



# SLOVENSKI STANDARD

## SIST EN 1754:2015

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Nadomešča:

SIST EN 1754:1998

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### Magnezij in magnezijeve zlitine - Sistem označevanja anod, ingotov in ulitkov - Številka in simbol materiala

Magnesium and magnesium alloys - Designation system for anodes, ingots and castings - Material numbers and material symbols

Magnesium und Magnesiumlegierungen - Bezeichnungssystem für Anoden, Blockmetalle und Gussstücke - Werkstoffnummern und Werkstoffkurzzeichen  
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Magnésium et alliages de magnésium - Système de désignation pour les anodes, lingots et pièces moulées - Désignation numérique et symbolique  
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**Ta slovenski standard je istoveten z: EN 1754:2015**

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#### **ICS:**

77.150.20      Magnezijevi izdelki      Magnesium products

**SIST EN 1754:2015**

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EUROPEAN STANDARD

EN 1754

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 77.150.20

Supersedes EN 1754:1997

English Version

## Magnesium and magnesium alloys - Designation system for anodes, ingots and castings - Material symbols and material numbers

Magnésium et alliages de magnésium - Système de désignation pour les anodes, lingots et pièces moulées - Désignation symbolique et numérique

Magnesium und Magnesiumlegierungen - Bezeichnungssystem für Anoden, Blockmetalle und Gussstücke - Werkstoffkurzzeichen und Werkstoffnummern

This European Standard was approved by CEN on 27 June 2015.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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## European foreword

This document (EN 1754:2015) 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 February 2016 and conflicting national standards shall be withdrawn at the latest by February 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1754:1997.

Annex C provides details of significant technical changes between this European Standard and the previous edition.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 1 “Technical conditions of delivery and cast material designation” to revise EN 1754:1997, *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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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**EN 1754:2015 (E)**

## **Introduction**

Magnesium and magnesium alloy anodes, ingots and castings can be designated either by numbers or by symbols for all grades.

In this revised standard, a designation system by number, similar to that described in EN 10027-2 [1], is specified.

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## 1 Scope

This European Standard specifies a material designation system for magnesium and magnesium alloys either by numbers or by symbols for castings including anodes and ingots intended for remelting.

The designation system by numbers is only applicable to standardized magnesium and magnesium alloys (see 2.1).

The designation system by symbols is applicable to

- a) standardized magnesium and magnesium alloys (see 2.1);
- b) non-standardized magnesium and magnesium alloys (see 2.2).

NOTE 1 The standardized designation by symbols does not necessarily imply that the material is standardized.

NOTE 2 Magnesium and magnesium alloys for aerospace applications referred to in European Standards prepared by AECMA (fr: Association Européenne des Constructeurs de Matériel Aérospatial) have different designations.

## 2 Terms and definitions

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

### 2.1

**standardized magnesium and magnesium alloy**  
magnesium and magnesium alloy specified in a European Standard

### 2.2

**non-standardized magnesium and magnesium alloy**  
magnesium and magnesium alloy not specified in a European Standard

## 3 Designation by numbers

### 3.1 General

There shall be only one designation by number for each magnesium grade or each magnesium alloy.

The designation system by numbers is based on the principles and the structure as set out in EN 10027-2 [1].

### 3.2 Structure of the designation

#### 3.2.1 Overall structure

The designation shall comprise six characters.

The positions shall be in accordance with Table 1:

Table 1 — Number structure

Position	1	2	3	4	5	6
Character	n	.	n	n	n	n
n: Arabic number						

The whole structure of the designation by numbers is shown in Table A.1.

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## 3.2.2 Positions 1, 2 and 3

Position 1 is the main group number, which is “3” for non-ferrous light metals, followed by a “dot” in position 2.

Position 3 is the material group number, which is “5” for magnesium.

## 3.2.3 Position 4

To specify the product form, the appropriate number given in Table 2 shall be used.

Table 2 — Product form

Product form	Number
Anode	1
Ingot	2
Casting	3

## 3.2.4 Position 5

To specify the alloy group the appropriate number given in Table 3 shall be used.

Table 3 — Alloy group

Alloy group	Number
Mg	0
MgAl, MgAlZn	1
MgAlMn, MgAlSi, MgAlRE <sup>a</sup>	2
MgMn, MgZnCu	3
MgZr, MgZnZr, MgZnREZr <sup>a</sup>	4
MgREAgZr <sup>a</sup> , MgREGdZr <sup>a</sup>	5
MgYREZr <sup>a</sup>	6
MgZnThZr	7
Vacant	8
Vacant	9
<sup>a</sup> RE: Rare earth elements.	

## 3.2.5 Position 6

A 1-digit character from “0” to “9” representing an individual material shall be used.

These numbers will be allocated by CEN/TC 190.

## 4 Designation by symbols

## 4.1 General

There shall be only one designation by symbols for each magnesium grade or each magnesium alloy.



## 4.2 Structure of the designation

### 4.2.1 Overall structure

The designation by symbols is based on chemical symbols, usually followed by numbers indicating the minimum or nominal content of each considered element.

There shall be no spaces between any of the used positions.

- Position 1: Prefix “EN-” (see 4.2.2);
- Position 2: Symbol “M” for magnesium;
- Position 3: Symbol for “product form” (see 4.2.3);
- Position 4: Symbol “Mg”;
- A coded designation for classification by chemical composition (see 4.2.4).

The whole structure of the designation system by symbols is shown in Table B.1.

### 4.2.2 Position 1

The prefix “EN-“ shall only be used for standardized materials.

NOTE If the European material standard (e.g. EN 1753 [2]) is presented in association with the material symbol (e.g. EN-MCMgAl2Mn), then the prefix “EN” of the symbol designation can be omitted (e.g. EN 1753-MCMgAl2Mn).

### 4.2.3 Position 3

To specify the product form, the appropriate symbol given in Table 4 shall be used.

**Table 4 — Product form**

Product form	Symbol
Anode	A
Ingot	B
Casting	C

### 4.2.4 Coded designation

#### 4.2.4.1 Unalloyed magnesium

The coded designation for unalloyed magnesium consists of the chemical symbol “Mg” for magnesium (position 4) followed by its minimum mass fraction in percent expressed to one or two decimal places, as applicable.

EXAMPLE EN-MBMg99,75