



AEROSPACE MATERIAL SPECIFICATION

AMS-B-20148™**REV. C**

Issued 1998-07
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Stabilized 2016-08

Superseding AMS-B-20148B

Brazing Sheet, Aluminum Alloy

RATIONALE

AMS-B-20148C stabilizes this document which contains requirements for several categories of aluminum alloy brazing sheet. Some of these products are addressed by superseding documents established in 2008 and 2011. Some of these products involve mature technology that is not expected to change, thus no further revisions are anticipated.

STABILIZED NOTICE

AMS-B-20148C has been declared "STABILIZED" by AMS D Nonferrous Alloys Committee. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because it contains some requirements which are not expected to change and other requirements which direct the use of superseding documents which impose equivalent requirements. The last technical update of this document occurred in May 2011. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification, including exceptions listed on the certification.

NOTE: In many cases, the purchaser may represent a sub tier supplier and not the cognizant engineering organization.

The following products shall be supplied to the requirements of the superseding specification listed in Figure 1.

AMS-B-20148 Class	Temper	Superseding Specification
#11	0	AMS4063
#12	0	AMS4064
#21	F	AMS4255
#22	F	AMS4256
#23	F	AMS4465
#24	F	AMS4460

Figure 1 – Superseding specifications

For products not listed in Figure 1, the technical requirements within this document remain effective.

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NOTICE

The initial SAE publication of this document was taken directly from U.S. Military Standard MIL-B-20148D, Amendment 1. This SAE Standard may retain the same part numbers established by the original military document. Any requirements associated with Qualified Products Lists (QPL) may continue to be mandatory for DoD contracts. Requirements relating to QPLs have not been adopted by the SAE for this standard and are not part of this SAE document.

1. SCOPE

1.1 Scope

This specification covers aluminum alloy brazing sheet for use in brazed aluminum joints.

1.2 Classification

Aluminum brazing sheet shall be supplied in the following alloys and tempers (See 6.5 for cross reference information). Information pertaining to classes #21 and #22 is contained in Appendix A – See 6.5.1:

TABLE 1

Class	Alloy	Tempers
#11	Brazing sheet (3003 Core, 4343 Cladding)	0, H12, H14
#12	Brazing sheet (3003 Core, 4343 Cladding)	0, H12, H14
#21	Brazing sheet (6951 Core, 4343 Clad) (formerly class 3)	Tempers 0, F
#22	Brazing sheet (6951 Core, 4343 Clad) (formerly class 4)	Tempers 0, F
#23	Brazing sheet (6951 Core, 4045 Cladding)	0, F
#24	Brazing sheet (6951 Core, 4045 Cladding)	0, F

Odd numbered sheet is supplied with cladding on one side and even numbered sheet is supplied with cladding on both sides (See Table 6).

1.2.1 Form

Brazing sheet is available in either coil or sheet form.

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 724-776-4970 (outside USA), www.sae.org.

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

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 B 557 Tension Testing Wrought and Cast Aluminum and Magnesium Alloy Products

ASTM B 660 Standard Practice for Packaging/Packing of Aluminum and Magnesium Products

ASTM E 34 Standard Test Methods for Chemical Analysis of Aluminum and Aluminum Base Alloy

2.3 U.S. Government Publications

Available from the Document Automation and Production Service (DAPS), Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-6257, <http://assist.daps.dla.mil/quicksearch/>.

MIL-STD-129 Marking for Shipment and Storage

2.4 ANSI Publication

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ANSI H35.2 American National Standard Dimensional Tolerances for Aluminum Mill Products

2.5 AWS Publication

Available from American Welding Society, 550 NW LeJeune Road, Miami, FL 33126, Tel: 1-800-443-9353, www.aws.org.

AWS A5.8 Specification for Brazing Filler Metal

3. REQUIREMENTS

3.1 Superseding Requirements

The requirements of the latest issue of the superseding specifications listed in Table 2 shall be fulfilled when reference is made to the applicable AMS-B-20148 class and temper. The requirements of AMS-B-20148 shall apply for other class and temper designations.

TABLE 2 - SUPERSEDING SPECIFICATIONS

AMS-B-20148 Class	Temper	Superseding Specification
#11	O	AMS4063
#12	O	AMS4064
#21	F	AMS4255
#22	F	AMS4256
#23	F	AMS4465
#24	F	AMS4460

3.2 Chemical Composition

Material shall conform to the chemical composition detailed in Table 3 determined in accordance with AMS2355.

3.3 Mechanical Properties

Mechanical properties shall conform with those detailed in Table 4 for the alloy and temper specified. There are no mechanical tests required for the "F" temper.

3.4 Cladding Thickness

The cladding bonded to the aluminum core shall have a thickness that meets the requirements of Table 6.

3.5 Dimensional Tolerances

Sheet shall not vary from specified dimensions by an amount greater than those tolerances specified in ANSI H35.2 for flatness, thickness, width, length and lateral bow for aluminum alloys.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection

Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for Compliance

All items must meet all requirements of Sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.