SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 4063C

Issued MAY 1968
Revised OCT 1993
Reaffirmed JUL 2000

Superseding AMS 4063B

Aluminum Alloy, Clad One Side Sheet
1.25Mn - 0.12Cu (No. 11-0 Brazing Sheet)
Annealed

UNS A83003

1. SCOPE:

1.1 Form:

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

1.2 Application:

This sheet has been used typically for brazed assemblies which are not subject to heat treatment after joining, 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.

AMS 2202	Tolerances, Aluminum Alloy and Magnesium Alloy Sheet and Plate
MAM 2202	Tolerances, Metric, Aluminum Alloy and Magnesium Alloy Sheet and Plate
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
AMS 2811	Identification, Aluminum and Magnesium Alloy Wrought Products

QUESTIONS REGARDING THIS DOCUMENT: (724) 772-7161 FAX: (724) 776-0243
TO PLACE A DOCUMENT ORDER: (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS: http://www.sae.org

2.2 ASTM Publications:

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

ASTM B 660 Packaging/Packing of Aluminum and Magnesium Products

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the percentages by weight shown in Tables 1 and 2, determined in accordance with AMS 2355 or MAM 2355:

TABLE 1 - Composition, Core (3003)

Element	Min	Max
Manganese	1.0	1.5
Copper	0.05	0.20
Iron	--	0.7
Silicon	--	0.6
Zinc	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

TABLE 2 - Composition, Cladding (4343)

Element	Min	Max
Silicon	6.8	8.2
Iron	--	0.8
Copper	--	0.25
Zinc	--	0.20
Manganese	--	0.10
Other Impurities, each	--	0.05
Other Impurities, total	--	0.15
Aluminum	remainder	

3.2 Condition:

Annealed

3.3 Properties:

Sheet shall conform to the following requirements, determined in accordance with AMS 2355 or MAM 2355:

3.3.1 Tensile Properties: Shall be as specified in Table 3.

TABLE 3A - Tensile Properties, Inch/Pound Units

Nominal Thickness Inch	Tensile Strength ksi, Max	Elongation in 2 Inches %, Min
0.006 to 0.007, incl	20.0	12
Over 0.007 to 0.012, incl	20.0	15
Over 0.012 to 0.031, incl	20.0	18
Over 0.031 to 0.050, incl	20.0	20
Over 0.050 to 0.249, incl	20.0	23

TABLE 3B - Tensile Properties, SI Units

Nominal Thickness mm	Tensile Strength MPa, Max	Elongation in 50.8 %, Min
0.15 to 0.18, incl	138	12
Over 0.18 to 0.30, incl	138	15
Over 0.30 to 0.79, incl	138	18
Over 0.79 to 1.27, incl	138	20
Over 1.27 to 6.32, incl	138	23

3.3.2 Bending: Sheet shall withstand, without cracking, bending at room temperature flat on itself with axis of bend parallel to the direction of rolling. The clad side may be either the convex or concave side of the sheet for bending tests.

3.3.3 Cladding: Shall be applied to only one face of the core.

3.3.3.1 Cladding Thickness: After rolling, the average cladding thickness shall be as specified in Table 4.

TABLE 4 - Minimum Average Cladding Thickness

Total Thickness of Composite Product Inch	Total Thickness of Composite Product mm	Cladding Thickness % of Total Thickness Min Average
Up to 0.063, incl	Up to 1.60, incl	8
Over 0.063 to 0.250, excl	Over 1.60 to 6.35, excl	4

3.4 Quality:

Sheet, 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 sheet.

3.5 Tolerances:

Shall conform to all applicable requirements of AMS 2202 or MAM 2202.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection:

The vendor of sheet shall supply all samples for vendor's tests and shall be responsible for performing all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the sheet conforms to the requirements of this specification.

4.2 Classification of Tests:

4.2.1 Acceptance Tests: Tests for composition (3.1), tensile properties (3.3.1), and tolerances (3.5) are acceptance tests and shall be performed on each lot.

4.2.2 Periodic Tests: Tests for bending (3.3.2) and cladding thickness (3.3.3.1) are periodic tests and shall be performed at a frequency selected by the vendor unless frequency of testing is specified by purchaser.

4.3 Sampling and Testing:

Shall be in accordance with AMS 2355 or MAM 2355.

4.4 Reports:

The vendor of clad sheet shall furnish with each shipment a report stating that the sheet conforms to the chemical composition and showing the results of tests to determine conformance to the other acceptance test requirements and, when performed, to the periodic test requirements. This report shall include the purchase order number, lot number, AMS 4063C, size, and quantity.

4.5 Resampling and Retesting:

Shall be in accordance with AMS 2355 or MAM 2355.