AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4611 B

Issued 12-1-42
Revised 3-1-51

BRASS, NAVAL
60.5Cu - 0.8Sn - 38.7Zn
Half Hard

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. FORM: Rods and bars.

3. APPLICATION: Primarily for screw machine parts. This material has better corrosion resistance than AMS 4610, but is less readily machinable.

4. COMPOSITION:

Copper	59.0 - 62.0
Tin	0.50 - 1.0
Lead	0.20 max
Iron	0.10 max
Total Other Elements	0.10 max
Zinc	remainder

5. CONDITION: Cold finished, half hard temper.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

Nominal Diameter or Distance between parallel sides, Inches	Tensile Strength, psi, min	Yield Strength at 0.2% offset or at extension indicated, psi, min	Extension Under Load, inch in 2 in.	Elongation, % in 4D, min
0.5 and under	60,000	27,000	0.0076	25
Over 0.5 to 1.0, incl	60,000	27,000	0.0076	30
Over 1.0 to 2.5, incl	58,000	26,000	0.0075	30
Over 2.5 to 3.5, incl	54,000	25,000	0.0074	30
Over 3.5	54,000	22,000	0.0070	30

6.1.1 Tensile test specimens from rods and bars over 1.5 in. in diameter or distance between parallel sides shall have their axes located approximately midway between center and surface.

6.2 Mercurous Nitrate Test: Test specimens of full cross section having length of either 6 in. or twice the diameter or minimum distance between parallel sides, whichever is greater, shall be capable of withstanding, without cracking, immersion for 15 min. in an aqueous solution containing 100 g of mercurous nitrate and 13 ml of nitric acid (sp gr 1.42) per liter of solution, using at least 10 ml of solution per sq in. of test specimen surface area.

7. 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.