ASME B16.26-2024
(Revision of ASME B16.26-2018)

Cast Copper Alloy Fittings for Flared Copper Tubes

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

ASME B16.26-2024
(Revision of ASME B16.26-2018)

Cast Copper Alloy Fittings for Flared Copper Tubes

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers
Two Park Avenue • New York, NY • 10016 USA

Date of Issuance: February 3, 2025

The next edition of this Standard is scheduled for publication in 2029.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The standards committee that approved the code or standard was balanced to ensure that individuals from competent and concerned interests had an opportunity to participate. The proposed code or standard was made available for public review and comment, which provided an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity. ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor does ASME assume any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representatives or persons affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.

The endnotes and preamble in this document (if any) are part of this American National Standard.

ASME Collective Membership Mark

The American Society of Mechanical Engineers
Two Park Avenue, New York, NY 10016-5990

CONTENTS

FOREWORD

The development of a standard for brass fittings for flared copper water tubes was initiated by a subcommittee of the Copper Tube and Fitting Manufacturers Standardization Committee in 1929. When a general agreement had been reached, the draft of the proposed standard was submitted to Sectional Committee A40 on Minimum Requirements for Plumbing and Standardization of Plumbing Equipment of the American Standards Association (ASA). Sectional Committee A40 was jointly sponsored by the American Society of Sanitary Engineering and The American Society of Mechanical Engineers (ASME).

Final ASA approval and designation as an American Standard, ASA A40.2-1936, was granted January 20, 1936.

The Standard remained unchanged and without reaffirmation until 1955, when this activity was transferred from Sectional Committee A40 to Sectional Committee B16 on Standardization of Pipe Flanges and Fittings, under the sponsorship of ASME, the Mechanical Contractors Association of America, Inc., and the Manufacturers Standardization Society of the Valve and Fittings Industry.

Sectional Committee B16 Subcommittee No. 9 on Solder-Joint Fittings was instructed to develop a revised standard. The revised draft of this Standard was submitted to industry for criticism and comment. The final draft was approved by Sectional Committee B16 and its sponsors by letter ballot. ASA approval and designation as ASA B16.26-1958 was granted on February 12, 1958. Beginning in 1965, consideration was given to reviewing the Standard in light of progress made in the production of these fittings. Subcommittee No. 9 completed its work by recommending the updating of referenced standards and thread specifications and including additional material. Following approval by the USA Standards Committee and Sponsors, the revision was approved by the new USA Standards Institute on April 21, 1967.

In 1982, American National Standards Committee B16 was reorganized as an ASME Committee operating under procedures accredited by the American National Standards Institute (ANSI). In the 1988 edition, metric units were omitted, and references to other standards were updated. Following approval by the B16 Main Committee and the ASME Supervisory Board, and after public review, the Standard was approved as an American National Standard by ANSI on August 23, 1988.

In the 2006 edition, metric units became the primary reference units while U.S. Customary units were maintained in either parenthetical or separate forms. SI values were positioned in the main text; U.S. Customary values were positioned in Mandatory Appendix I. The Scope was clarified, and a section on hydrostatic testing was added, along with a quality assurance recommendation in Nonmandatory Appendix B. Additional information concerning the design of the tube flare was also incorporated, in answer to user requests for such information, and was reported in Nonmandatory Appendix A. Following approval by the B16 Main Committee and the ASME Supervisory Board, and after public review, the Standard was approved as an American National Standard by ANSI on May 23, 2006.

In the 2011 edition, references to ASME standards were revised to no longer list specific edition years; the latest edition of ASME publications applies unless stated otherwise. Materials manufactured to other editions of the referenced ASTM standards have been permitted to be used to manufacture fittings meeting the requirements of this Standard as long as the fitting manufacturer verifies the material meets the requirements of the referenced edition. Following approval by the Standards Committee and the ASME Board on PTCS, the revision to the 2006 edition was approved as an American National Standard by ANSI on August 9, 2011 with the designation ASME B16.26-2011.

