

AEROSPACE MATERIAL SPECIFICATION



MAM 4247B

Issued JAN 1987
Revised MAY 1994
Cancelled MAR 2003

Superseding MAM 4247A

Aluminum Alloy, Hand Forgings
7.7Zn - 2.4Mg - 1.6Cu - 0.16Cr (7049-T7352)
Solution Heat Treated, Stress Relieved by Compression, and
Precipitation Heat Treated

UNS A97049

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of March, 2003. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications.

AMS 4247 covers the same material.

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1. SCOPE:

1.1 Form:

This specification covers an aluminum alloy in the form of hand forgings procured to metric dimensions.

1.1.1 AMS 4247 is the inch/pound version of this MAM.

1.2 Application:

These forgings have been used typically for parts requiring a combination of high strength and resistance to stress-corrosion cracking and for parts requiring stability during machining, but usage is not limited to such applications.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

MAM 2355 Quality Assurance Sampling and Testing, Aluminum Alloys and Magnesium Alloys, Wrought Products, Except Forging Stock, and Rolled, Forged, or Flash Welded Rings, Metric (SI) Units.

AMS 2645 Fluorescent Penetrant Inspection

AMS 2808 Identification, Forgings

2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

ASTM B 594 Ultrasonic Inspection of Aluminum-Alloy Products for Aerospace Applications

ASTM B 660 Packaging/Packing of Aluminum and Magnesium Products

2.3 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-H-6088 Heat Treatment of Aluminum Alloys

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the percentages by weight shown in Table 1, determined in accordance with MAM 2355.

TABLE 1 - Composition

Element	min	max
Zinc	7.2	8.2
Magnesium	2.0	2.9
Copper	1.2	1.9
Chromium	0.10	0.22
Iron	--	0.35
Silicon	--	0.25
Manganese	--	0.20
Titanium	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

3.2 Condition:

Solution heat treated, stress relieved by compression to produce 1 to 5% permanent set, and precipitation heat treated. Heat treatments shall be performed in accordance with MIL-H-6088.

3.3 Properties:

Forgings shall conform to the following requirements, determined in accordance with MAM 2355:

- 3.3.1 Tensile Properties: Specimens, machined from forgings having an essentially square or rectangular cross-section heat treated in the indicated thickness, shall have the properties shown in Table 2 provided the as-forged thickness does not exceed 125 mm.