

## SLOVENSKI STANDARD SIST EN 1754:1998

01-avgust-1998

Magnezij in magnezijeve zlitine - Anode, ingoti in ulitki iz magnezijevih zlitin - Sistem označevanja

Magnesium and magnesium alloys - Magnesium and magnesium alloy anodes, ingots and castings - Designation system

Magnesium und Magnesiumlegierungen - Anoden, Blockmetalle und Gußstücke aus Magnesium und Magnesiumlegierungen - Bezeichnungssystem

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Magnésium et alliages de magnésium - Anodes, lingots et pieces moulées en magnésium et en alliages de magnésium - Systeme de désignation

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Ta slovenski standard je istoveten z: EN 1754-1998

ICS:

77.150.20 Magnezijevi izdelki Magnesium products

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**EUROPEAN STANDARD** 

**EN 1754** 

NORME EUROPÉENNE

**FUROPÄISCHE NORM** 

June 1997

ICS 77.150.20

Descriptors:

magnesium, magnesium alloys, ingots, castings, designation, numerical designations, symbols

English version

Magnesium and magnesium alloys - Magnesium and magnesium alloy anodes, ingots and castings - Designation system

Magnésium et alliages de magnésium ranodes. Anodes, lingots et pièces moulées en magnésium et en ARD PRE Blockmetalle und Gußstücke aus Magnesium und alliages de magnésium - Système de désignation Magnesiumlegierungen - Bezeichnungssystem (Standards.iteh.ai)

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This European Standard was approved by CEN on 1997-05-01. 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.

The European Standards exist 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.

### CEN

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.

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 December 1997, and conflicting national standards shall be withdrawn at the latest by December 1997.

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 1754

Magnesium and magnesium alloys - Magnesium and magnesium alloy anodes, ingots and castings - Designation system

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 is one of a number of standards specifying the means to designate ingot and/or casting alloys using their main metal constituent as the basis for the subdivision of the designation structure.

#### 1 Scope

This European Standard specifies

- a designation system for magnesium and magnesium alloys by numbers;
- a designation system for magnesium and magnesium alloys by symbols.

This standard applies to magnesium and magnesium alloys for ingots intended for remelting and to magnesium and magnesium alloys for castings, including anodes.

NOTE: Materials for aerospace applications referred to in European Standards prepared by AECMA (Association Europeane des Constructeurs de Matériel Aérospatial) have different designations.

#### 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 2092

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Light metals and their alloys - Code of designation based on chemical symbols

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3 Designation by numbers

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#### 3.1 Overall structure (positions 1 to 10)

The designation shall comprise 10 positions each one having one character (see figure 1):

| Position  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----------|---|---|---|---|---|---|---|---|---|----|
| Character | E | Ν | - | L | L | n | n | n | n | n  |

L capital letter

n Arabic number

Figure 1: Number structure

- Positions 1 to 3: The prefix EN-;
- Position 4: The symbol M for magnesium;
- Position 5: Either the symbol A or B or C, as applicable;
  - a) A for anodes;
  - b) B for ingots;
  - c) C for castings;
- Positions 6 to 10: Five figures to indicate the chemical composition.

#### 3.2 Structure for positions 6 to 10

#### 3.2.1 Position 6

Position 6 shall be used to indicate the major element or the major alloying element as follows:

| Magnesium         | 1XXXX |
|-------------------|-------|
| Aluminium         | 2XXXX |
| Zinc              | 3XXXX |
| Manganese         | 4XXXX |
| Silicon           | 5XXXX |
| Rare earth metals | 6XXXX |
| Zirconium         | 7XXXX |
| Silver            | 8XXXX |
| Yttrium           | 9XXXX |

#### 3.2.2 Positions 7 and 8

Positions 7 and 8 shall be used to indicate the alloy group as follows:

| Mg       | X00XX                      |
|----------|----------------------------|
| MgAlZn   | X11XX                      |
| MgAlMn   | X12XX                      |
| MgAlSi   | X13XX                      |
| MgZnCu   | X21XX                      |
| MgZnREZr | X51XX                      |
| MgREAgZr | X52XXCoh CTANDADD DDFV/IFW |
| MgREYZr  | X52XXTeh STANDARD PREVIEW  |
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#### 3.2.3 Position 9

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Position 9 shall be used to indicate alloy subgroups ndards/sist/a9a63926-331b-403b-a330-baefb1ce6608/sist-en-1754-1998

**EXAMPLES:** 

XXX1X

XXX2X

#### 3.2.4 Position 10

Position 10 shall be used to differentiate alloys within subgroups by a figure chosen from 0 to 9:

**EXAMPLES:** 

XXXX0

XXXX1

#### 3.3 Examples

Examples of designations by number are:

EN-MB21210

EN-MC65220

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#### 4 Designation by symbols

#### 4.1 Overall structure

The designations of magnesium and magnesium alloys shall be based on chemical symbols, usually followed by numbers indicating the minimum or nominal content of the considered element.

The chemical symbols used shall be those of the international nomenclature in accordance with ISO 2092.

The figures indicating the minimum or nominal content of the element concerned, shall be based on the chemical composition limits of the material.

The designation shall comprise the following:

- the prefix EN-;
- the symbol M for magnesium;
- the symbol A, B or C, as applicable:
  - a) A for anodes;
  - b) B for ingots;
  - c) C for castings;
- the symbol Mg;
- a coded designation.

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#### 4.2 Coded designation

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The coded designation for unalloyed magnesium shall consist of the chemical symbol Mg for magnesium followed by its minimum mass fraction in percent expressed to one or two decimal places, as applicable, e.g. <a href="https://standards.iteh.ai/catalog/standards/sist/a9a63926-331b-403b-a330-">https://standards.iteh.ai/catalog/standards/sist/a9a63926-331b-403b-a330-</a>

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Magnesium alloys shall be code designated by Mg followed by the chemical symbols of the main element or elements. These symbols are usually followed by figures which express the mass fraction of the elements concerned in percent.

When several alloying elements are required in the designation, they shall be arranged in decreasing order of mass fraction in percent. The number of alloying elements in the designation shall not be greater than four.

#### 4.3 Examples

Examples of designations by symbols are:

EN-MCMgAl8Zn1 EN-MBMgAl5Mn