

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 4016D

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

Issued 12-5-39

Revised 1-15-57

ALUMINUM ALLOY SHEET AND PLATE 2.5Mg - 0.25Cr (5052-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
Zinc	0.20 max
Manganese	0.10 max
Copper	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:** Test specimens shall conform to ASTM E8-54T 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 Inches	Tensile Strength psi, min	Elongation % in 2 in., min
0.017 to 0.019, incl	31,000	4
Over 0.019 to 0.050, incl	31,000	5
Over 0.050 to 0.113, incl	31,000	7
Over 0.113 to 0.249, incl	31,000	9
Over 0.249 to 0.500, incl	31,000	11
Over 0.500 to 2.000, incl	31,000	12

- 5.2 **Bending:** Material 0.249 in. and under in thickness shall be capable of withstanding, without cracking, bending at room temperature through an angle of 180 deg around a diameter equal to the bend factor times the nominal thickness of the material, with axis of bend parallel to direction of rolling.

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