



Designation: B950 – 22

Standard Guide for Editorial Procedures and Form of Product Specifications for Copper and Copper Alloys¹

This standard is issued under the fixed designation B950; 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.

1. Scope*

1.1 This guide establishes the editorial procedures and form and style for product specifications under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys.

NOTE 1—For standards other than product specifications, such as test methods, practices, and guides, see the appropriate sections of Form and Style for ASTM Standards (Blue Book).²

1.2 This guide has been prepared as a supplement to the current edition of the Form and Style Manual, and is appropriate for use by the subcommittees within ASTM Committee B05 on Copper and Copper Alloys. This guide is to be applied in conjunction with the Form and Style Manual. The Appendix contains a copy of the B05 electronic template which includes adopted language for various sections and provides a template for drafting B05 product specifications.

NOTE 2—The contents of this guide were previously maintained as a white paper under the title, “ASTM Committee B05 Outline of Form of Specifications.”

1.3 Subcommittees preparing new product specifications or revising existing ones should follow the practices and procedures outlined herein, and be guided by the latest specifications covering similar commodities.

1.4 If a conflict exists between this guide and the mandatory sections of the current edition of the Form and Style Manual, the Form and Style Manual requirements have precedence. If a conflict exists between this guide and the nonmandatory sections of the current edition of the Form and Style Manual, this guide has precedence.

1.5 When patents are involved, the specifications writer should refer to the Form and Style Manual section on patents and trademarks. Also, refer to part F of the Form and Style Manual for trademark information and the safety hazards caveat.

¹ This guide is under the jurisdiction of ASTM Committee B05 on Copper and Copper Alloys and is the direct responsibility of Subcommittee B05.91 on Editorial and Publications.

Current edition approved May 1, 2022. Published June 2022. Originally approved in 2006. Last previous edition approved in 2021 as B950–21^{ε1}. DOI: 10.1520/B0950-22.

² Available from ASTM website at: https://www.astm.org/media/pdf/bluebook_FormStyle.pdf.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*³

B153 Test Method for Expansion (Pin Test) of Copper and Copper-Alloy Pipe and Tubing

B154 Test Method for Mercurous Nitrate Test for Copper Alloys

B170 Specification for Oxygen-Free Electrolytic Copper—Refinery Shapes

B193 Test Method for Resistivity of Electrical Conductor Materials

B194 Specification for Copper-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar

B216 Specification for Tough-Pitch Fire-Refined Copper—Refinery Shapes

B224 Classification of Coppers

B248 Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar

B248M Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar (Metric)

B249/B249M Specification for General Requirements for Wrought Copper and Copper-Alloy Rod, Bar, Shapes and Forgings

B250/B250M Specification for General Requirements for Wrought Copper Alloy Wire

B251/B251M Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube

B577 Test Methods for Detection of Cuprous Oxide (Hydrogen Embrittlement Susceptibility) in Copper

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

*A Summary of Changes section appears at the end of this standard

- B601** Classification for Temper Designations for Copper and Copper Alloys—Wrought and Cast
- B824** Specification for General Requirements for Copper Alloy Castings
- B846** Terminology for Copper and Copper Alloys
- B858** Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys
- B900** Practice for Packaging of Copper and Copper Alloy Mill Products for U.S. Government Agencies
- B968/B968M** Test Method for Flattening of Copper and Copper-Alloy Pipe and Tube
- E6** Terminology Relating to Methods of Mechanical Testing
- E8/E8M** Test Methods for Tension Testing of Metallic Materials
- E18** Test Methods for Rockwell Hardness of Metallic Materials
- E29** Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E44** Definitions for Terms Relating to Heat Treatment of Metals (Withdrawn 1993)⁴
- E53** Test Method for Determination of Copper in Unalloyed Copper by Gravimetry (Withdrawn 2022)⁴
- E54** Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)⁴
- E62** Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)⁴
- E75** Test Methods for Chemical Analysis of Copper-Nickel and Copper-Nickel-Zinc Alloys (Withdrawn 2010)⁴
- E76** Test Methods for Chemical Analysis of Nickel-Copper Alloys (Withdrawn 2003)⁴
- E112** Test Methods for Determining Average Grain Size
- E118** Test Methods for Chemical Analysis of Copper-Chromium Alloys (Withdrawn 2010)⁴
- E121** Test Methods for Chemical Analysis of Copper-Tellurium Alloys (Withdrawn 2010)⁴
- E243** Practice for Electromagnetic (Eddy Current) Examination of Copper and Copper-Alloy Tubes
- E478** Test Methods for Chemical Analysis of Copper Alloys
- E527** Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)
- E581** Test Methods for Chemical Analysis of Manganese-Copper Alloys
- E1227** Terminology for Chemical Analysis of Metals (Withdrawn 1991)⁴
- E1371** Test Method for Gravimetric Determination of Phosphorus in Phosphorus-Copper Alloys or Phosphorus-Copper-Silver Alloys (Withdrawn 2006)⁴

