
Magnezij in magnezijeve zlitine - Nelegirani magnezij

Magnesium and magnesium alloys - Unalloyed magnesium

Magnesium und Magnesiumlegierungen - Reinmagnesium

Magnésium et alliages de magnésium - Magnésium non allié

Ta slovenski standard je istoveten z: EN 12421:1998

[SIST EN 12421:2000](https://standards.iteh.ai/catalog/standards/sist/0bbbcfd5-fa84-42f5-a896-3f13f58fc098/sist-en-12421-2000)

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ICS:

77.120.20	Magnezij in magnezijeve zlitine	Magnesium and magnesium alloys
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SIST EN 12421:2000**en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12421

April 1998

ICS 77.120.20

Descriptors: magnesium, chemical composition, designation, quality, classification, marking, tests

English version

Magnesium and magnesium alloys - Unalloyed magnesium

Magnésium et alliages de magnésium - Magnésium non
allié

Magnesium und Magnesiumlegierungen - Reinmagnesium

This European Standard was approved by CEN on 25 March 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 190 "Foundry technology", the secretariat of which is held by DIN.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 3.10 " Cast magnesium" to prepare the following standard :

EN 12421

Magnesium and magnesium alloys - Unalloyed magnesium

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

This European Standard classifies the commercially available cast unalloyed magnesium into a number of grades suitable for the applications to which they might be put.

1 Scope

This European Standard specifies the chemical composition of cast unalloyed magnesium. It specifies classification, designation and marking.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

ISO 31-0 : 1992

Quantities and units – Part 0: General principles

NOTE: Informative references to documents used in the preparation of this standard and cited at the appropriate places in the text, are listed in a bibliography, see annex A.

3 Definitions

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For the purposes of this standard the following definitions apply :

3.1 unalloyed magnesium

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Magnesium with a minimum mass fraction of 99,0 %.

3.2 cast unalloyed magnesium

Unalloyed magnesium 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 (e.g. number, mass, etc.);
- d) any requirements for declarations of conformity;
- e) any additional requirements agreed between the manufacturer and the purchaser.

5 Designation

The material shall be designated either by symbol or by number (see table 1).

6 Manufacture

The manufacturing process shall be left to the discretion of the manufacturer unless otherwise agreed at the time of ordering.

NOTE: The manufacturing process covers all operations up to the delivery of the product.

7 Requirements

7.1 Chemical composition

The chemical composition of cast unalloyed magnesium shall conform to the requirements for the appropriate material given in table 1.

If not otherwise specified in the enquiry and order, the chemical composition of the cast unalloyed magnesium shall relate to that of the samples taken from the melt at the time of pouring.

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Table 1: Chemical composition of cast unalloyed magnesium

Material designation		Chemical composition in percent (mass fraction)													
Symbol	Number	Element	Al	Mn	Si	Fe	Cu	Ni	Pb	Sn	Na	Ca	Zn	Others each	Mg ¹⁾
EN-MB99,5	EN-MB10010	min.	—	—	—	—	—	—	—	—	—	—	—	—	99,5
		max.	0,1	0,1	0,1	0,1	0,1	0,1	—	—	0,01	0,01	—	0,05	—
EN-MB99,80-A	EN-MB10020	min.	—	—	—	—	—	—	—	—	—	—	—	—	99,80
		max.	0,05	0,05	0,05	0,05	0,02	0,001	0,01	0,01	0,003	0,003	0,05	0,05	—
EN-MB99,80-B	EN-MB10021	min.	—	—	—	—	—	—	—	—	—	—	—	—	99,80
		max.	0,05	0,05	0,05	0,05	0,02	0,002	0,01	0,01	—	—	—	0,05	—
EN-MB99,95-A	EN-MB10030	min.	—	—	—	—	—	—	—	—	—	—	—	—	99,95
		max.	0,01	0,006	0,006	0,003	0,005	0,001	0,005	0,005	0,003	0,003	0,005	0,005	—
EN-MB99,95-B	EN-MB10031	min.	—	—	—	—	—	—	—	—	—	—	—	—	99,95
		max.	0,01	0,01	0,01	0,005	0,005	0,001	0,005	0,005	—	—	—	0,01	0,005

¹⁾ By difference

NOTE: The material designation is in accordance with EN 1754.

¹⁾ By difference

NOTE: The material designation is in accordance with EN 1754.

7.2 General condition of the product

The product shall have a clean surface and shall be commercially free from visible and internal defects to a standard agreed between the manufacturer and the purchaser.

8 Testing

For analysis of chemical composition, samples shall be taken by the manufacturer to assure conformance to the chemical composition requirements given in table 1 and shall be representative of the material delivered.

9 Rounding of numbers

In recording chemical analysis, the number representing the result for any value specified in this standard shall be expressed to the same number of decimal places as the corresponding number in this standard. The rounding of numbers shall meet the requirements of ISO 31-0 : 1992, annex B, clause B.3, rule A or B. The choice shall be left to the discretion of the manufacturer, unless the use of one of the rules is agreed by the time of acceptance of the order.

10 Declaration of conformity and inspection documents

If agreed between the manufacturer and the purchaser or when specified on the order, the manufacturer shall provide a declaration of product conformity or an inspection document listing the results of the analysis of the chemical elements given in table 1, and of any other element which may have been previously agreed.

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11 Marking

Unless otherwise agreed, each product, or bundle of products, shall be clearly marked with the following:

- manufacturer's identification; [SIST EN 12421:2000](https://standards.iteh.ai/catalog/standards/sist/0bbbcfd1-fa84-42f5-a896-3f13f58fc098/sist-en-12421-2000)
- material designation;
- melt identification;
- unit weight (mass).

The method of marking is left to the discretion of the manufacturer. Markings shall be indelible and shall not be a source of contamination.

12 Complaints

In case of any product complaint, the manufacturer shall be able to examine the validity of the complaint within a reasonable time.

Complaints may only be raised against defective products if the defect impairs their processing and use to a more than negligible extent. This shall apply unless otherwise agreed by the time of acceptance of the order.

The purchaser shall give the manufacturer the opportunity to judge whether the complaints are justified.