



AEROSPACE MATERIAL SPECIFICATION

AMS4225™**REV. F**

Issued 1968-11
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Superseding AMS4225E

Aluminum Alloy, Heat-Resistant, Castings
5.0Cu - 1.5Ni - 0.25Mn - 0.25Sb - 0.25Co - 0.20Ti - 0.20Zr (203.0-T6)
Solution Heat Treated and Precipitation Heat Treated
(Composition similar to UNS A02030)

RATIONALE

AMS4225F has been declared "STABILIZED" by AMS Committee D Nonferrous Alloys Committee. This document will no longer be updated and may no longer represent standard industry practice. This document contains mature technology that is not expected to change and thus no further revisions are anticipated. The committee can find no users or producers for this material and the alloy designation has been inactivated by The Aluminum Association.

NOTE: Previously this document was revised. The last technical update of this document occurred in March 2018. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to the specification; including exceptions listed on the certification. In many cases, the purchaser may represent a sub tier supplier and not the cognizant engineering organization.

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Standard, visit Sharing Hub

1. SCOPE

1.1 Form

This specification covers an aluminum alloy in the form of castings.

1.2 Application

These castings have been used typically for components requiring moderate strength and good stability up to 600 °F (316 °C) with resistance to stress-corrosion cracking, 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.

AMS2175	Casting, Classification and Inspection of
AMS2360	Room Temperature Tensile Properties of Castings
AMS2361	Elevated Temperature Tensile Properties of Castings
AMS2694	In-Process Welding of Castings
AMS2771	Heat Treatment of Aluminum Alloy Castings

AMS2804 Identification, Castings

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 B557	Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products
ASTM B557M	Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products (Metric)
ASTM B660	Packaging/Packing of Aluminum and Magnesium Products
ASTM E10	Brinell Hardness of Metallic Materials
ASTM E21	Elevated Temperature Tension Tests of Metallic Materials
ASTM E29	Using Significant Digits in Test Data to Determine Conformance with Specifications
ASTM E139	Conducting Creep, Creep-Rupture, and Stress-Rupture Tests of Metallic Materials
ASTM E716	Sampling and Sample Preparation of Aluminum and Aluminum Alloys for Determination of Chemical Composition by Spark Atomic Emission Spectrometry
ASTM E1251	Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry
ASTM E1417/E1417M	Liquid Penetrant Testing
ASTM E1742/E1742M	Radiographic Examination
ASTM E3061	Analysis of Aluminum and Aluminum Alloys by Inductively Coupled Plasma Atomic Emission Spectrometry (Performance Based Method)

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight shown in Table 1, determined by spectrochemical methods in accordance with ASTM E1251 or ASTM E3061 or by other analytical methods acceptable to purchaser (see 3.4.1).