2.2 ISO Document:⁵

- ISO 4744** Copper and copper alloys -- Determination of chromium content -- Flame atomic absorption spectrometric method

2.3 JIS Document:⁶

- JIS H1068** Methods for Determination of Bismuth in Copper and Copper Alloys

3. Terminology

3.1 For definitions of terms used in this guide, refer to the Form and Style Manual and Terminology **B846**.

4. Significance and Use

4.1 The Form and Style for ASTM Standards manual provides mandatory requirements and recommended practices for the preparation and content of ASTM specifications. In order to promote consistency in the style and content of product specifications under its jurisdiction, Committee B05 recognizes the need to provide a supplementary document pertaining to the types of products and materials covered by specifications under its jurisdiction.

4.2 This guide contains a list of sections to be considered for inclusion in a specification for copper and copper alloys, recommended wording, or both, for such sections. An electronic template including committee adopted language is included in the Appendix.⁷

4.3 Persons drafting new product specifications, or modifying existing ones, under the jurisdiction of Committee B05, should follow this guide and the requirements of the Form and Style Manual to ensure consistency.

5. Subject Headings of Text

5.1 The following is the heading sequence for the specifications text. The headings listed are those most generally used. Other headings may be included for specialized subjects when the information is pertinent to the document under development; in which case, all instructions and guidance for that particular section shall be applied, and these headings should appear in the most appropriate place and sequence depending on their relationship to other sections.

5.2 *Superscripts*—The headings identified as mandatory are required by the Society. The headings identified with an asterisk (*) are a guide for Committee B05 documents, where applicable, either by inclusion or by reference to a general requirements specification.

5.3 Not all of the headings may be required for a particular standard specification. For example, when the specification does not contain reference to any other standard within the text, it is not required to include a section on Referenced Documents. Or, in the case where no physical property requirements are given, the physical property section is not required.

Title ^{ASTM}	Sampling ^{B05}
Designation ^{ASTM}	Number of Tests and Retests ^{B05}
Scope ^{ASTM}	Specimen Preparation ^{B05}
Referenced Documents ^{B05}	Test Methods ^{B05*,B}
General Requirements ^{B05,A}	Significance of Numerical Limits ^{B05}
Terminology ^{B05}	Inspection ^{B05}

⁴ The last approved version of this historical standard is referenced on www.astm.org.

⁵ Available from International Organization for Standardization (ISO), ISO Central Secretariat, BIBC II, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <http://www.iso.org>.

⁶ Available from Japanese Standards Association (JSA), Mita MT Bldg., 3-13-12 Mita, Miyoto-Ku, Tokyo 108-0073, Japan, <http://www.jsa.or.jp>.

⁷ For an electronic WORD version of the template, see B05 Main Page on the ASTM website, <http://www.astm.org/COMMITTEE/B05.htm>.

Classification	Rejection and Rehearing ^{B05}
Ordering information ^{B05}	Certification ^{B05}
Materials and Manufacture ^{B05}	Test Reports ^{B05}
Chemical Composition ^{B05}	Product Marking
Temper ^{B05}	Packaging and Package Marking ^{B05}
Grain Size of Annealed Tempers	Keywords ^{ASTM}
Physical Property Requirements ^{B05}	Summary of Changes ^{B05}
Mechanical Property Requirements [*]	Supplementary Requirements
Performance Requirements	Quality Assurance
Other Requirements	Annexes
Dimensions, Mass, and Permissible Variations ^{B05}	Appendixes
Workmanship, Finish, and Appearance ^{B05}	

^{ASTM} Mandatory ASTM Society requirement

^{B05} Guide for B05 specifications

^A When reference is made to a general requirements specification, the sequence position of the General Requirements section in the product specification should be prior to the first section referenced, which is usually Terminology.