In the 2013 edition, provisions were included to recognize low-lead alloys to comply with revisions to the U.S. Safe Drinking Water Act that took effect in January 2014. Following approval by the ASME B16 Standards Committee, approval as an American National Standard was given by ANSI on July 29, 2013, with the designation ASME B16.26-2013.

In the 2018 edition, section 5 was revised to add marking requirements for lead-free fittings made using either bismuth- or silicon-containing alloys to identify that the alloy contains these elements. This language was previously included in the ASME B16.18 standard and was added to retain consistency in marking requirements across the range of lead-free copper alloy fittings standards. The U.S Customary tables formerly in Mandatory Appendix I were merged with the SI tables in the main text; the tables were redesignated, Mandatory Appendix I was deleted, and the cross-references were updated accordingly. In addition, all reference standards in what was formerly Mandatory Appendix II were updated. Following approval by the ASME B16 Standards Committee, approval as an American National Standard was given by ANSI on August 3, 2018, with the new designation ASME B16.26-2018.

In this 2024 edition, definitions have been added, and the references have been updated. Following approval by the ASME B16 Standards Committee, approval as an American National Standard was given by ANSI on October 21, 2024, with the new designation ASME B16.26-2024.

ASME B16 COMMITTEE
Standardization of Valves, Flanges, Fittings, and Gaskets

(The following is the roster of the committee at the time of approval of this Standard.)

STANDARDS COMMITTEE OFFICERS

C. E. Davila, *Chair*
R. M. Bojarczuk, *Vice Chair*
S. J. Rossi, *Secretary*

STANDARDS COMMITTEE PERSONNEL

A. Appleton, Appleton Quality Concepts, LLC
R. Barnes, ANRIC Enterprises, Inc.
D. C. Bayreuther, Neles USA, Inc.
W. Bedesem, Consultant
R. M. Bojarczuk, Retired
A. M. Cheta, Shell Global Solutions (U.S.)
G. A. Cuccio, Capitol Manufacturing Co., LLC
C. E. Davila, Crane ChemPharma & Energy
J. G. Dominguez, Welding Outlets, Inc.
B. G. Fabian, Pennsylvania Machine Works, LLC
D. R. Frikken, Becht Engineering Co., Inc.
J. D. Grant, DeZURIK, Inc.
J. R. Holstrom, Val-Matic Valve and Manufacturing Corp.
D. Hunt, Jr., Fastenal Co.
G. A. Jolly, Samshin, Ltd.
A. Kireta, Jr., Copper Development Association, Inc.
E. J. Lain, Constellation
T. A. McMahon, Emerson Process Management, LLP
R. C. Merrick, Consultant
W. H. Patrick, Dow, Inc.
D. W. Rahoi, Consultant
D. F. Reid, VSP Technologies
S. J. Rossi, The American Society of Mechanical Engineers
R. A. Schmidt, Canadoil
J. Sekela, CSA America Standards, Inc.
F. Feng, *Delegate*, China Productivity Center for Machinery National Technical Committee
P. V. Craig, *Contributing Member*, Jomar Group, Ltd.

SUBCOMMITTEE J — COPPER AND COPPER ALLOY FLANGES, FLANGED FITTINGS, AND SOLDER JOINT FITTINGS

J. Matson, *Chair*, Viega
D. Wiener, *Secretary*, The American Society of Mechanical Engineers
J. A. Ballanco, JB Engineering & Code Consulting, PC
W. E. Chapin, Professional Code Consulting, LLC
M. Elmer, Copper Development Association, Inc.
D. R. Frikken, Becht Engineering Co., Inc.
C. Haldiman, Watts Regulator Co.
D. Hunt, Jr., Fastenal Co.
R. Kelsey, NIBCO
A. G. Kireta, Jr., Copper Development Association, Inc.
C. A. Mueller, Mueller Industries, Inc.
J. Atkinson, *Contributing Member*, Mueller Industries, Inc.

CORRESPONDENCE WITH THE B16 COMMITTEE

General. ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Standard should be sent to the staff secretary noted on the committee's web page, accessible at https://go.asme.org/B16committee.

