AMERICAN NATIONAL STANDARD

Small Solid Rivets

ANSI B18.1.1 - 1972

(REVISION OF B18.1–1965)

7/16 Inch Nominal Diameter and Smaller

REAFFIRMED 2016

SECRETARIAT

SOCIETY OF AUTOMOTIVE ENGINEERS
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

PUBLISHED BY

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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ACCEPTANCE NOTICE

The above Industry Standardization Document was adopted on 20 November 1972 and is approved for use by the DOD. The indicated industry group has furnished the clearances required by existing regulations. Copies of this document are stocked by the DOD Single Stock Point, U.S. Naval Publications and Forms Center, Philadelphia, Pennsylvania 19120, for issue to DOD activities only .

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FOREWORD

American National Standards Committee B18 for the standardization of bolts, screws, nuts, rivets and similar fasteners was organized in March 1922, as Sectional Committee B18, under the aegis of the American Engineering Standards Committee (later the American Standards Association, then the United States of America Standards Institute and, as of October 6, 1969, the American National Standards Institute, Inc.) with the Society of Automotive Engineers and the American Society of Mechanical Engineers as joint sponsors. Subcommittee 1 was subsequently appointed and charged with responsibility for the standardization of rivets.

Initial efforts of the Subcommittee were directed at development of a standard covering solid rivets of less than 1/2 inch nominal diameter which was approved in 1927 and designated B18a–1927.

A proposed standard covering tinners, coopers and belt rivets was granted recognition as a tentative document in May of 1928 and was approved as an American Standard in January 1929 under the designation B18g–1928.

Revisions made to both of these standards relative to physical tests were issued as addendums under the designations B18a1–1942 and B18g1–1942, respectively.

Following reorganization of Sectional Committee B18 in 1947, Subcommittee 1 was requested to review the documents under its jurisdiction to bring them up to date and, as necessary, develop them into complete product standards. Revisions to the documents on small rivets, and tinners, coopers, and belt rivets were considered at length during several meetings of the Subcommittee held over a period from 1947 to 1951. A draft proposal combining the data contained in both prior documents under the common heading "Small Solid Rivets", incorporating dimensional tolerances with no significant change in basic dimensions was agreed upon by the Subcommittee in November 1952. Following approval by letter ballot of the Sectional Committee and sponsor organizations the revision was submitted to the American Standards Association and was designated an American Standard, B18.1–1953, in June of 1953.

Shortly after publication of the 1953 standard, Subcommittee 1 undertook development of a revision to include data for chamfered points and other minor refinements to meet requirements of the user industry. The resulting proposal was approved by letter ballot of the B18 Committee conducted on May 10, 1954. Subsequent to approval by the sponsors, the revision was presented to the American Standards Association for designation as an American Standard. This was granted on October 5, 1955.

From 1960 to 1962, a number of changes to the standard relating to underhead fillets, dimensioning of countersunk head rivets, points, and material specifications were approved by the Subcommittee. A draft proposal incorporating these revisions and numerous editorial corrections was approved by letter ballot of the Sectional Committee on February 11, 1964. Following approval by the sponsor organizations the revision was designated an American Standard on September 20, 1965.

During 1969 and 1970, Subcommittee 1 drafted a revision of the B18.1 Standard incorporating the addition of the 60-degree flat countersunk head (formerly on Standard ASAE S228), changes to nomenclature for countersunk head and truss head rivets, and a complete reworking of the format to conform with related documents. Subsequent to letter ballot approval by American National Standards Committee B18 and the sponsors, the revision was submitted to the American National Standards Institute and was designated an American National Standard, ANSI B18.1.1–1972, on January 12, 1972.

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Standardization of Bolts, Nuts, Rivets, Screws and Similar Fasteners

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AMERICAN NATIONAL STANDARD

SMALL SOLID RIVETS

7/16 INCH NOMINAL DIAMETER AND SMALLER

1 INTRODUCTORY NOTES

1.1 SCOPE

1.1.1 This standard covers complete general and dimensional data for those types of small solid rivets recognized as "American National Standard". All other types of small solid rivets, within the limits of the diameters contained herein, are to be considered special. Also included is an appendix covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.

1.1.2 The inclusion of dimensional data in this standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult with manufacturers concerning the availability of products.

1.2 TYPES OF RIVETS

This standard specifies small solid rivets including flat head, flat countersunk head, button head, pan head, truss head, tinners, cooper, belt; and 60-degree flat countersunk head rivets.

1.3 TABULAR SIZES

The nominal sizes of rivets in fractions of an inch or decimals as given for the respective types in Tables 1 through 5, and the sizes as given for the respective types in Tables 6, 7, 8 and 9, shall be considered "American National Standard". This, however, does not preclude the manufacture or use of rivets having other diameters. Where other sizes of rivets having other size designations, such as Birmingham wire gage numbers, are shown in catalogs interposed with "American National Standard" sizes, it is recommended that the data be presented in such form as to make clear which diameters are and which are not "American National Standard"

1.4 HEAD PROPORTIONS

The proportions for heads of rivets indicated in the respective tables shall be standard, other proportions shall be considered special. Where nonstandard diameter rivets are required for special applications, the proportions of heads and points, if pointed, shall preferably be based on the formulations given in Appendix I.

1.5 DIMENSIONS

All dimensions in this standard are given in inches, unless otherwise stated.

1.6 TERMINOLOGY

For definitions of terms relating to fasteners or component features thereof used in this standard, refer to American National Standard, Glossary of Terms for Mechanical Fasteners ANSI B18.12.

1.7 RELATED STANDARDS

It should be noted that standards for large rivets, tubular and split rivets and other related fasteners are published under separate cover as listed on the back sheet of this standard.

1.8 REFERENCED STANDARDS

Copies of referenced ASTM Standards may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

Copies of referenced SAE Standards may be obtained from the Society of Automotive Engineers, Inc., Two Pennsylvania Plaza, New York, New York 10001.