

AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 4611

Issued 12-1-42

Revised

NAVAL BRASS Rods and Bars (Half Hard)

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

2. <u>COMPOSITION</u> :	Copper	59.0 - 62.0
	Tin	0.5 - 1.0
	Lead	0.20 max
	Iron	0.10 max
	Total Other Impurities	0.10 max
	Zinc	remainder

3. CONDITION: (a) Half hard temper conforming to the following minimum physical properties:

Diameter or Thickness inches	Tensile Strength lb per sq in.	Yield Strength at 0.2% Set or an Extension Indicated lb per sq in.	Extension	Elongation % in 2 in.
			Under Load inch in 2"	
0.500 and less	60,000	27,000	0.0076	30
0.501 to 1.000, incl.	60,000	27,000	0.0076	35
1.001 to 2.500, incl.	58,000	26,000	0.0075	35
2.501 and over	54,000	25,000	0.0074	35

(b) Specimens of material shall be capable of withstanding immersion for 15 minutes, without cracking, in an aqueous solution containing 100 grams of mercurous nitrate and 13 cubic centimeters of nitric acid, (sp.gr. 1.42) per liter.

4. QUALITY: The material shall be uniform in quality and temper, clean, sound, smooth commercially straight, and free from foreign materials, pipes, slivers, laps, cracks, twists, seams, scale, damaged ends or edges, buckles, and other injurious defects, within the limits of best commercial manufacturing methods. Material revealing defects during fabrication is subject to rejection.
5. TOLERANCES: The commercial tolerances specified in ASTM B21-40T shall apply.
6. REPORTS: The manufacturer shall furnish three copies of a notarized report stating that the chemical composition and physical properties of the material are within the requirements specified. This report shall include the purchase order number material specification number, size and quantity. If parts are supplied, the part number shall also be included.
7. IDENTIFICATION: The number AMS 4611 shall be printed along the length of each bar and rod at intervals not exceeding two feet. Bars and rods of diameter less than 1/2 inch may be identified by other means as agreed upon by the vendor and purchaser.