

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
New York City

## AMS4017c

Issued 1-1-42

Revised 10-1-51

### ALUMINUM ALLOY SHEET 2.5Mg - 0.25Cr (52S-H34)

- 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 little 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:** Half-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	34,000	3
Over 0.019 - 0.050, incl	34,000	4
Over 0.050 - 0.113, incl	34,000	6
Over 0.113 - 0.249, incl	34,000	7

- 5.2 Bending:** Sheet 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
0.019 and under	1
Over 0.019 - 0.113, incl	2
Over 0.113 - 0.249, incl	3

Section 7C of the SAE Technical Board rules provides that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."