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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Copper Flat Products with Finished (Rolled or Drawn) Edges (Flat Wire and Strip)¹

This standard is issued under the fixed designation B 272; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope *

1.1 This specification covers the requirements for flat copper products, flat wire and strip, with finished rolled or drawn edges produced for general application.

1.1.1 The product is normally produced in UNS Copper Nos. C10100, C10200, C10300, C10500, C10700, C10800, C11000, C12200, and C14200.

1.1.2 When a copper other than that listed in 1.1.1 is designated by the purchaser, the resulting product shall conform to the appropriate temper, physical, mechanical, performance, dimensional, and tolerance requirements of this specification.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

B 5 Specification for High Conductivity Tough-Pitch Copper Refinery Shapes²

B 170 Specification for Oxygen-Free Electrolytic Copper Refinery Shapes²

B 193 Test Method for Resistivity of Electrical Conductor Materials³

B 248 Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar²

B 250 Specification for General Requirements for Wrought Copper-Alloy Wire²

B 379 Specification for Phosphorized Coppers—Refinery Shapes²

B 577 Test Methods for Hydrogen Embrittlement of Copper²

B 623 Specification for Tough-Pitch Fire-Refined High-Conductivity Copper—Refinery Shapes²

B 846 Terminology for Copper and Copper Alloys²

E 8 Test Methods for Tension Testing of Metallic Materials⁴

E 18 Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials⁴

E 290 Test Method for Semi-Guided Bend Test for Ductility of Metallic Materials⁴

3. Terminology

3.1 For definitions of terms related to copper and copper alloys, refer to Terminology B 846.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *capable of*—possessing the required properties or characteristics, or both, necessary to conform to specification requirements when subjected to specified tests.

3.2.2 *unaided eye*—without visual enhancement; however, corrective optical lenses necessary to obtain normal vision shall be permitted.

4. Ordering Information

4.1 Contracts or purchase orders for product to this specification should include the following information:

4.1.1 ASTM designation and year of issue,

4.1.2 Copper UNS No. designation (Section 1),

4.1.3 Temper—O61 (annealed) or H04 (hard) (Section 7),

4.1.4 Dimensions—Width and thickness (Section 13),

4.1.5 Quantity—Total weight, footage, or number of pieces,

4.1.6 How furnished—lengths, coils, spools, etc., and

4.1.7 When purchased for agencies of the U.S. Government (Section 12).

4.2 The following options are available under this specification and should be included in the contract or purchase order when required:

4.2.1 Electrical resistivity (Section 8),

4.2.2 Hydrogen embrittlement susceptibility test (Section 10),

4.2.3 Bend test (Section 11),

¹ This specification is under the jurisdiction of ASTM Committee B-5 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.02 on Rod, Bar, Wire, Shapes, and Forgings.

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² *Annual Book of ASTM Standards*, Vol 02.01.

³ *Annual Book of ASTM Standards*, Vol 02.03.

⁴ *Annual Book of ASTM Standards*, Vol 03.01.