



AEROSPACE MATERIAL SPECIFICATION

AMS4412™

REV. B

Issued 2007-11
Reaffirmed 2015-03
Revised 2021-08

Superseding AMS4412A

Aluminum Alloy, Sheet
3.2Cu - 0.52Mg - 0.30Ag - 0.95 Li - 0.12Zr (2198-T8)
Solution Heat Treated, Cold Worked, and Artificially Aged
(Composition similar to UNS A92198)

RATIONALE

AMS4412 is the result of a Five Year Review and update of the specification. The revision prohibits unauthorized exceptions (1.1, 3.4.2, 3.7, 4.4.1, 5.1.1, 8.5, 8.7), updates title composition, Composition (3.1, Table 1), Condition (3.2.1, 8.2), allows the use of prior revisions (8.6), and SI unit tensile tests (8.4).

1. SCOPE

1.1 Form

This specification covers an aluminum alloy in the form of sheet from 0.063 to 0.249 inches (1.60 to 6.30 mm) in nominal thickness (see 8.7).

1.2 Application

This product has been used for aircraft applications where it offers a combination of high strength and low density, 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 last published issue of that document shall apply.

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

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For more information on this standard, visit
<https://www.sae.org/standards/content/AMS4412B/>

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 B660 Packaging/Packing of Aluminum and Magnesium Products

ASTM B666/B666M Identification Marking of Aluminum and Magnesium Products

2.3 ANSI Accredited Publications

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

ANSI H35.1/H35.1M Alloy and Temper Designation Systems 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 shown in Table 1, determined in accordance with AMS2355.

Table 1 - Composition

Element	Min	Max
Silicon	--	0.08
Iron	--	0.10
Copper	2.9	3.5
Manganese	--	0.50
Magnesium	0.25	0.8
Chromium		0.05
Zinc	--	0.35
Titanium	--	0.10
Silver	0.10	0.50
Lithium	0.8	1.1
Zirconium	0.04	0.18
Other Elements, each	--	0.05
Other Elements, total	--	0.15
Aluminum	remainder	

3.2 Condition

Product shall be supplied in the following condition:

3.2.1 Solution heat treated, cold worked sufficiently to meet the requirements of 3.4 after aging (see 8.2), and artificially aged to T8 temper (refer to ANSI H35.1/H35.1M).

3.3 Heat Treatment

Shall be performed in accordance with AMS2772 and as follows:

3.3.1 Solution Heat Treatment Temperature

930 to 950 °F (500 to 510 °C).