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

AMS 4056B

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ALUMINUM ALLOY SHEET AND PLATE
4.5Mg - 0.65Mn - 0.15Cr (5083-0)

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 welding, moderate strength, and good resistance to corrosion are important. Excessive cold work or prolonged heating in the temperature range of 150 - 300 F (65 - 150 C) may cause susceptibility to stress corrosion.

3. COMPOSITION:

	min	max
Magnesium	4.0	4.9
Manganese	0.30	1.0
Chromium	0.05	0.25
Iron	--	0.40
Silicon	--	0.40
Zinc	--	0.25
Titanium	--	0.15
Copper	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

4. CONDITION: Annealed and, unless otherwise specified, mill finish.

5. TECHNICAL REQUIREMENTS: When ASTM methods are specified for determining Ø conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.

5.1 Tensile Properties: Test specimens shall conform to ASTM E8 and shall be taken parallel to the direction of rolling. Sheet type specimens shall be used for material less than 0.5 in. thick and 0.75 in. and over in width. Round specimens shall be used Ø for material 0.5 in. and over in thickness and 0.75 in. and over in width. Material under 0.75 in. wide and under 0.5 in. thick may be tested in either full section or by use of round specimens; for such sizes, elongation requirements apply only when round specimens are used.

Nominal Thickness Inches	Tensile Strength psi min	Tensile Strength psi max	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,200,000) psi, min	Extension Under Load in. in 2 in.	Elongation % in 2 in. or 4D, min
0.050 to 1.500, incl	40,000	51,000	18,000	0.0075	16
Over 1.500 to 3.000, incl	39,000	50,000	17,000	0.0073	16
Over 3.000 to 4.000, incl	38,000	--	16,000	0.0071	16
Over 4.000 to 5.000, incl	38,000	--	16,000	0.0071	14
Over 5.000 to 6.000, incl	37,000	--	15,000	0.0069	14

5.1.1 When a dispute occurs between purchaser and vendor over the yield strength value, yield strength determined by the offset method shall apply.

6. QUALITY: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2202.

8. REPORTS:

8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product conforms to the chemical composition and technical requirements of this specification. This report shall include the purchase order number, material specification number, thickness, size, and quantity.

8.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

9. IDENTIFICATION: Unless otherwise specified, each sheet and plate shall be marked on one face, in the respective location indicated below. Symbols shall be applied using a suitable marking fluid and shall be sufficiently stable to withstand normal handling.

9.1 Flat Sheet and Plate 0.375 In. and Under Thick, 6 - 60 In., Incl, Wide, and 36 - 200 In., Incl, Long: Shall be marked in rows of symbols not less than 3/8 in. in height and recurring at intervals not greater than 3 feet. Rows shall run parallel to the direction of rolling of the piece and shall be spaced approximately 6 in. on centers across the width. Every third row shall show the manufacturer's identification and nominal thickness in inches. The other rows shall show the alloy number and temper, or AMS 4056, and shall be staggered.