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# AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

**SAE**

AMS 4507G

Issued JUL 1945  
Revised JUL 1995

Superseding AMS 4507F

COPPER ALLOY (BRASS), SHEET, STRIP, AND PLATE  
70Cu - 30Zn  
Half Hard (H02)

UNS C26000

## 1. SCOPE:

### 1.1 Form:

This specification covers a copper-zinc alloy (brass) in the form of sheet, strip, and plate.

### 1.2 Application:

These products have been used typically for stampings, but usage is not limited to such applications.

## 2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

### 2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2222 Tolerances, Copper and Copper Alloy Sheet, Strip, and Plate

MAM 2222 Tolerances, Metric, Copper and Copper Alloy Sheet, Strip, and Plate

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## 2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

- ASTM B 248 General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar
- ASTM B 248M General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar (Metric)
- ASTM E 8 Tension Testing of Metallic Materials
- ASTM E 8M Tension Testing of Metallic Materials (Metric)
- ASTM E 18 Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
- ASTM E 478 Chemical Analysis of Copper Alloys

## 2.3 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-C-3993 Copper and Copper-Base Alloy Mill Products, Packaging of

## 3. TECHNICAL REQUIREMENTS:

## 3.1 Composition:

(R)

Shall conform to the percentages by weight shown in Table 1, determined by wet chemical methods in accordance with ASTM E 478, by spectrochemical methods, or by other analytical methods acceptable to purchaser.

TABLE 1 - Composition

Element	min	max
Copper	68.5	71.5
Lead	--	0.07
Iron	--	0.05
Zinc (3.1.2)	remainder	--
Sum of Named Elements (3.1.1)	99.7	

3.1.1 Applicable only when zinc is determined by direct analysis.

3.1.2 Applicable when zinc is not determined by analysis. The reported (certified) value is the difference between the sum of all other specified elements and 100% and will, therefore, include unnamed elements. Limits for unnamed elements may be established by agreement between purchaser and manufacturer.

## 3.2 Condition:

Cold rolled, half-hard (H02) temper (See 8.2).

## 3.3 Properties:

The product shall conform to the following requirements:

3.3.1 Tensile Strength: Shall be 57.0 to 67.0 ksi (393 to 462 MPa), determined in accordance with ASTM E 8 or ASTM E 8M.

3.3.2 Hardness: Should be 56 to 68 HR30T, or equivalent, determined in accordance with ASTM E 18, but the product shall not be rejected on the basis of hardness if the tensile strength requirement is met.

## 3.4 Quality:

The product, as received by purchaser, shall be uniform in quality and condition, sound, and free from foreign materials and from imperfections detrimental to usage of the product.

## 3.5 Tolerances:

Shall conform to AMS 2222 or MAM 2222 as applicable to nonrefractory alloys.

## 4. QUALITY ASSURANCE PROVISIONS:

## 4.1 Responsibility for Inspection:

(R)

The vendor of the product shall supply all samples for vendor's tests and shall be responsible for performing all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the product conforms to the requirements of this specification.

## 4.2 Classification of Tests:

All technical requirements are acceptance tests and shall be performed on each lot.

## 4.3 Sampling and Testing:

(R)

Shall be in accordance with ASTM B 248 or ASTM B 248M.

## 4.4 Reports:

(R)

The vendor of the product shall furnish with each shipment a report showing the results of tests on each lot to determine conformance to all technical requirements. This report shall include the purchase order number, lot number, AMS 4507G, size, and quantity.