AEROSPACE
MATERIAL SPECIFICATIONS
SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 4725B

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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:

	min	max
Beryllium	1.80	2.05
Nickel + Cobalt	0.20	--
Nickel + Cobalt + Iron	--	0.6
Copper + Total Named Elements	99.5	--

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 Ø Microstructure: Shall reveal a minimum of beta phase constituent. Any beta phase present shall be fine and well dispersed and shall not be in the form of stringers. Material may be precipitation heat treated as in 5.4 before examination.

5.3 Ø Wrapping: Wire shall withstand, without cracking, wrapping at room temperature 5 full, closely spaced turns around a diameter equal to the nominal diameter or thickness of the wire.

5.4 Ø Tensile Properties After Precipitation Heat Treatment: Wire shall conform to the following requirements after being precipitation heat treated by heating to 600 F ± 5 (315.6 C ± 2.8), holding at heat for 3 hr, and cooling in air.

Tensile Strength, psi	165,000 - 190,000
Elongation, % in 2 in.	3.0 min

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