

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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## AMS 4674

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Revised

**NICKEL-COPPER ALLOY, CORROSION RESISTANT**  
67Ni - 30Cu  
Free Machining

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **FORM:** Rods, bars, and forgings.
3. **APPLICATION:** Primarily for fittings, such as cones, nipples and unions, for use in fluid line assemblies using AMS 4574 tubing.

4. **COMPOSITION:**

Nickel	63.00 - 70.00
Sulfur	0.025- 0.060
Iron	2.50 max
Manganese	2.00 max
Silicon	0.50 max
Aluminum	0.50 max
Carbon	0.30 max
Copper	remainder

5. **CONDITION:**

- 5.1 Rods and bars shall be supplied cold-drawn conforming to the requirements in 6.1.
- 5.2 Forgings shall be supplied as-forged conforming to the requirements in 6.2.
- 5.3 Stock ordered for forging shall be supplied as ordered by the forging manufacturer and shall be specially selected for freedom from surface seams and for good hot-working characteristics.

6. **TECHNICAL REQUIREMENTS:**

- 6.1 Rods and bars shall conform to the following requirements:

Nominal Diameter or Distance between Parallel Sides <u>Inches</u>	Tensile Strength <u>psi</u>	Yield Strength at 0.2% offset or at <u>extension indicated</u> <u>psi. min</u>	Extension Under Load <u>Inch in 2 in.</u>	Elongation <u>% in 4D min</u>	Hardness <u>Rockwell</u>
Rounds					
Under 0.500	85,000 - 100,000	50,000	0.0078	15	B 84 - 96
0.500 - 1.000, incl	85,000 - 110,000	50,000	0.0078	15	B 84 - 98
Over 1.000 - 2.000, incl	85,000 min	50,000	0.0078	15	B 84 -100
Hexagons, Squares and Rectangles					
Up to 2.000, incl	85,000 min	50,000	0.0078	15	B 80 - 94

**NOTE.** Material shall not be rejected on the basis of hardness if tensile property requirements are met.

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