AERONAUTICAL MATERIAL SPECIFICATION

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

AMS4725 A

Issued 12-1-47
Revised 6-1-51

COPPER-BERYLLIUM ALLOY WIRE
98Cu - 1.9Be
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	1.8 - 2.05
Nickel + Cobalt	0.20 min
Nickel + Cobalt + Iron	0.60 max
Copper + Total Named Elements	99.5 min

4. CONDITION: Cold drawn or rolled and solution heat treated, in a suitable condition for precipitation heat treatment.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	58,000 - 78,000
Elongation, % in 2 in.	35 min

5.2 Tensile Properties After Precipitation Heat Treatment: Wire after being heated at 600 F ± 5 for 3 hr and cooling in air shall conform to the following requirements:

Tensile Strength, psi	160,000 min
Elongation, % in 2 in.	1.5 min

6. QUALITY: Wire shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and internal and external defects detrimental to fabrication or to performance of parts.

7. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2224 as applicable. Diameter, thickness and width tolerances shall be as specified below:

7.1 Rounds, Hexagons and Octagons: Table II, Refractory.

7.2 Squares: Table III, Refractory.

7.3 Rectangles, Thickness: Table III, Refractory.

7.4 Rectangles, Width: Table IV, Refractory.