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ALUMINIUM AND ALUMINIUM ALLOYS—
DRAWN WIRE, ROD, BAR AND STRIP

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Aluminium Alloy).....NSC Group 95]

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AUSTRALIAN STANDARD

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DRAWN WIRE, ROD, BAR AND STRIP

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PREFACE

This edition of this standard was prepared by the Association's Committee on Aluminium and Aluminium Alloys.

During the preparation of this standard the committee considered the following recommendation and standards issued by the International Organization for Standardization (ISO):

ISO/R209 Composition of Wrought Products of Aluminium and Aluminium Alloys—Chemical Composition (Percent)

ISO 5191 Wrought Aluminium and Aluminium Alloy Products—General Conditions for Inspection and Delivery

ISO 5193 Wrought Aluminium and Aluminium Alloys—Drawn Round Bars—Tolerances on Shape and Dimensions (Symmetric Plus and Minus Tolerances on Diameter)

ISO 7274 Wrought Aluminium and Aluminium Alloys—Drawn Round Bars—Tolerances on Shape and Dimensions (All Minus Tolerances on Diameter).

Australian practice follows North American practice, and as a consequence, the proposed standard is not compatible with ISO for chemistry, properties or manufacturing tolerances.

In this edition, the former Appendix B, Temper Designation, has been deleted, since this is covered in AS 2848.1, Aluminium and Aluminium Alloys—Compositions and Designations—Wrought Products.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
ALUMINIUM AND ALUMINIUM ALLOYS—DRAWN WIRE, ROD, BAR AND STRIP

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard specifies requirements for wrought aluminium and aluminium alloy drawn or cold-finished wire, rod, bar and strip products for general engineering.

NOTE: Guidelines to purchasers on requirements that must be specified by the purchaser and those that must be agreed upon at the time of enquiry and/or order are given in Appendix A.

1.2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1391	Methods for Tensile Testing of Metals
AS 2338	Preferred Dimensions of Wrought Metal Products
AS 2612	Aluminium and Aluminium Alloys—Sampling and Preparation of Solid Samples for Optical Emission Spectrometry
AS 2706	Numerical Values—Rounding and Interpretation of Limiting Values
AS 2848.1	Aluminium and Aluminium Alloys—Compositions and Designations—Part 1—Wrought Products
BS 1728	Methods for the Analysis of Aluminium and Aluminium Alloys
ASTM E34	Methods for Chemical Analysis of Aluminium and Aluminium Base Alloys
ASTM	Methods for Emission Spectrochemical Analysis.

1.3 DESIGNATION.

1.3.1 Alloy designation. The aluminium and aluminium alloy designation as shown in column 1 of Table 2.1 shall be in accordance with AS 2848.1.

1.3.2 Temper designation. The temper designation shall be in accordance with AS 2848.1 and shall be used for all forms of wrought aluminium and aluminium alloys. It shall follow the alloy designation, the two being separated by a dash.

Examples of complete designation: 1200-O, 5251-H34, 6061-T6.

1.4 DEFINITIONS. For the purpose of this standard, the following definitions apply:

1.4.1 Alclad wire—wire having on its surface a metallurgically bonded aluminium or aluminium alloy coating anodic to the core alloy to which it is bonded, thus electrolytically protecting the core alloy against corrosion.

1.4.2 Bar—a solid section long in relation to its cross-sectional dimensions, having a symmetrical cross-section which is square or rectangular (excluding flattened wire) with sharp or rounded corners or edges, or which is hexagonal or octagonal, and whose width or greatest distance between parallel faces is 10 mm or greater.

1.4.3 Batch—all product of the same section, size, alloy temper and finish in a shipment. For heat-treated product, a batch consists of all product of the same section, size, alloy, temper and finish and from the same furnace load.

1.4.4 Rod—a solid round section of 10 mm or greater in diameter, whose length is greater in relation to its diameter.

1.4.5 Strip—wire (or bar) of rectangular or square cross section with rounded edges or corners and with a maximum width of 16 mm.

NOTE: May be supplied coiled or in straight lengths.

1.4.6 Wire—a solid section long in relation to its cross-sectional dimensions, having a symmetrical cross-section, square or rectangular (excluding flattened wire) with sharp or rounded corners or edges, or which is round, hexagonal or octagonal, and whose diameter, width or greatest distance between parallel faces is less than 10 mm.

1.5 INTERPRETATION OF SPECIFIED LIMITING VALUES. For the purpose of assessing compliance with this standard, the specified limiting values herein shall be interpreted in accordance with the 'rounding method' described in AS 2706, i.e. the observed or calculated value shall be rounded to the same number of figures as in the specified limiting value and then compared with the specified limiting value. For example, for specified limiting values of 2.5, 2.50, and 2.500, the observed or calculated value would be rounded respectively to the nearest 0.1, 0.01, or 0.001.

For examples of interpretation of specified values in accordance with the rounding method, see AS 2706, Appendix B.