



AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N. Y. 10017

AMS 4769A

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BRAZING ALLOY, SILVER 45Ag - 24Cd - 16Zn - 15Cu

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Wire, rod, strip, sheet, pig, powder, shot, chips, or as ordered.
3. **APPLICATION:** Primarily for joining ferrous metals, including austenitic steels, where high joint strength up to 400 F (204 C) is required, or for nonferrous metals except those having base of aluminum or magnesium.
4. **COMPOSITION:**

	min	max
Silver	44.0	46.0
Cadmium	23.0	25.0
Zinc	14.0	18.0
Copper	14.0	16.0
Other Elements, total	--	0.15

Note. The following approximate values are listed for reference:

Solidus	1125 F (607 C)
Liquidus	1145 F (618 C)

5. **CONDITION:** Unless otherwise specified, material shall be furnished in the following condition:

5.1 **Wire and Rod:** Cold drawn or rolled or extruded, as ordered, annealed, and pickled clean.

5.2 **Strip and Sheet:** Cold rolled hard.

5.3 **Pig, Powder, Shot, and Chips:** As fabricated.

6. **TECHNICAL REQUIREMENTS:**

6.1 **Color:** Shall be yellow-white.

6.2 **Flatness:** When unrolled, strip shall lie flat with no undue tendency to recoil.

7. **QUALITY:** Material shall be uniform in color, quality, and condition, and free from foreign materials and from imperfections detrimental to its working qualities. Wire, rod, strip, and sheet shall be clean, sound, smooth, bright, and free from slivers, splitting, ragged edges, damaged ends, and other injurious imperfections.

8. **SIZES AND TOLERANCES:** Unless otherwise specified, material shall be supplied in the following standard sizes and to the tolerances shown:

8.1 **Wire and Rod; Drawn, Rolled, or Extruded:**

8.1.1 **Nominal Diameters, Inch:** 0.005, 0.007, 0.010, 0.015, 0.025, 1/32, 0.040, 3/64, 1/16, 3/32, 1/8, 0.175, 3/16, 0.225, 1/4.

8.1.2 Diameter Tolerance, Drawn Wire and Rod: The latest issue of AMS 2224, Table II, column headed
 Ø "Refractory".

8.1.3 Diameter Tolerance; Rolled or Extruded Wire and Rod:

Ø	Nominal Diameter or Distance Between Parallel Sides Inch	Tolerance, Inch Plus and Minus	
		Round	Square
	1/32 to 1/16, incl	0.005	--
	Over 1/16 to 1/8, incl	0.006	--
	Over 1/8 to 3/16, incl	0.007	0.009
	Over 3/16 to 1/4, incl	0.008	0.010

8.2 Strip and Sheet:

8.2.1 Nominal Thickness, Inch: 0.001, 0.0015, 0.002, 0.003, 0.004, 0.005, 0.006, 0.008, 0.010, 0.014,
 Ø 0.020, and 0.030.

8.2.2 Tolerances: Unless otherwise specified, thicknesses less than 0.002 in. shall have a tolerance of
 + 0.0002 in.; thicknesses 0.002 in. and over shall have tolerances conforming to the latest issue of
 Ø AMS 2222 for Refractory Alloys. Width of individual rolls of strip shall not vary more than ± 0.010 in.
 from nominal. The length of strip in a roll shall be as determined by the manufacturer, except that
 no roll shall weigh more than 75 pounds.

Ø 8.3 Powder:

Ø 8.3.1 Nominal Sizes: -60, -100, -200 and -325 mesh

8.3.2 Unless otherwise agreed upon by purchaser and vendor, the nominal mesh sizes shown in 8.3.1 shall
 be supplied in accordance with the following tolerances on particle size distribution.

Nominal Mesh Size	100% Through U. S. Sieve Series Number	No More Than 10% Through U. S. Sieve Series Number
- 60	60	100
-100	100	200
-200	200	325
-325	325	*

*No more than 10% finer than a 10 micron particle size.

9. REPORTS:

9.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a
 Ø report stating that the product conforms to the requirements specified. This report shall include the
 purchase order number, material specification number, heat number, form and size, and quantity from
 each heat.

9.2 When parts made of this brazing alloy or assemblies requiring the use of this brazing alloy are sup-
 plied, the vendor of finished or semi-finished parts shall, unless otherwise specified, furnish with each
 shipment three copies of a report showing the purchase order number, material specification number,
 contractor or other direct supplier of brazing alloy, part number, and quantity. When brazing alloy
 for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of
 brazing alloy to determine conformance to the requirements of this specification, and shall include in
 the report a statement that the brazing alloy conforms, or shall include copies of laboratory reports
 showing the results of tests to determine conformance.