



AEROSPACE MATERIAL SPECIFICATION

AMS4232™

REV. D

Issued	1990-01
Reaffirmed	2006-04
Revised	2018-08

Superseding AMS4232C

Aluminum Alloy Extrusions
2.7Cu - 2.2Li - 0.12Zr (2090-T86)
Solution Heat Treated, Cold Worked, and Precipitation Heat Treated
(Composition similar to UNS A92090)

RATIONALE

AMS4232D prohibits unauthorized exceptions (3.7), revises Condition (3.2), Properties (3.4.3), Reports (4.4.1), and Identification (5.1.1), and results from a Five-Year Review and update of this specification.

1. SCOPE

1.1 Form

This specification covers an aluminum alloy in the form of extruded bars, rods, and profiles up to 0.499 inches (12.67 mm) in nominal diameter, or least thickness, and under 10 in² (65 cm²) in cross-sectional area.

1.2 Application

These extrusions have been used typically for parts in structural applications requiring strength similar to 7050-T6 alloy with good exfoliation resistance and approximately 7.8% lower 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

AMS2750 Pyrometry

ARP1917 Clarification of Terms Used in Aerospace Metals Specifications

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<http://standards.sae.org/AMS4232D>

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
ASTM B660	Packaging/Packing of Aluminum and Magnesium Products
ASTM B666/B666M	Identification Marking of Aluminum and Magnesium Products
ASTM G34-72	Exfoliation Corrosion Susceptibility in 2XXX and 7XXX Series Aluminum Alloys (EXCO Test)
ASTM G38	Making and Using C-Ring Stress Corrosion Test Specimens
ASTM G44	Exposure of Metals and Alloys by Alternate Immersion in Neutral 3.5% Sodium Chloride Solution
ASTM G85	Modified Salt Spray (Fog) Testing

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 shown in Table 1, determined in accordance with AMS2355, or by other analytical methods acceptable to purchaser.

Table 1 - Composition

Element	Min	Max
Silicon	--	0.10
Iron	--	0.12
Copper	2.4	3.0
Manganese	--	0.05
Magnesium	--	0.25
Chromium	--	0.05
Zinc	--	0.10
Titanium	--	0.15
Lithium	1.9	2.6
Zirconium	0.08	0.15
Other Elements, each	--	0.05
Other Elements, total	--	0.15
Aluminum	remainder	