



AEROSPACE MATERIAL SPECIFICATION

AMS2221™**REV. H**

Issued 1945-07
Reaffirmed 2017-09
Revised 2023-01

Superseding AMS2221G

Tolerances
Copper and Copper Alloy Bars and Rods

RATIONALE

AMS2221H results from a Five-Year Review and update of this specification with changes to update applicable documents (Section 2).

1. SCOPE

This specification covers established inch/pound manufacturing tolerances applicable to bars and rods of copper and copper alloys ordered to inch/pound dimensions. These tolerances apply to all conditions, unless otherwise noted. The term “exclusive” is used to apply only to the higher figure of a specified range.

- 1.1 If the tolerance is expressed as a percentage of a specified dimension, the tolerance so calculated shall be rounded to the nearest 0.001 inch to obtain the permissible tolerance.

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publication

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AS7766 Terms Used in Aerospace Metals Specifications

2.2 Definitions

Terms used in AMS are defined in AS7766.

3. DIAMETER OR THICKNESS

3.1 Cold Finished

3.1.1 Rods; Rounds, Hexagons, and Octagons

See Table 1.

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Documents

Document Sharing Hub

3.1.2 Bars; Squares, and Rectangles

Shall be as follows:

3.1.2.1 Copper

See Table 2.

3.1.2.2 Nonrefractory Alloys

See Table 3.

3.1.2.3 Refractory Alloys

See Table 4.

3.2 Extruded Round, Hexagonal, Octagonal, Square, and Rectangular Shapes

See Table 5.

3.3 Hot Finished Rounds

See Table 6.

4. WIDTH

4.1 Rectangles, Not Including Squares

See Table 7.

5. LENGTH

Shall be as shown in Table 8, 5.1, and 5.2.

5.1 Full length pieces specific and stock lengths with or without ends.

5.2 No length tolerances are established for extruded and hot rolled rod.

6. STRAIGHTNESS

6.1 Cold Finished Rods; Hexagons, Octagons

See Table 9.

6.2 Bars; Squares and Rectangles

When supplied in straight lengths, in rolls, or on bucks, shall be of such straightness that the maximum edgewise curvature (depth of arc) shall be not greater than 0.50 inch in any 6 feet or length, or 0.083 inch x length in feet for shorter lengths.

7. FLATNESS

No requirements specified.