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Australian Standard 1881 — 1977

ZINC ALLOY INGOTS (FOR PRESSURE DIECASTING) AND ZINC ALLOY PRESSURE DIECASTINGS



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

THE FOLLOWING INDUSTRIAL, SCIENTIFIC AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Associated Chambers of Manufactures of Australia
Australian Zinc Development Association
Diecasting Institute of Australia
Electricity Supply Association of Australia
Federal Chamber of Automotive Industries
Galvanizers Association of Australia
Telecom Australia
Producers of Zinc Metal
Society of Automotive Engineers—Australasia

This standard, prepared by Committee MT/4, Zinc and Zinc Alloys, was approved by the Metals Standards Board on behalf of the Council of the Standards Association of Australia on 10 December 1976, and published on 1 May 1977.

The specification is intended to include the technical provisions necessary for the supply of the material referred to, but does not purport to comprise all the necessary provisions of a contract.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for public review as DR 74127.

AUSTRALIAN STANDARD SPECIFICATION

**ZINC ALLOY INGOTS
(FOR PRESSURE DIECASTING)
AND ZINC ALLOY
PRESSURE DIECASTINGS**

AS 1881 — 1977

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PREFACE

This standard was prepared under the direction of the Association's Committee on Zinc and Zinc Alloys by its working group on zinc die-casting alloys, as a combined revision and metrication of AS H63—1962, Zinc Alloys for Die Casting, and AS H64—1962, Zinc Alloy Die Castings. It includes specifications for the supply of two zinc alloys in ingot form for pressure diecasting and of pressure diecastings made from them.

In preparing this standard, the committee took into account a recommendation issued by the International Organization for Standardization, viz ISO/R301, Zinc Alloy Ingots, and British Standard BS 1004:1972, Zinc Alloys for Die Casting and Zinc Alloy Die Castings.

The alloy designation adopted in the standard is that used in ISO/R301, and replaces the former nomenclature of Alloy A and Alloy B used in AS H63 and H64. It should be noted that Alloys Zn Al 4 and Zn Al 4 Cu 1 are almost identical in composition with Alloys A and B respectively, and slight changes in the specified composition of the alloys have been made to reflect Australian practice. In this regard the alloys differ from those designated by ISO/R301 and BS 1004.

Information on mechanical properties to be expected after certain periods of ageing is contained in Appendices B and C.

In review of the information required to be supplied by the purchaser to the manufacturer at the time of enquiry or order, the committee recommended that a separate appendix setting out purchasing guidelines should be included. It was felt that such an appendix, if followed, would assist in avoiding misunderstandings, and this in turn would result in the purchaser's receiving satisfactory material and service. This information is included as Appendix A, and indicates to the purchaser what requirements must be met when ordering to this standard.

This standard requires reference to the following Australian standards:

AS 1242 Zinc Ingot

AS 1329 Methods for the Analysis of Zinc Alloys.

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STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard Specification
for
ZINC ALLOW INGOTS (FOR PRESSURE DIECASTING) AND
ZINC ALLOY PRESSURE DIECASTINGS**

**SECTION 1. SCOPE AND GENERAL
REQUIREMENTS**

1.1 SCOPE. This specification sets out quality requirements and conditions of supply for two zinc alloys in ingot form for pressure diecasting, and for the pressure diecastings made from them.

NOTES:

1. Guidelines to purchasers on requirements that must be specified by the purchaser and those that must or may be agreed upon at the time of enquiry and/or order are given in Appendix A.
2. The properties of the alloys are given in Appendices B and C.

1.2 APPLICATION. The zinc alloy ingots shall comply with the relevant requirements of this Section 1 and with the requirements of Section 2 for the designated alloy.

The pressure diecastings shall comply with the relevant requirements of this Section 1 and with the requirements of Section 3 for the diecastings made from the designated alloy.

1.3 DESIGNATION.

1.3.1 General. The grade designation of the alloys shall include the following:

- (a) The number of this Australian Standard, i.e. AS 1881.
- (b) Chemical symbols and figures indicating the alloying elements and their approximate mean levels.

(See Paragraph A10 of Apparatus A.)

1.3.2 Dimensionally Stabilized Diecastings. When dimensionally stabilized diecastings are required, the letter 'S' in brackets shall be added to the alloy designation.

Examples of designation: AS 1881/Zn Al 4 Cu 1; AS 1881/Zn Al 4 (S).

1.4 ROUNDING OF NUMBERS. For the purpose of deciding whether a particular requirement of this specification is complied with, the determined value, observed and calculated, expressing the result of a chemical analysis, shall be rounded off in accordance with Appendix D. The number of significant places retained in the rounded-off value shall be the same as that of the specified value in this specification.