AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York, N.Y. 10017

AMS 4383

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Revised

MAGNESIUM ALLOY SHEET AND PLATE
2.0Th - 0.80Mn (HM21A-T81)

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

2. APPLICATION: Primarily for components requiring weldability and good strength-to-weight ratio up to 700 F (371 C).

3. COMPOSITION:

	min	max
Thorium	1.5	2.5
Manganese	0.45	1.1
Other Impurities, each	--	0.10
Other Impurities, total	--	0.30
Magnesium	remainder	

4. CONDITION: Solution heat treated, cold worked, precipitation heat treated, and pickled.

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 Longitudinal and Long Transverse Tensile Properties: The following requirements apply to material 0.125 to 0.312 in., incl, thick and not over 48 in. wide:

Tensile Strength, psi	34,000 min
Yield Strength at 0.2% Offset or at 0.0117 in. in 2 in. Extension Under Load (E = 6,500,000), psi	25,000 min
Elongation, % in 2 in. or 4D	4 min

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.

5.1.2 If sizes other than those shown are ordered, tensile property requirements shall be as agreed upon by purchaser and vendor.

5.2 Longitudinal and Long Transverse Compressive Properties: Material 0.125 to 0.312 in., incl, thick and not over 48 in. wide shall be capable of showing compressive yield strength not lower than 22,000 psi. Yield strength shall be measured at 0.2% offset in accordance with the issue of ASTM E9 specified in the latest issue of AMS 2350.

5.2.1 If sizes other than those shown are ordered, compressive properties shall be as agreed upon by purchaser and vendor.

5.3 Longitudinal and Long Transverse Tensile Properties at 600 F (315.6 C): Material 0.125 to 0.312 in., incl, thick and not over 48 in. wide shall be capable of showing tensile strength not lower than 15,000 psi. Specimens shall be heated to 600 F ± 5 (315.6 C ± 2.8), held at heat for 10 min. before testing, and tested at 600 F ± 5 (315.6 C ± 2.8) at a rate not greater than 0.05 in. per in. per min. through the 0.2% offset and at a rate of 0.11 - 0.14 in. per in. per min. above the 0.2% offset.

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