



AEROSPACE MATERIAL SPECIFICATION

AMS4185™**REV. F**Issued 1951-06
Revised 2019-04

Superseding AMS4185E

Filler Metal, Aluminum Brazing

12Si

(Composition similar to UNS A94047)

RATIONALE

AMS4185F revises the document to align with industry standard AWS A5.8, prohibits unauthorized exceptions (3.5), revises composition (3.1), product size and tolerances (3.4), defines lot based on product size (4.3.2.1), and 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 wire, sheet, foil, pig, grains, shot, and chips.

1.2 Application

This material has been used typically for joining aluminum by brazing, particularly by molten flux (dip) brazing procedure, 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.

ARP1917 Clarification of Terms Used in Aerospace Metals Specifications

2.2 AWS Publications

Available from American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33166-6672, Tel: 1-800-443-9353 or 305-443-9353, www.aws.org.

AWS A5.01M/A5.01 Welding Consumables - Procurement of Filler Metals and Fluxes

AWS A5.8M/A5.8 Specification for Filler Metals for Brazing and Braze Welding

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3. TECHNICAL REQUIREMENTS

3.1 Product shall comply with the requirements of AWS A5.8 BAlSi-4 and the following:

3.1.1 Beryllium shall not exceed 0.0003%.

3.1.2 Note that prior revisions of this document allowed higher levels of trace elements. Material certified to those prior revisions may be used until supplies are depleted (see 8.5).

3.2 Condition

Filler metal shall be furnished in the following condition:

3.2.1 Round Wire, Flattened and Slit Wire, and Sheet

Annealed.

3.2.2 Pig, Grains, Shot, and Chips

As fabricated.

3.2.3 Foil

As ordered.

3.3 Quality

Filler metal, 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 filler metal.

3.4 Standard Sizes

Filler metal shall be supplied in the following standard sizes shown in Table 1. Other sizes and shapes are as ordered by the purchaser.

3.4.1 Round Wire

Shall conform to Table 1.

Table 1 - Standard sizes, round wire

Nominal Diameter Inch	Nominal Diameter Millimeters
1/32	0.8
1/16	1.6
3/32	2.4
1/8	3.2
5/32	4.0
3/16	4.8
1/4	6.4

3.5 Exceptions

Any exceptions shall be authorized by purchaser and reported as in 4.4.1.