

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 3202C

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SYNTHETIC RUBBER Dry Heat Resistant (55-65)

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:** Primarily for packings, bushings, grommets and seals where resistance to dry heat is of prime importance.

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 or other deleterious effect on other materials when exposed to conditions normally encountered in service. Discoloration of metal shall not be considered objectionable.

4.2 **Properties:** Unless otherwise specified, the product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with the listed ASTM methods insofar as practicable:

	<u>Property</u>	<u>Value</u>	<u>Test Method</u>
4.2.1	As Received:		
	Hardness, Durometer "A" or equiv.	60 + 5	
	Tensile Strength, psi, min	1500	ASTM D412-41
	Elongation, %, min	250	
4.2.2	Processing Oil Resistance:		ASTM D471-46T
	(Immediate Deteriorated Properties)		
	Hardness Change, Durometer "A" or equiv.	-15 to +10	
	Tensile Strength Reduction, % max	50	Medium: ASTM Oil No. 3
	(based on area before immersion)		Temperature: 212 F + 2
	Elongation Reduction, %, max	40	Time: 70 hr
	Volume Change (Method A), %	-10 to +75	
	Decomposition	None	
	Surface Tackiness	None	
	Low Temperature Brittleness	Pass	Same as in 4.2.5
4.2.3	Dry Heat Resistance:		ASTM D865-47T
Φ	Hardness Change, Durometer "A" or equiv.	0 to +20	
	Tensile Strength Reduction, %, max	60	Temperature: 300 F + 2
	Elongation Reduction, %, max	70	Time: 70 hr
	Surface Hardness or Brittleness	None	
	Bend (180 deg flat)	Pass	

<u>Property</u>	<u>Value</u>	<u>Test Method</u>
4.2.4 <u>Compression Set:</u>		ASTM D395-47T, Method B
Per cent of original deflection, max	50	Temperature: 212 F + 2
		Time: 70 hr
Per cent of original thickness, max	15	Compressed to 70% original thickness

4.2.5 <u>Low Temperature Brittleness:</u>	Pass	ASTM D736-46T
		Temperature: -40 F + 2
		Time: 5 hr

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

6. TOLERANCES: Unless otherwise specified, the following tolerances apply:

6.1 Sheet and Strip:

Nominal Thickness Inch	Tolerance, Inch Plus and Minus
1/8 and less	1/64
Over 1/8 to 1/2, incl	1/32
Over 1/2	3/64

6.2 Tubing:

Nominal Wall Thickness Inch	Tolerance Plus and Minus
Less than 1/16	0.005 in.
1/16 and over	10%

7. REPORTS: Unless otherwise specified, the vendor shall furnish with each shipment three copies of a notarized 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. IDENTIFICATION: Unless otherwise specified, all material shall be identified and marked 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 product, during shipment and storage, will not be permanently distorted, and will be protected against exposure to undue weathering or harmful agents of any kind.