

AEROSPACE

MATERIAL SPECIFICATIONS

AMS 5687D

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

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ALLOY WIRE, CORROSION AND HEAT RESISTANT Nickel Base - 15.5Cr - 8.0Fe Annealed

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for lock wire and wire cloth requiring oxidation resistance superior to that of the 18-8 type of steel.
3. **COMPOSITION:**

	min	max
Carbon	--	0.06
Manganese	--	1.00
Silicon	--	0.50
Sulfur	--	0.015
Chromium	14.00	17.00
Nickel + Cobalt	72.00	--
Cobalt (1)	--	1.00
Iron	6.00	10.00
Columbium + Tantalum (1)	--	1.00
Titanium (1)	--	0.50
Aluminum (1)	--	0.35
Copper	--	0.50

(1) Determination not required for routine acceptance.

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2269.
4. **CONDITION:** Cold-drawn from hot finished wire or rod, and annealed, and descaled if necessary, unless otherwise specified.
- 4.1 Wire shall be supplied in coils or on spools, unless otherwise ordered.
5. **TECHNICAL REQUIREMENTS:**
- 5.1 **Tensile Properties:**

Nominal Diameter Inch	Tensile Strength, psi, min	
	Coils or Spools	Straight Lengths
0.002 to 0.015, incl	130,000	--
Over 0.015 to 0.040, incl	115,000	--
Over 0.040	110,000	125,000

- 5.2 **Wrapping:** Wire shall withstand, without cracking, wrapping at room temperature five full, closely spaced turns around a diameter equal to the diameter of the wire.
6. **QUALITY:** Wire shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.