

Magnesium and magnesium alloys - Magnesium alloy  
ingots and castings

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|   |  |
|---|--|
| See Eesti standard EVS-EN 1753:2019 sisaldab Euroopa standardi prEN 1753, EN 1753:2019 ingliskeelset teksti.        | This Estonian standard EVS-EN 1753:2019 consists of the English text of the European standard prEN 1753, EN 1753:2019.             |
| Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas   | This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation. |
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English Version

## Magnesium and magnesium alloys - Magnesium alloy ingots and castings

Magnésium et alliages de magnésium - Lingots et  
pièces moulées en alliages de magnésium

Magnesium und Magnesiumlegierungen - Blockmetalle  
und Gussstücke aus Magnesiumlegierungen

This European Standard was approved by CEN on 5 August 2019.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

| <b>Contents</b>   | <b>Page</b> |
|---|-------------|
| <b>European foreword</b> .....  | <b>3</b>    |
| <b>Introduction</b> .....   | <b>4</b>    |
| <b>1 Scope</b> .....  | <b>5</b>    |
| <b>2 Normative references</b> .....   | <b>5</b>    |
| <b>3 Terms and definitions</b> .....  | <b>5</b>    |
| <b>4 Designation</b> .....  | <b>6</b>    |
| <b>5 Order information</b> .....  | <b>7</b>    |
| <b>6 Manufacture</b> .....  | <b>7</b>    |
| <b>7 Requirements</b> .....   | <b>7</b>    |
| <b>8 Sampling</b> .....   | <b>20</b>   |
| <b>9 Test methods</b> .....   | <b>22</b>   |
| <b>10 Retests</b> .....   | <b>24</b>   |
| <b>11 Inspection documentation</b> .....  | <b>24</b>   |
| <b>Annex A (informative) Comparison of material designations for magnesium alloy ingots and castings according to EN 1754 [5] and ISO 16220 [4]</b> ..... | <b>25</b>   |
| <b>Annex B (informative) Additional information regarding the manganese and iron content</b> .....  | <b>28</b>   |
| <b>Annex C (informative) Additional information regarding maximum content of alloying and trace elements in ingots and castings</b> .....                 | <b>29</b>   |
| <b>Annex D (informative) Significant technical changes between this European Standard and the previous edition</b> .....                                  | <b>30</b>   |
| <b>Bibliography</b> .....   | <b>31</b>   |

## European foreword

This document (EN 1753:2019) 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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

This document supersedes EN 1753:1997.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 9 “Cast magnesium” to revise:

EN 1753:1997, *Magnesium and magnesium alloys — Magnesium alloy ingots and castings*

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

This document classifies cast magnesium alloys into a number of grades suitable for the applications for which they might be used.

Sixteen new grades as specified in National [1] [2] [3] or International Standards [4] have been added.

In this standard a new designation system by number, as established in EN 1754 [5], is given.

NOTE This designation system by number is based on the structure and rules of EN 10027-2 [6] and so corresponds with the European numbering system for steel and other materials.

## 1 Scope

This document specifies the grades and the corresponding requirements for cast alloyed magnesium materials.

This document specifies two groups of cast magnesium alloy grades by a classification based on the chemical composition. The first group deals with grades for magnesium alloy ingots. The second group deals with grades for magnesium alloy castings.

This document also specifies mechanical properties measured on test pieces machined from cast samples.

This document does not cover technical delivery conditions for magnesium alloy castings (see EN 1559-1 [7] and EN 1559-5 [8]).

## 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.

<std>EN 10204, *Metallic products - Types of inspection documents*</std>

<std>EN ISO 6506-1, *Metallic materials - Brinell hardness test - Part 1: Test method (ISO 6506-1)*</std>

<std>EN ISO 6892-1, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1)*</std>

<std>EN ISO 80000-1:2013, *Quantities and units - Part 1: General (ISO 80000-1:2009 + Cor 1:2011)*</std>

## 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:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **cast sample**

quantity of material cast to represent the cast material

Note 1 to entry: This includes separately cast samples, side by side cast samples and cast-on samples.

[SOURCE: EN 1563:2018, definition 3.5]

### 3.2

#### **separately cast sample**

sample cast in a separate mould under representative manufacturing conditions and material grade

[SOURCE: EN 1563:2018, definition 3.6]