



# AEROSPACE MATERIAL SPECIFICATION

AMS4362™

REV. H

Issued	1954-03
Reaffirmed	2000-08
Revised	2019-12

Superseding AMS4362G

Forgings, Magnesium Alloy  
5.5Zn - 0.45Zr (ZK60A-T5)  
Precipitation Heat Treated  
(Composition similar to UNS M16600)

## RATIONALE

AMS4362H prohibits unauthorized exceptions (3.7), revises Properties (3.4.1.3), Quality (3.5.1) and Reports (4.4.1), and results from a Five-Year Review and update of this specification.

### 1. SCOPE

#### 1.1 Form

This specification covers a magnesium alloy in the form of die forgings 3 inches (76 mm) and under in nominal thickness at time of heat treatment, hand forgings 6 inches (152 mm) and under in nominal thickness, and forging stock of any size (see 8.5).

#### 1.2 Application

These forgings have been used typically for parts requiring high strength-to-weight ratio for service up to 300 °F (149 °C), 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](http://www.sae.org).

AMS2201	Tolerances, Aluminum and Aluminum Alloy Bar, Rod, Wire, and Forging Stock, Rolled or Cold Finished
AMS2355	Quality Assurance, Sampling and Testing, Aluminum Alloys and Magnesium Alloy, Wrought Products (Except Forging Stock), and Rolled, Forged, or Flash Welded Rings
AMS2475	Protective Treatments, Magnesium Alloys

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AMS2630	Inspection, Ultrasonic Product Over 0.5 Inch (12.5 mm) Thick
AMS2750	Pyrometry
AMS2808	Identification, Forgings
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](http://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 B953	Sampling Magnesium and Magnesium Alloys for Spectrochemical Analysis
ASTM B954	Analysis of Magnesium and Magnesium Alloys by Atomic Emission Spectrometry
ASTM B660	Packaging/Packing of Aluminum and Magnesium Products
ASTM E1417/E1417M	Liquid Penetrant Testing

## 3. TECHNICAL REQUIREMENTS

### 3.1 Composition

Shall conform to the percentages by weight shown in Table 1, determined in accordance with ASTM B954, by spectrochemical methods, or by other analytical methods acceptable to purchaser.

**Table 1 - Composition**

Element	Min	Max
Zinc	4.8	6.2
Zirconium	0.45	1.0
Other Elements, each	--	0.10
Other Elements, total	--	0.30
Magnesium	remainder	

3.1.1 Determination not required for routine acceptance.

### 3.2 Condition

Product shall be supplied in the following condition:

#### 3.2.1 Die and Hand Forgings

Precipitation heat treated without prior solution heat treatment.

#### 3.2.2 Forging Stock

As ordered by the forging manufacturer.