

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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SYNTHETIC RUBBER

Weather Resistant, Chloroprene Type (35-45)

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, tubing, molded shapes, extrusions, or as ordered.
3. APPLICATION: Primarily for parts, such as window channels, bumper pads, chafing strips, and weather seals, requiring resistance to weather.
4. TECHNICAL REQUIREMENTS:
 - 4.1 General:
 - Ø 4.1.1 Condition: Unless otherwise specified, a suitably cured product shall be furnished.
 - 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.
 - 4.1.3 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 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 listed ASTM methods, insofar as practicable.
 - 4.2.1 As Received:

4.2.1.1 Hardness, Durometer "A" or equiv.	40 ± 5	
4.2.1.2 Tensile Strength, psi, min	900	ASTM D412-51T, Die B or C
4.2.1.3 Elongation, %, min	350	ASTM D412-51T, Die B or C
 - 4.2.2 Processing Oil Resistance:
(Immediate Deteriorated Properties)

		ASTM D471-52T
		Medium: ASTM Oil No. 3
		Temperature: 212 F ± 2
		Time: 70 hr
 - 4.2.2.1 Tensile Strength Reduction, %, max 70
(based on area before immersion)
 - 4.2.2.2 Elongation Reduction, %, max 50
 - Ø 4.2.2.3 Volume Change (Method A), % +60 to +120
 - 4.2.2.4 Decomposition None
 - 4.2.2.5 Surface Tackiness None

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4.2.3 Dry Heat Resistance:

ASTM D573-53

Temperature: 212 F $\pm$ 2

Time: 70 hr

4.2.3.1 Hardness Change, Durometer "A" or equiv. 0 to +15

4.2.3.2 Tensile Strength Reduction, %, max 25

4.2.3.3 Elongation Reduction, %, max 35

Ø 4.2.3.4 Bend (flat) No cracking or checking

4.2.4 Compression Set:

ASTM D395-53T, Method B

Temperature: 212 F $\pm$ 2

Time: 70 hr

Compressed to 0.300 in. thick

4.2.4.1 Per cent of original deflection, max 75

4.2.4.2 Per cent of original thickness, max 30

4.2.5 Low Temperature Brittleness: Pass

ASTM D736-46T (See Note 1)

Temperature: -40 $\pm$ 2

Time: 5 hr

Note 1. To be specified only until satisfactory replacement test and values are established.

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 under	1/64
Over 1/8 to 1/2, incl	1/32
Over 1/2	3/64

6.2 Tubing:

6.2.1 Ø	Nominal OD or ID (not both), Inch	Tolerance Plus and Minus	Ovality (See Note 2)
	1/2 and under	0.020 in.	10%
	Over 1/2 to 1, incl	0.030 in.	15%
	Over 1	4%	15%

Note 2. Ovality applies to tubing ordered in straight lengths with wall thickness of 1/16 in. and over, and shall be computed from the difference of the minor and major axis diameter measurements, taken at the same location on the tube, expressed as a percentage of the nominal diameter.