



Designation: F468M – 06 (Reapproved 2018)

Standard Specification for Nonferrous Bolts, Hex Cap Screws, and Studs for General Use (Metric)¹

This standard is issued under the fixed designation F468M; 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 U.S. Department of Defense.

1. Scope*

1.1 This specification covers the requirements for commercial wrought nonferrous bolts, hex cap screws, and studs in nominal thread diameters M6 to M36 inclusive manufactured from a number of alloys in common use and intended for general service applications.

1.2 Unless otherwise specified, nuts used on these bolts, cap screws, and studs shall conform to the requirements of Specification F467M. Nuts shall be of the same alloy group as the fastener on which they are used and shall have a specified minimum proof stress equal to or greater than the specified minimum tensile strength stress of the fastener on which they are used.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

NOTE 1—This specification is the metric companion of Specification F468.

1.4 *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:²

- B154 Test Method for Mercurous Nitrate Test for Copper Alloys
- B193 Test Method for Resistivity of Electrical Conductor Materials

¹ This specification is under the jurisdiction of ASTM Committee F16 on Fasteners and is the direct responsibility of Subcommittee F16.04 on Nonferrous Fasteners.

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² 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.

- B211M Specification for Aluminum and Aluminum-Alloy Rolled or Cold-Finished Bar, Rod, and Wire (Metric)
- B565 Test Method for Shear Testing of Aluminum and Aluminum-Alloy Rivets and Cold-Heading Wire and Rods
- B574 Specification for Low-Carbon Nickel-Chromium-Molybdenum, Low-Carbon Nickel-Molybdenum-Chromium, Low-Carbon Nickel-Molybdenum-Chromium-Tantalum, Low-Carbon Nickel-Chromium-Molybdenum-Copper, and Low-Carbon Nickel-Chromium-Molybdenum-Tungsten Alloy Rod
- D3951 Practice for Commercial Packaging
- E8M Test Methods for Tension Testing of Metallic Materials [Metric] (Withdrawn 2008)³
- E18 Test Methods for Rockwell Hardness of Metallic Materials
- E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E34 Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys (Withdrawn 2017)³
- E38 Methods for Chemical Analysis of Nickel-Chromium and Nickel-Chromium-Iron Alloys (Withdrawn 1989)³
- E53 Test Method for Determination of Copper in Unalloyed Copper by Gravimetry
- E54 Test Methods for Chemical Analysis of Special Brasses and Bronzes (Withdrawn 2002)³
- E55 Practice for Sampling Wrought Nonferrous Metals and Alloys for Determination of Chemical Composition
- E62 Test Methods for Chemical Analysis of Copper and Copper Alloys (Photometric Methods) (Withdrawn 2010)³
- E75 Test Methods for Chemical Analysis of Copper-Nickel and Copper-Nickel-Zinc Alloys (Withdrawn 2010)³
- E76 Test Methods for Chemical Analysis of Nickel-Copper Alloys (Withdrawn 2003)³
- E92 Test Methods for Vickers Hardness and Knoop Hardness of Metallic Materials

³ The last approved version of this historical standard is referenced on www.astm.org.

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