

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 4574A

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NICKEL-COPPER ALLOY TUBING, SEAMLESS, CORROSION RESISTANT

67Ni - 30Cu

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 fluid lines, such as primer and fuel lines, requiring corrosion resistance with strength relatively high for non-ferrous alloys.

3. COMPOSITION:

Nickel + Cobalt	63.00 - 70.00
Iron	2.50 max
Manganese	2.00 max
Cobalt, if determined	1.00 max
Silicon	0.50 max
Aluminum	0.50 max
Carbon	0.30 max
Sulfur	0.02 max
Copper	remainder

4. CONDITION: Cold-drawn and annealed.

5. TECHNICAL REQUIREMENTS:

5.1 Physical Properties:

Tensile Strength, psi	85,000 max
Elongation, % in 2 in.	32 min

- 5.2 Flarability: Tubing shall be capable of being flared without formation of cracks or other visible defects. Specimens for flaring may be cut from any portion of the tube, or an entire tube may be used as a specimen. The end of the specimen to be flared shall be cut square, with the cut end smooth and free from burrs, but not rounded. The specimen shall, at room temperature, be forced axially with steady pressure over a hardened and polished tapered steel pin having a 74 degree included angle, to produce a flare having the permanent expanded OD specified in the following table.

Nominal OD Inch	Expanded OD Inch, min	Nominal OD Inch	Expanded OD Inch, min
0.188	0.290	0.750	0.937
0.250	0.359	1.000	1.187
0.312	0.421	1.250	1.500
0.375	0.484	1.500	1.721
0.500	0.656	1.750	2.106
0.625	0.781	2.000	2.356

Note 1: Tubing with intermediate nominal OD shall take the same percentage flare as that for the next larger OD.