Revisions and Errata. The committee processes revisions to this Standard on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published in the next edition of the Standard.

In addition, the committee may post errata on the committee web page. Errata become effective on the date posted. Users can register on the committee web page to receive email notifications of posted errata.

This Standard is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number, the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Standard

(4) to permit the use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Standard.

(c) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Standard and the paragraph, figure, or table number

(4) the editions of the Standard to which the proposed case applies

(d) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Approved cases are posted on the committee web page.

Interpretations. Upon request, the committee will issue an interpretation of any requirement of this Standard. An interpretation can be issued only in response to a request submitted through the online Inquiry Submittal Form at https://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers can track the status of their requests at https://go.asme.org/Interpretations.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Interpretations are published in the ASME Interpretations Database at https://go.asme.org/Interpretations as they are issued.

Committee Meetings. The B16 Standards Committee regularly holds meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the committee. Information on future committee meetings can be found on the committee web page at https://go.asme.org/B16committee.

ASME B16.26-2024
SUMMARY OF CHANGES

Following approval by the ASME B16 Standards Committee and ASME, and after public review, ASME B16.26-2024 was approved by the American National Standards Institute on October 21, 2024.

This edition includes the following changes identified by a margin note, **(24)**. The Record Numbers listed below are explained in more detail in the "List of Changes in Record Number Order" following this Summary of Changes.

Page	*Location*	*Change (Record Number)*
1	2.6	Added *(24-615)*
6	Mandatory Appendix I	Updated *(23-601)*

LIST OF CHANGES IN RECORD NUMBER ORDER

Record Number	Change
23-601	Updated references in Mandatory Appendix I.
24-615	Added para. 2.6 to define “may,” “shall,” and “should.”

CAST COPPER ALLOY FITTINGS FOR FLARED COPPER TUBES

1 SCOPE

This Standard establishes specifications for cast copper alloy fittings and nuts used with flared seamless copper tube conforming to ASTM B88 (water and general plumbing systems). Included are requirements for the following:

(a) pressure ratings
(b) size
(c) marking
(d) material
(e) dimensions
(f) threading
(g) hydrostatic testing

2 GENERAL

2.1 References

Codes, standards, and specifications containing provisions to the extent referenced herein constitute requirements of this Standard. These reference documents are listed in Mandatory Appendix I.

2.2 Convention

For determining conformance with this Standard, the convention for fixing significant digits where limits (maximum and minimum values) are specified shall be as defined in ASTM E29. This requires that an observed or calculated value be rounded off to the nearest unit in the last right-hand digit used for expressing the limit. Decimal values and tolerances do not imply a particular method of measurement.

2.3 Relevant Units

This Standard states values in both SI (metric) and U.S. Customary units. These systems of units are to be regarded separately as standard. Within the text, the U.S. Customary units are shown in parentheses. The values stated in each system are not exact equivalents; therefore, it is required that each system of units be used independently of the other. Combining values from the two systems constitutes nonconformance with the Standard.

2.4 Quality Systems

Requirements relating to the product manufacturer's quality system program are described in Nonmandatory Appendix B.

2.5 Service Conditions

Criteria for selection of materials suitable for particular fluid service are not within the scope of this Standard.

2.6 Definitions (24)

may: the term used to denote permission, neither a requirement nor a recommendation.

shall: the term used to denote a requirement.

should: the term used to denote a recommendation.

3 PRESSURE RATINGS

The fittings covered by this Standard are designed for a maximum cold-water service pressure of 1 200 kPa (175 psig).

4 SIZE

The sizes of the fittings shown in Table 7.1-1 correspond to standard water tube size as defined in ASTM B88.

5 MARKING

Each fitting shall be marked with the manufacturer's name or trademark and other applicable markings as required by MSS SP-25. Marking of fittings less than nominal size ½ is optional.

Fittings manufactured from cast copper alloys containing silicon shall be permanently marked with the designation Si.

Fittings manufactured from cast copper alloys containing bismuth shall be permanently marked with the designation B or Bi.