

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Classification of magnetic powder cores**

**Classification des noyaux en poudre magnétique**





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IEC 63299

Edition 1.0 2022-09

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**Classification of magnetic powder cores**

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 29.030; 29.100.10

ISBN 978-2-8322-5704-3

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## CLASSIFICATION OF MAGNETIC POWDER CORES

## FOREWORD

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

|             |                  |
|-------------|------------------|
| Draft       | Report on voting |
| 51/1403/CDV | 51/1413/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# CLASSIFICATION OF MAGNETIC POWDER CORES

## 1 Scope

This document specifies classification rules for metallic magnetic powder cores used in inductive components fulfilling the requirements of the electronics industries.

This document addresses the following objectives for magnetic powder cores suppliers and users:

- cross-reference between core materials from multiple suppliers;
- assistance to users in understanding the published technical data in catalogues when comparing multiple suppliers;
- guidance to users in selecting the most applicable core for each application;
- establishing uniform benchmarks for suppliers for performance in the new development of core material.

The numerical values given in this document are typical values of parameters of the related material. Direct translation from the material specification into the core specification is not always easy or possible.

Every detailed material and core specification will be agreed upon between the user and the supplier.

## 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.

IEC 60050-221, *International Electrotechnical Vocabulary (IEV) – Part 221: Magnetic materials and components*

IEC 60404-1, *Magnetic materials – Part 1: Classification*

IEC 63300<sup>1</sup>, *Test methods for electrical and magnetic properties of magnetic powder cores*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-221, IEC 60404-1 and IEC 63300 apply.

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- IEC Electropedia: available at <https://www.electropedia.org/>
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<sup>1</sup> Under preparation. Stage at the time of publication: IEC CDV 63300:2022.