

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4530

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Revised

BERYLLIUM-COPPER ALLOY SHEET AND STRIP Solution Treated

1. ACKNOWLEDGEMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. COMPOSITION:

Beryllium	1.90-2.15
Nickel plus Cobalt plus Iron	0.15-0.50
Copper	remainder
Total Named Elements	99.50 min

3. CONDITION: (a) Solution treated, in a suitable condition for precipitation hardening, conforming to the following physical properties:

<u>Thickness</u> Inch	<u>Tensile Strength</u> psi	<u>Elongation</u> % in 2 in.	<u>Hardness</u> Rockwell
Less than 0.010	80,000 max	10 min	15T 75-81
0.010-0.020, incl.	80,000 max	25 min	30T 45-59
Over 0.020-0.040, incl.	80,000 max	35 min	45T 16-37
Over 0.040	80,000 max	35 min	B 45-64

(b) A test specimen cut from sheet or strip and heated for 3 hours in a dry atmosphere at $600^{\circ}\text{F} \pm 5$ shall conform to the following physical properties:

<u>Thickness</u> Inch	<u>Tensile Strength</u> psi	<u>Hardness</u> Rockwell
0.010 to 0.020, incl.	150,000 min	15N 77-81
Over 0.020 to 0.040, incl.	150,000 min	30N 54-60
Over 0.040	150,000 min	C 34-40

4. QUALITY: Sheet and strip shall be of uniform quality and condition, clean, sound, smooth, and free from defects detrimental to fabrication or to performance of parts. Warpage resulting from precipitation heat treatment shall not be considered a material defect. Sheet and strip revealing harmful defects during fabrication shall be subject to rejection.

5. TOLERANCES: Unless otherwise specified, tolerances shall conform to AMS 2222 as applicable and/or as specified below:

- (a) Thickness - Table II
- (b) Width - not required
- (c) Camber - not required