



AEROSPACE MATERIAL SPECIFICATION

AMS4787™

REV. H

Issued	1971-11
Reaffirmed	2008-11
Revised	2022-02

Superseding AMS4787G

Gold-Nickel Alloy, Brazing Filler Metal, High Temperature
82Au - 18Ni
1740 °F (949 °C) Solidus-Liquidus Temperature
(Composition similar to P00820)

RATIONALE

AMS4787H is the result of a Five-Year Review and update of the specification. The revision prohibits unauthorized exceptions (3.5, 4.4.1, 5.1.3, 8.5), clarifies paste requirements (3.2.1.2), and allows prior revisions (8.4).

1. SCOPE

1.1 Form

This specification covers a gold-nickel alloy in the form of wire, rod, sheet, strip, foil, pig, powder, shot, chips, preforms, and a viscous mixture (paste) of the powder in a suitable binder.

1.2 Application

This filler metal has been used typically for joining corrosion and heat resistant steels and alloys where corrosion and oxidation resistant joints with good strength up to 1300 °F (704 °C), but usage is not limited to such application. This filler metal is normally used for brazing, without flux, using a protective atmosphere.

1.3 Classifications

Filler metal supplied to this specification is classified (see 8.6) as follows:

Class 1 - Standard composition (AWS A5.8M/A5.8 BAu-4)

Class 2 - Supplementary composition control

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.

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<https://www.sae.org/standards/content/AMS4787H/>

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.

AMS2222 Tolerances, Copper and Copper Alloy Sheet, Strip, and Plate

AMS2224 Tolerances, Copper and Copper Alloy Wire

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 B214 Sieve Analysis of Metal Powders

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

3. TECHNICAL REQUIREMENTS

3.1 Composition

Products shall meet the requirements of AWS A5.8M/A5.8, BAu-4 and the following:

3.1.1 For Class 2 (see 8.6), copper shall be limited to 0.06% maximum, carbon to 0.005% maximum, and the following elements shall be limited to 0.002% maximum each; aluminum, cadmium, lead, magnesium, phosphorus, silicon, titanium, and zinc. The total of these elements shall not exceed 0.05% maximum.

3.2 Condition

The product shall be supplied as fabricated unless otherwise specified.

3.2.1 Paste

Unless otherwise specified by the purchaser, shall consist of 84 to 90% by weight powder in a suitable binder and shall not contain flux.

3.2.1.1 Paste shall have a shelf life of not less than 6 months from date of manufacture; not more than thorough mixing shall be required to restore paste for use during that time.

3.2.1.2 Paste shall leave no adherent residue when heated in a protective atmosphere to a temperature higher than 1000 °F (538 °C).

3.3 Quality

The product, as received by purchaser, shall be uniform in color, quality, and condition and free from foreign materials and from imperfections detrimental to its working qualities. Wire, rod, sheet, strip, and foil shall be clean, sound, bright, and free from slivers, splitting, ragged edges, damaged ends, and other injurious imperfections. Pig, powder, shot, and chips shall have a metallic luster.