



# AEROSPACE MATERIAL SPECIFICATION

AMS4113

REV. F

Issued 1968-11  
Reaffirmed 2008-05  
Revised 2014-12

Superseding AMS4113E

Aluminum Alloy, Extruded Profiles  
1.0Mg - 0.60Si - 0.28Cu - 0.20Cr (6061-T6)  
Solution and Precipitation Heat Treated  
(Composition similar to A96061)

## RATIONALE

AMS4113F 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 profiles such as angles, channels, tees, zees, I-beams, and H-beams.

#### 1.2 Application

These products have been used typically for parts requiring moderate strength, especially where such parts require brazing or welding during fabrication, 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 canceled 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 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

AMS2355 Quality Assurance Sampling and Testing, Aluminum Alloys and Magnesium Alloys, Wrought Products, Except Forging Stock, and Rolled, Forged, or Flash Welded Rings

AMS2772 Heat Treatment of Aluminum Alloy Raw Materials

AS1990 Aluminum Alloy Tempers

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## 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 B 660 Packaging/Packing of Aluminum and Magnesium Products

ASTM B 666/B 666M Identification Marking of Aluminum Products

## 2.3 ANSI Publications

Available from American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036, Tel: 212-642-4900, [www.ansi.org](http://www.ansi.org).

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.

**TABLE 1 – Composition**

Element	min	max
Silicon	0.40	0.8
Iron	--	0.7
Copper	0.15	0.40
Manganese	--	0.15
Magnesium	0.8	1.2
Chromium	0.04	0.35
Zinc	--	0.25
Titanium	--	0.15
Other elements, each	--	0.05
Other elements, total	--	0.15
Aluminum	remainder	

### 3.2 Condition

Extruded and solution and precipitation heat treated to the T6 temper (See AS1990) in accordance with AMS2772.

3.2.1 Profiles shall be supplied with an as-extruded surface finish; light polishing to remove minor surface imperfections is permissible provided such imperfections can be removed within specified dimensional tolerances.

### 3.3 Properties

Profiles shall conform to the following requirements, determined on the mill product size in accordance with AMS2355:

#### 3.3.1 Tensile Properties

Shall be as shown in Table 2.