

AEROSPACE MATERIAL SPECIFICATIONS

AMS 4388A

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

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MAGNESIUM ALLOY EXTRUSIONS 3.0Th - 1.5Mn (HM31A-F)

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Bars, rods, and shapes.
3. **APPLICATION:** Primarily for components requiring weldability and good strength to weight ratio up to 600 F (316 C).
4. **COMPOSITION:**

	min	max
Thorium	2.5	3.5
Manganese	1.2	--
Other Impurities, each	--	0.10
Other Impurities, total	--	0.30
Magnesium	remainder	

5. **CONDITION:** As fabricated.

5.1 Unless otherwise specified, extrusions shall be supplied with the as-extruded surface finish; light polishing to remove minor surface imperfections is permissible provided such imperfections can be removed within the dimensional tolerances.

6. **TECHNICAL REQUIREMENTS:**

- 6.1 **Tensile Properties:**

	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 6,500,000)		Elongation % in 2 in. or 4D, min
		psi, min	Extension Under Load in. in 2 in.	
Bars, Rods and Solid Shapes, Cross Sectional Area Up to 4 sq. in., excl	37,000	26,000	0.0120	4

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

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

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

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