

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5687 B

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ALLOY WIRE, CORROSION AND HEAT RESISTANT
Nickel Base - 15.5Cr - 8Fe
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, rivets, and fastenings requiring \emptyset oxidation resistance superior to that of the 18-8 type of steel.

3. **COMPOSITION:**

\emptyset	Carbon	0.06	max
	Manganese	1.0	max
	Silicon	0.50	max
	Sulfur	0.015	max
	Chromium	14.0 - 17.0	
	Nickel + Cobalt	72.0	min
	Cobalt, if determined	1.0	max
	Iron	6.0 - 10.0	
	Copper	0.50	max

4. **CONDITION:** Cold-drawn, annealed, and descaled if necessary, unless copper coated is specified. Cold drawn wire shall be drawn from hot finished wire or \emptyset rod that has been previously ground or otherwise overhauled for removal of seams and other injurious surface defects.

4.1 Wire shall be supplied in coils, unless otherwise ordered.

5. **TECHNICAL REQUIREMENTS:**

5.1 **Tensile Properties:**

Nominal Diameter Inch	Tensile Strength, psi	
	Coils	Straight Lengths
Under 0.032	115,000 max	130,000 max
0.032 and over	105,000 max	120,000 max

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 defects detrimental to fabrication or to performance of parts.

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