

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Magnetic materials –
Part 8-1: Specifications for individual materials – Permanent magnet
(magnetically hard) materials**

**Matériaux magnétiques –
Partie 8-1: Spécifications pour matériaux particuliers – Matériaux (magnétiques
durs) pour aimants permanents**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MAGNETIC MATERIALS –**Part 8-1: Specifications for individual materials –
Permanent magnet (magnetically hard) materials**

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IEC 60404-8-1 has been prepared by IEC technical committee 68: Magnetic alloys and steels. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) recently developed anisotropic REFeB hot deformed magnets and anisotropic HDDR REFeB bonded magnets are included;
- b) high energy Ca-La-Co ferrites stabilized by La and Co substitution are included;
- c) new and high-performance grades of REFeB and RE₂Co₁₇ sintered magnets and isotropic REFeN bonded magnets are added.

The text of this International Standard is based on the following documents:

| Draft | Report on voting |
|------------|------------------|
| 68/732/CDV | 68/742/RVC |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

This document includes the recently developed REFeB hot deformed magnets, anisotropic HDDR REFeB bonded magnets and high energy Ca-La-Co ferrites which have become established in permanent magnet applications. New and high-performance materials of REFeB and $\text{RE}_2\text{Co}_{17}$ sintered magnets and isotropic and anisotropic REFeN bonded magnets are added to each table with new codes. Almost all materials added to this document have been used for various motors to save energy and contribute to the prevention of global warming.