1N silver nitrate solution using potassium chromate as the indicator. Run a blank determination on distilled water. Subtract the value for the blank from that for the sample. Calculate percent chlorine in the sample.

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