

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
New York City

## AMS 4530A

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### COPPER - BERYLLIUM ALLOY SHEET AND STRIP Solution Treated

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 parts requiring high strength with good electrical conductivity or lack of magnetic susceptibility.
3. **COMPOSITION:**

Beryllium	1.90 - 2.15
Nickel or Cobalt	0.20 min
Nickel • Cobalt • Iron	0.60 max
Copper • total named elements	99.50 min

4. **CONDITION:** Unless otherwise specified, material shall be supplied solution heat treated in a suitable condition for precipitation heat treatment.
5. **TECHNICAL REQUIREMENTS:** (a) Physical Properties As Received.-

Nominal Thickness Inch	Tensile Strength psi, max	Elongation % in 2 in., min	Hardness Rockwell
Under 0.010	80,000	10	--
0.010 - 0.030, incl	80,000	25	15T 72 - 86
Over 0.030 - 0.050, incl	80,000	35	30T 40 - 68
Over 0.050 - 0.075, incl	80,000	35	F 103 max
Over 0.075	80,000	35	B 80 max

(b) Physical Properties After Precipitation Heat Treatment.- Material after precipitation heat treatment at 600 F ± 5 for 3 hours and cooling in air shall conform to the following requirements:

Nominal Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% offset or at extension indicated		Hardness Rockwell
		psi, min	Inch in 2 in.	
Under 0.010	150,000	120,000	0.0170	--
0.010 - 0.020, incl	150,000	120,000	0.0170	15N 77 - 81
Over 0.020 - 0.065, incl	150,000	120,000	0.0170	30N 54 - 60
Over 0.065	150,000	120,000	0.0170	C 34 - 40

6. **QUALITY:** Material 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.

Section 7C c  
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