



AEROSPACE MATERIAL SPECIFICATION

AMS7735™**REV. F**

Issued 1970-11
Reaffirmed 2012-04
Revised 2026-06

Superseding AMS7735E

Alloy Wire, Round,
35Pd - 30Ag - 14Cu - 10Au - 10Pt - 1Zn,
Solution Heat Treated
(Composition similar to UNS P03300)

RATIONALE

AMS7735F results from a Five-Year Review and update of this specification with changes to the minimum Zinc level in Composition (see Table 1 and Title), presentation of Hardness values (see Table 3), and recommended heat treatment parameters (see 3.3.2), and to update wording to prohibit unauthorized exceptions (see 3.3.3, 3.6, and 8.4), relocate Definitions (see 2.3), update Applicable Documents (see Section 2) and Sampling and Testing (see 4.3.1 and 4.3.2), and restrict the use of material produced to prior revisions of this specification (see 8.3).

1. SCOPE

1.1 Form

This specification covers a palladium-silver alloy in the form of round wire 0.004 to 0.080 inch (0.10 to 2.03 mm), inclusive, in nominal diameter (see 8.5).

1.2 Application

This wire has been used typically for electrical contacts or bearing surfaces requiring high hardness, low contact resistance, and good corrosion resistance, 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: 1-877-606-7323 (U.S. and Canada only) or 1-724-776-4970 (outside U.S. and Canada), www.sae.org.

AMS2750 Pyrometry

AS7766 Terms Used in Aerospace Metals Specifications

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Documents

Standard, visit Sharing Hub

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 E8/E8M Tension Testing of Metallic Materials

ASTM E384 Microindentation Hardness of Materials

2.3 Definitions

Terms used in AMS are defined in AS7766.

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight shown in Table 1, determined by spectrochemical methods or by other analytical methods acceptable to the purchaser.

Table 1 - Composition

Element	Min	Max
Palladium	34.0	36.0
Silver	29.0	31.0
Copper	13.5	14.5
Gold	9.5	10.5
Platinum	9.5	10.5
Zinc	0.8	1.2
Other Elements, total	--	0.1

3.2 Condition

Solution heat treated.

3.3 Properties

Wire shall conform to the following requirements:

3.3.1 As Solution Heat Treated

3.3.1.1 Tensile Properties

Shall be as specified in Table 2, determined in accordance with ASTM E8/E8M.

Table 2A - Tensile properties, inch/pound units

Nominal Diameter Inches	Tensile Strength ksi	Elongation in 2 Inches or 4D %
0.004 to 0.020, incl	110 to 135	20 to 40
Over 0.020 to 0.040, incl	100 to 125	15 to 35
Over 0.040 to 0.080, incl	95.0 to 120	15 to 35