



AEROSPACE MATERIAL SPECIFICATION

AMS4029™

REV. M

Issued 1958-08
Reaffirmed 2017-09
Revised 2022-08

Superseding AMS4029L

Aluminum Alloy, Sheet and Plate
(2014; -T6 Sheet, -T651 Plate)
Solution and Precipitation Heat Treated
(Composition similar to UNS A92014)

RATIONALE

AMS4029M results from a Five-Year Review and update of this specification with changes to prohibit unauthorized exceptions (3.3.3, 3.6, 4.4.1, 5.1.1, 8.5), update form (1.1), applicable documents (Section 2, 3.2.1, 3.2.2), ordering information (8.6), and allow the use of the immediate prior specification revision (8.4).

1. SCOPE

1.1 Form

This specification covers an aluminum alloy in the form of sheet and plate 0.020 to 4.00 inches (0.51 to 101.60 mm), inclusive, in nominal thickness (see 8.5).

1.2 Application

These products have been used typically for structural parts of good strength, but usage is not limited to such applications.

1.2.1 Certain design and processing procedures may cause these products to become susceptible to stress-corrosion cracking; ARP823 recommends practices to minimize such conditions.

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

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SAE WEB ADDRESS:

For more information on this standard, visit
<https://www.sae.org/standards/content/AMS4029M/>

ARP823 Minimizing Stress-Corrosion Cracking in Wrought High-Strength Aluminum Alloy Products

AS7766 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 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)

2.4 Definitions

Terms used in AMS are defined in AS7766.

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	0.50	1.2
Iron	--	0.7
Copper	3.9	5.0
Manganese	0.40	1.2
Magnesium	0.20	0.8
Chromium	--	0.10
Zinc	--	0.25
Titanium	--	0.15
Other Elements, each	--	0.05
Other Elements, total	--	0.15
Aluminum	remainder	

3.2 Condition

The product shall be supplied in the following condition:

3.2.1 Sheet

Solution and precipitation heat treated in accordance with AMS2772 to the -T6 temper (refer to ANSI H35.1/H35.1M).