SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS 4008K

Issued NOV 1941
Revised FEB 2001
Cancelled OCT 2006

Superseded by ASTM B 209

Aluminum Alloy, Sheet and Plate
1.25Mn - 0.12Cu (3003-H14)
Strain Hardened

A93003

RATIONALE

AMS 4008K places this specification in cancelled status.

CANCELLATION NOTICE

This specification has been declared “CANCELLED” by the Aerospace Materials Division, SAE, as of October, 2006, and has been superseded by ASTM B 209. The requirements of the latest issue of ASTM B 209 for 3003-H14 shall be fulfilled whenever reference is made to the cancelled AMS 4008. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, noting that it has been superseded by ASTM B 209.

Cancelled specifications are available from SAE.

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: custsvc@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

1. SCOPE:

1.1 Form:

This specification covers an aluminum alloy in the form of sheet and plate.

1.2 Application:

These products have been used typically for parts requiring moderately severe forming or spinning, 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, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2355	Quality Assurance Sampling and Testing, Aluminum Alloys and Magnesium Alloys, Wrought Products, Except Forging Stock, and Rolled, Forged, or Flash Welded Rings
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

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM B 660	Packaging/Packing of Aluminum and Magnesium Products
ASTM B 666/B 666M	Identification Marking of Aluminum and Magnesium Products

2.3 ANSI Publications:

Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

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 AMS 2355 or MAM 2355.

TABLE 1 - Composition

Element	min	max
Silicon	--	0.6
Iron	--	0.7
Copper	0.05	0.20
Manganese	1.0	1.50
Zinc	--	0.10
Other Elements, each	--	0.05
Other Elements, total	--	0.15
Aluminum	remainder	

3.2 Condition:

Strain hardened to the H14 condition.

3.3 Properties:

The product shall conform to the following requirements, determined in accordance with AMS 2355 or MAM 2355 on the mill produced size.

3.3.1 Tensile Properties: Shall be as specified in Table 2.

TABLE 2A - Tensile Properties, Inch/Pound Units

Nominal Thickness Inch	Tensile Strength ksi	Yield Strength at 0.2% Offset ksi, min	Elongation in 2 Inches or 4D %, min
0.009 to 0.012, incl	20.0 to 26.0	17.0	1
Over 0.012 to 0.019, incl	20.0 to 26.0	17.0	2
Over 0.019 to 0.031, incl	20.0 to 26.0	17.0	3
Over 0.031 to 0.050, incl	20.0 to 26.0	17.0	4
Over 0.050 to 0.113, incl	20.0 to 26.0	17.0	5
Over 0.113 to 0.161, incl	20.0 to 26.0	17.0	6
Over 0.161 to 0.249, incl	20.0 to 26.0	17.0	7
Over 0.249 to 0.499, incl	20.0 to 26.0	17.0	8
Over 0.499 to 1.000, incl	20.0 to 26.0	17.0	10

TABLE 2B - Tensile Properties, SI Units

Nominal Thickness Millimeters	Tensile Strength MPa	Yield Strength at 0.2% Offset MPa, min	Elongation in 50.8 mm or 4D %, min
0.23 to 0.30, incl	138 to 179	117	1
Over 0.30 to 0.48, incl	138 to 179	117	2
Over 0.48 to 0.79, incl	138 to 179	117	3
Over 0.79 to 1.27, incl	138 to 179	117	4
Over 1.27 to 2.87, incl	138 to 179	117	5
Over 2.87 to 4.09, incl	138 to 179	117	6
Over 4.09 to 6.32, incl	138 to 179	117	7
Over 6.32 to 12.67, incl	138 to 179	117	8
Over 12.67 to 25.40, incl	138 to 179	117	10

3.3.2 Bending: Product shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to the bend factor shown in Table 3 times the nominal thickness of the product with axis of bend parallel to the direction of rolling.

TABLE 3 - Bending Parameters

Nominal Thickness Inch	Nominal Thickness Millimeters	Bend Factor
0.009 to 0.113, incl	0.23 to 2.87, incl	0
Over 0.113 to 0.249, incl	Over 2.87 to 6.32, incl	2

3.4 Quality:

The product, as received by purchaser, shall be uniform in quality and condition, sound, and free from foreign materials and from imperfections detrimental to usage of the product.

3.5 Tolerances:

Shall conform to all applicable requirements of ANSI H35.2 or ANSI H35.2M.