

# AERONAUTICAL MATERIAL SPECIFICATIONS

## AMS 4385

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

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Revised

### MAGNESIUM ALLOY SHEET HK31A-H24

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 550 F.
3. **COMPOSITION:**

Thorium	2.5 - 4.0
Zirconium	0.45 - 1.0
Other Elements, each	0.15 max
Other Elements, total	0.30 max
Magnesium	remainder

4. **CONDITION:** Cold rolled and partially annealed (-H24) 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 Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 6,500,000)		Elongation % in 2 in. min
		psi, min	Extension Under Load in. in 2 in.	
0.016 to 0.125, incl	34,000	26,000	0.0120	4
Over 0.125 to 0.250, excl	31,000	22,000	0.0108	4

- 5.1.1 The term "excl" applies only to the higher figure of the specified range.

- 5.2 **Compressive Properties:** Material shall be capable of meeting the following requirements. Test specimens shall be tested in the longitudinal direction in a suitable jig.

Nominal Thickness Inch	Yield Strength at 0.2% Offset psi, min
0.016 to 0.125, incl	20,000
Over 0.125 to 0.250, excl	18,000

- 5.2.1 The term "excl" applies only to the higher figure of the specified range.

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