^B Test methods that are detailed in specifications shall contain all of the mandatory headings shown in Part A, Section A1, of the Blue Book.

5.4 Subject Headings shall precede each section to orient the reader. Section and text paragraphs shall be numbered in accordance with the Guide for the Use of the Modified Numbering System in Part D of the Form and Style for ASTM Standards manual. The following is an example of how it should appear in a standard:

1. Scope

1.1 This specification establishes the requirements for... etc.

6. Section Contents

NOTE 3—Explanations of section content requirements are detailed in this section. In the Annex and published separately on the B05 Main Page under Additional Information, is an electronic template containing recommended language for each section. In this guide, the examples were removed to avoid redundancy and inconsistencies.

6.1 Title^{ASTM}

6.1.1 The title should be as concise as possible, yet complete enough to identify the material, product, system, or services for which the requirements are established by the document.

6.2 Designation and Year of Issue^{ASTM}

6.2.1 *Designation*—The alphanumeric designation is assigned by ASTM Headquarters.

6.2.2 *Year Date*—After the designation, a hyphen is followed by the last two numbers of the year of acceptance or last revision. Reapprovals are the last date in parentheses. Footnote 1 is not changed with a reapproval.

NOTE 4—The Form and Style Manual includes definitions of date of issue and year date.

6.3 Scope^{ASTM}

6.3.1 The Scope should be a brief summary of the product and product application.

6.3.2 A statement shall be included in this section as to whether inch-pound or SI units are the standard, if the specification has a companion specification or is a dual designation specification.

6.3.3 Include the prescribed caveat on safety hazards per mandatory blue book language, when one or more test methods are included other than by reference.

NOTE 5—The safety hazard caveat shall also appear in test methods, guides, and practices that involve the use of materials, operations, or equipment.

6.3.4 Related documents not referenced in the text may be included as a footnote, or listed as References at the end of the standard cited by number if more than five are cited.

6.4 Referenced Documents^{B05}

6.4.1 List in alphanumeric sequence the designation and complete title of all standards and other documents referenced, including standards and codes of other organizations.

6.4.2 Provide footnotes to this section indicating the source of the documents. When referenced later in the text, use only the type of document (specification, test method, practice, guide, etc.) and the designation letter and number (for example, Test Methods **B577**).

6.4.3 Do not use the year of issue when listing the referenced documents unless there is a technical reason for requiring a specific issue.

6.5 General Requirements^{B05,A}

6.5.1 This section should be used for requirements that are available in a General Requirements specification and are included in the specification by reference. General Requirements specifications are **B248**, **B248M**, **B249/B249M**, **B250/B250M**, **B251/B251M**, and **B824**. When a product specification refers to a general requirements specification for applicable requirements, the reference shall be made in this section so as to alert the user that the details of the requirement(s) shall be found in another document.

6.5.1.1 The utilization of a general requirements section in the drafting of a new specification or in the revision of a standard is not mandatory; however, it is recommended since considerable repetition within a group of similar documents would be avoided.

6.5.1.2 In the case where a section in the general requirements section has been referenced and the same titled section appears in the product specification with requirements that either supplement or supersede the referenced general requirements section, use the explanatory clause 3.2 in the electronic template.

6.6 Terminology^{B05}

NOTE 6—For use of terminology in B05 standards, refer also to the Committee B05 Terminology Management Policy.

6.6.1 When applicable, refer to Terminology **B846** for definitions of terms relating to copper and copper alloys, or to other existing ASTM terminology standards having general applications. Terms not appearing in other ASTM terminology standards and requiring other than dictionary definitions should be defined.

6.6.1.1 Examples of ASTM terminology standards having general application are: **E44**, Definitions for Terms Relating to Heat Treatment of Metals; **E6**, Terminology Relating to Methods of Mechanical Testing; **E1227** Terminology for Chemical Analysis of Metals.

6.6.2 Definitions:

6.6.2.1 Definitions shall be in dictionary-definition form, following the guidelines of Part E of The Form and Style