



AEROSPACE MATERIAL SPECIFICATION

AMS4041™

REV. T

Issued	1941-11
Reaffirmed	2017-11
Revised	2019-09

Superseding AMS4041S

Aluminum Alloy, Sheet and Plate, Alclad
4.4Cu - 1.5Mg - 0.60Mn (2024, -T3 Sheet/-T351 Plate with 1-1/2% Alclad)
Solution Heat Treated, Cold Worked and Naturally Aged
(Composition similar to UNS A82024)

RATIONALE

AMS4041T prohibits unauthorized exceptions (3.6), revises reports (4.4.1) and identification (5.1.1).

1. SCOPE

1.1 Form

This specification covers an aluminum alloy in the form of sheet and plate alclad two sides, over 0.187 to 1.000 inch (over 4.750 to 25.40 mm) in nominal thickness, supplied in the -T3/-T351 temper.

1.1.1 AMS4041 covers alclad material for sheet greater than 0.187 inch and plate. The cladding thickness is minimized to provide a commensurate increase in tensile properties for this alclad reduction. Use of this product is not recommended without proper evaluation of corrosion resistance.

1.2 Supersession Notice

Requirements for thin gage sheet (0.008 to 0.187 inch) in accordance with AMS4041 are superseded by AMS4462. AMS-QQ-A-250/5 and AMS4462 have the same requirements for alclad thickness and tensile properties for material less than 0.187 inch in thickness.

1.3 Application

These products have been used typically for high strength parts requiring higher yield strength than is afforded by non-cold worked, naturally aged tempers of this alloy, maximum corrosion resistance and fabrication that does not involve welding, but usage is not limited to such applications.

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the latest published issue of that document shall apply.

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2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2355 Quality Assurance, Sampling and Testing, Aluminum Alloys and Magnesium Alloy, Wrought Products (Except Forging Stock), and Rolled, Forged, or Flash Welded Rings

AMS2772 Heat Treatment of Aluminum Alloy Raw Materials

ARP1917 Clarification of Terms Used in Aerospace Metals Specifications

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM B594 Ultrasonic Inspection of Aluminum-Alloy Wrought Products for Aerospace Applications

ASTM B660 Packaging/Packing of Aluminum and Magnesium Products

ASTM B666/B666M Identification Marking of Aluminum and Magnesium Alloy Products

2.3 ANSI Accredited Publications

Copies of these documents are available online at <http://webstore.ansi.org/>.

ANSI H35.1/H35.1M Standard Alloy and Temper Designation System for Aluminum

ANSI H35.2 Dimensional Tolerances for Aluminum Mill Products

ANSI H35.2M Dimensional Tolerances for Aluminum Mill Products (Metric)

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight as shown in Tables 1, determined in accordance with AMS2355.

Table 1A - Composition, core (2024)

Element	Min	Max
Silicon	--	0.50
Iron	--	0.50
Copper	3.8	4.9
Manganese	0.30	0.9
Magnesium	1.2	1.8
Chromium	--	0.10
Zinc	--	0.25
Titanium	--	0.15
Other Elements, each	--	0.05
Other Elements, total	--	0.15
Aluminum	remainder	