LAND SEA AIR SPACE

AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AMS 4193

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Revised

ALUMINUM ALLOY SHEET AND PLATE
4.4Cu - 1.5Mg - 0.60Mn (2024-T861)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. APPLICATION: Primarily for structural parts of good strength. This material, when re-heat treated by the user, may not have the tensile properties shown. Certain design and processing procedures may cause this material to be susceptible to stress corrosion cracking; ARP 823 recommends practices to minimize such conditions.

3. COMPOSITION:

	min	max
Copper	3.8	4.9
Magnesium	1.2	1.8
Manganese	0.30	0.9
Iron	--	0.50
Silicon	--	0.50
Zinc	--	0.25
Chromium	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

4. CONDITION: Solution heat treated, cold reduced approximately 6% in thickness, and precipitation heat treated.

5. TECHNICAL REQUIREMENTS: The product shall conform to the following requirements; tensile properties shall be determined in accordance with the latest issue of AMS 2355.

5.1 Tensile Properties:

Nominal Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 10,500,000) psi, min	Extension Under Load in. in 2 in.	Elongation % in 2 in. or 4D, min
0.020 to 0.062, incl	70,000	62,000	0.0158	3
Over 0.062 to 0.249, incl	71,000	66,000	0.0166	4
Over 0.249 to 0.500, incl	70,000	64,000	0.0162	4

5.1.1 When a dispute occurs between purchaser and vendor over the yield strength values, 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.