

Magnetic materials - Part 8-11: Specifications for individual materials - Fe-based amorphous strip delivered in the semi-processed state

EESTI STANDARDI EESSÕNA

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English Version

**Magnetic materials - Part 8-11: Specifications for individual materials - Fe-based amorphous strip delivered in the semi-processed state
(IEC 60404-8-11:2018)**

Matériaux magnétiques - Partie 8-11: Spécifications pour matériaux particuliers - Bandes en alliage amorphe à base de fer livrées à l'état semi-fini
(IEC 60404-8-11:2018)

Magnetische Werkstoffe - Teil 8-11: Anforderungen an einzelne Werkstoffe - eisenbasiertes, amorphes Band in nicht schlussgeglühtem Zustand
(IEC 60404-8-11:2018)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 68/571/CDV, future edition 1 of IEC 60404-8-11, prepared by IEC/TC 68 "Magnetic alloys and steels" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60404-8-11:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-01-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-04-12

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Endorsement notice

The text of the International Standard IEC 60404-8-11:2018 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-121	-	International Electrotechnical Vocabulary (IEV) - Part 121: Electromagnetism	-	-
IEC 60050-221	-	International Electrotechnical Vocabulary (IEV) - Chapter 221: Magnetic materials and components	-	-
IEC 60404-1	-	Magnetic materials - Part 1: Classification	EN 60404-1	-
IEC 60404-9	-	Magnetic materials - Part 9: Methods of determination of the geometrical characteristics of electrical steel sheet and strip	EN 60404-9	-
IEC 60404-16	-	Magnetic materials - Part 16: Methods of measurement of the magnetic properties of Fe-based amorphous strip by means of a single sheet tester	EN IEC 60404-16	-
ISO 404	-	Steel and steel products - General technical delivery requirements	-	-
ISO 10474	-	Steel and steel products - Inspection documents	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MAGNETIC MATERIALS –**Part 8-11: Specifications for individual materials –
Fe-based amorphous strip delivered in the semi-processed state****FOREWORD**

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International Standard IEC 60404-8-11 has been prepared by IEC technical committee 68: Magnetic alloys and steels.

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

CDV	Report on voting
68/571/CDV	68/585A/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60404 series, published under the general title *Magnetic materials*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

Fe-based amorphous strip is regarded as a promising material to reduce energy loss in transformer cores and, consequently, to help mitigate global warming.

The Fe-based amorphous strip is produced by a rapidly-solidifying, direct-casting process. The strip is intended primarily for the construction of wound cores of transformers for commercial power frequency (50 Hz and 60 Hz) applications.

After appropriate heat treatment, the strip exhibits a significantly lower value of specific total loss in comparison with grain-oriented electrical steel strip for the same applications. It is associated with low hysteresis loss due to low magnetic anisotropy and with low eddy current loss due to high resistivity and reduced thickness.