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Magnesium and magnesium alloys — Unalloyed magnesium — Chemical composition

Magnésium et alliages de magnésium — Magnésium non allié — Composition chimique

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 5, *Magnesium and alloys of cast or wrought magnesium*.

This fourth edition cancels and replaces the third edition (ISO 8287:2011), which has been technically revised.

The main changes compared with the previous edition are as follows:

a) in the Introduction and Clause 2, EN 12421:1998 has been replaced by EN 12421:2017;

b) four new grades of cast unalloyed magnesium have been added in Table 1, namely ISO Mg99,95C, ISO Mg99,995A, ISO Mg99,995B and ISO Mg99,995C.

Introduction

This document classifies commercially available cast unalloyed magnesium into a number of grades suitable for the applications for which they might be used. The grades listed in this document are identical to those in EN 12421:2017.

Magnesium and magnesium alloys — Unalloyed magnesium — Chemical composition

1 Scope

This document specifies the chemical composition of cast unalloyed magnesium. It specifies classification, designation, testing rules, marking, packing, transportation, storage, and information subject to agreement between the manufacturer and the purchaser.

This document applies to cast unalloyed magnesium produced by the silicon-thermo process or molten salt electrolysis process.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 80000-1:2009, *Quantities and units — Part 1: General*

EN 12421:2017, *Magnesium and magnesium alloys — Unalloyed magnesium*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
unalloyed magnesium
magnesium with a minimum purity of 99,0 % mass fraction

3.2
cast unalloyed magnesium
unalloyed magnesium (3.1) cast in a variety of shapes

4 Information to be supplied by the purchaser

The enquiry and order shall define the product required and shall contain the following information:

a) material designation;

b) product shape;

c) quantity (for example number, mass, etc.);

d) any requirements for declarations of conformity;

e) any additional requirements agreed between the manufacturer and the purchaser.