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**Magnesium and magnesium alloys —  
Magnesium alloy ingots and castings**

*Magnésium et alliages de magnésium — Lingots et pièces moulées en  
alliage de magnésium*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 16220 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 second edition cancels and replaces the first edition (ISO 16220:2000), which has been technically revised.

## Introduction

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

Some of the alloys referenced in this International Standard can be the subject of a patent or of patent applications and their listing herein is not to be construed in any way as the granting of a license under such patent rights.

This International Standard is technically identical with European Standard EN 1753, except for some minor deviation in Ni content, Mn content and Fe/Mn ratio. Grade designation also differs slightly; the correlation is given in Annex A.

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# Magnesium and magnesium alloys — Magnesium alloy ingots and castings

## 1 Scope

This International Standard specifies the chemical composition of magnesium alloy ingots. It also specifies the chemical composition of magnesium alloy castings and the mechanical properties of separately cast samples of these alloys (see Clause 6). By agreement, this International Standard also specifies the mechanical properties of magnesium alloy castings determined from samples cut from a casting.

## 2 Normative references

The following referenced documents are indispensable for the application 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 31-0, *Quantities and units — Part 0: General principles*

ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 6892, *Metallic materials — Tensile testing at ambient temperature*

EN 1559-5, *Founding — Technical condition of delivery — Part 5: Additional requirements for magnesium alloy castings*

## 3 Designation

### 3.1 Material

The material shall be designated by symbols as given in Tables 1 to 5.

NOTE 1 The material symbol designations are in accordance with ISO 2092:1984<sup>1)</sup>. The material number designations are identical to those used in EN 1753.

NOTE 2 A list of European designations, national and former national European designations corresponding to those specified in this International Standard is given in Annex A.

### 3.2 Temper designation

The following symbols for temper designation shall be used:

- F: as-cast; applies to products that acquire some temper from casting processes not having special control over the amount of thermal treatment;

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1) Withdrawn in 2002.