

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 3242B

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SYNTHETIC RUBBER Weather Resistant, Chloroprene Type (75 - 85)

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, extrusions, or as ordered.
3. APPLICATION: Primarily for parts, such as window channels, bumper pads, chafing strips, and seals, requiring resistance to weather.
4. TECHNICAL REQUIREMENTS:

4.1 General:

- 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: 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. When the product supplied is an extrusion of such shape that suitable test specimens cannot be cut from the product, a separate flat strip test sample shall be supplied upon request. This strip shall be prepared from 1 in. \pm 1/16 OD by 0.075 in. \pm 0.008 thick wall tubing which shall be mechanically split and flattened into a strip while being extruded and then cured in the same manner as production material.

4.2.1 As Received:

- | | | |
|---|------------|---------------------------|
| 4.2.1.1 Hardness, Durometer "A" or equiv. | 80 \pm 5 | |
| 4.2.1.2 Tensile Strength, psi, min | 1900 | ASTM D412-51T, Die B or C |
| 4.2.1.3 Elongation, %, min | 150 | ASTM D412-51T, Die B or C |
| Ø 4.2.1.4 Tensile Stress at 80% Elongation, psi | See Note 1 | ASTM D412-51T, Die B or C |
| Ø 4.2.1.5 Tear Resistance, lb per in., min | See Note 2 | ASTM D624-54, Die B |
| Ø 4.2.1.6 Specific Gravity | See Note 3 | ASTM D297-55T |

4.2.2 Oil Resistance:

(Immediate Deteriorated Properties)

ASTM D471-57T

Medium: ASTM Oil No. 3

Temperature: 212 F + 2

Time: 70 hr

4.2.2.1 Tensile Strength Change, %, max
(based on area before immersion)

-40

4.2.2.2 Elongation Change, %, max

-35

4.2.2.3 Volume Change (Method A), %

+30 to +90

4.2.2.4 Decomposition

None

4.2.2.5 Surface Tackiness

None

4.2.3 Dry Heat Resistance:

ASTM D573-53

Temperature: 212 F + 2

Time: 70 hr

4.2.3.1 Hardness Change, Durometer "A"
or equiv.

0 to +10

4.2.3.2 Tensile Strength Change, %, max

-20

4.2.3.3 Elongation Change, %, max

4.2.3.3.1 For parts other than extrusions

-50

Ø 4.2.3.3.2 For extruded parts

-60

4.2.3.4 Bend (flat)

No cracking
or checking

4.2.4 Compression Set:

ASTM D395-55, Method B

Temperature: 212 F + 2

Time: 70 hr

Compressed to 75% of
original thickness

4.2.4.1 Per cent of original deflection, max

4.2.4.1.1 For parts other than extrusions

72

Ø 4.2.4.1.2 For extruded parts

79

4.2.4.2 Per cent of original thickness, max

4.2.4.2.1 For parts other than extrusions

18

Ø 4.2.4.2.2 For extruded parts

20

4.2.5 Low Temperature Resistance:

4.2.5.1 Brittleness
Ø

Pass

ASTM D746-57T

Procedure B

Temperature: -40 F + 2

4.2.5.2 Young's Modulus, psi, max
Ø (See Note 4)

50,000

ASTM D797-46

Temperature: -40 F + 2

Note 1. Value to be reported. Specimens shall be prestretched to 100% elongation
Ø twice within 5 min. of test.

Ø Note 2. Value to be reported.

Note 3. Value to be reported. Production material shall be within ± 0.02 of the qualification test value.

Note 4. This test is not normally required but may be used in case of disagreement on the results of the brittleness test.

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

6.1 Sheet and Strip:

Nominal Thickness Inches	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 Nominal OD or ID (not both), Inches	Tolerance, Inch Plus and Minus	Ovality (See Note 5)
1/2 and under	0.020	10%
Over 1/2 to 1, incl	0.030	15%
Over 1	4%	15%

Note 5. 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.

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

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, values to be reported, form or part number, and quantity.