

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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ALUMINUM ALLOY SHEET 2.5Mg - 0.25Cr (52S-H32)

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 parts requiring moderate forming and where resistance to corrosion is important.
3. COMPOSITION:

Magnesium	2.2 - 2.8
Chromium	0.15 - 0.35
Iron + Silicon	0.45 max
Manganese	0.10 max
Copper	0.10 max
Zinc	0.10 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: Quarter-hard and, unless otherwise specified, mill finish.

5. TECHNICAL REQUIREMENTS:

- 5.1 Tensile Properties: Sheet shall conform to the following requirements. Test specimens shall conform to ASTM E8, except from sheet less than 3/4 in. wide, and shall be cut parallel to the direction of rolling. Elongation requirements apply only to sheet 3/4 in. and over in width.

Nominal Thickness Inch	Tensile Strength psi, min	Elongation % in 2 in., min
0.019 and under	31,000	4
Over 0.019 - 0.050, incl	31,000	5
Over 0.050 - 0.113, incl	31,000	7
Over 0.113 - 0.249, incl	31,000	9

- 5.2 Bending: Material shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to the bend factor shown below times the nominal thickness of the sheet, with axis of bend parallel to direction of rolling.

Nominal Thickness Inch	Bend Factor
0.050 and under	1
Over 0.050 - 0.113, incl	2
Over 0.113 - 0.249, incl	3

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