This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN 10106:2015

Cold rolled non-oriented electrical steel strip and sheet delivered in the fully processed state

© CEN 2015 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN 10106:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 10106:2015	2015-10-28

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2015-11-15	77.140.50
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN 10106:2015 is the adopted Irish version of the European Document EN 10106:2015, Cold rolled non-oriented electrical steel strip and sheet delivered in the fully processed state

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 10106

October 2015

ICS 77.140.50

Supersedes EN 10106:2007

English Version

Cold rolled non-oriented electrical steel strip and sheet delivered in the fully processed state

Bandes et tôles en acier électrique à grains non orientés laminées à froid et livrées à l'état fini

Kaltgewalztes nicht kornorientiertes Elektroband und -blech im schlussgeglühten Zustand

This European Standard was approved by CEN on 29 August 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2015 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 10106:2015 E

This is a free page sample. Access the full version online.

Contents

Page

European foreword ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 5
4 Classification and designation ... 6
4.1 Classification ... 6
4.2 Designation ... 6
5 Information supplied by the purchaser ... 6
5.1 Mandatory information ... 6
5.2 Options ... 7
5.3 Example of an order ... 7
6 General requirements ... 7
6.1 Production process ... 7
6.2 Form of supply ... 7
6.3 Delivery condition ... 8
6.4 Surface condition ... 8
6.5 Suitability for cutting ... 8
7 Technical requirements ... 8
7.1 Magnetic properties ... 8
7.1.1 General ... 8
7.1.2 Magnetic polarization ... 8
7.1.3 Specific total loss ... 9
7.1.4 Anisotropy of loss ... 9
7.2 Geometric characteristics and tolerances ... 10
7.2.1 Thickness ... 10
7.2.2 Width ... 11
7.2.3 Length ... 12
7.2.4 Edge camber ... 12
7.2.5 Flatness (wave factor) ... 12
7.2.6 Residual curvature ... 12
7.3 Technological characteristics ... 12
7.3.1 Density ... 12
7.3.2 Stacking factor ... 12
7.3.3 Number of bends ... 12
7.3.4 Internal stresses ... 12
8 Inspection and testing ... 13
8.1 General ... 13
8.2 Selection of samples ... 13
8.3 Preparation of test specimens ... 13
8.3.1 Magnetic properties ... 13
8.3.2 Geometrical characteristics and tolerances ... 14
8.3.3 Technological characteristics ... 14
8.4 Test methods ... 14

This is a free page sample. Access the full version online.

8.4.1 General **14**
8.4.2 Magnetic properties **14**
8.4.3 Geometrical characteristics and tolerances **15**
8.4.4 Technological characteristics **15**
8.5 Retests **16**

9 Marking, labelling and packaging **16**

10 Complaints **16**

Annex A (normative) **Options** **17**

Annex B (informative) **Non-specified magnetic properties** **18**

Annex C (informative) **Density determination** **19**

Annex D (informative) **Minimum stacking factor for coated products** **20**

Annex E (informative) **Changes to the previous version EN 10106:2007** **21**

Bibliography **22**

This is a free page sample. Access the full version online.

European foreword

This document (EN 10106:2015) has been prepared by Technical Committee ECISS/TC 108 “Steel sheet and strip for electrical applications”, 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 April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

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

This document supersedes EN 10106:2007.

Regarding the changes that were made in this new edition of EN 10106, see Annex E.

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

This is a free page sample. Access the full version online.

1 Scope

This European Standard specifies cold-rolled non-oriented electrical steel strip and sheet in nominal thicknesses of 0,35 mm, 0,50 mm, 0,65 mm and 1,00 mm. In particular, it specifies general requirements, the magnetic properties, geometric characteristics and tolerances, technological characteristics as well as the inspection procedure.

This European Standard applies to materials supplied in the fully annealed condition intended for the construction of magnetic circuits. It does not apply to semi-processed material.

These magnetic materials correspond to IEC 60404-1:2000, C.2.3.2.1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10021, *General technical delivery conditions for steel products*

EN 10027-1, *Designation systems for steels — Part 1: Steel names*

EN 10027-2, *Designation systems for steels — Part 2: Numerical system*

EN 10204, *Metallic products — Types of inspection documents*

EN 10251, *Magnetic materials — Methods of determination of the geometrical characteristics of electrical steel sheet and strip*

EN 10280, *Magnetic materials — Methods of measurement of the magnetic properties of electrical sheet and strip by means of a single sheet tester*

EN 10342, *Magnetic materials — Classification of surface insulations of electrical steel sheet, strip and laminations*

EN 60404-2, *Magnetic materials — Part 2: Methods of measurement of the magnetic properties of electrical steel strip and sheet by means of an Epstein frame (IEC 60404-2)*

EN 60404-13, *Magnetic materials — Part 13: Methods of measurement of density, resistivity and stacking factor of electrical steel sheet and strip (IEC 60404-13)*

EN ISO 7799, *Metallic materials — Sheet and strip 3 mm thick or less — Reverse bend test (ISO 7799)*

IEC 60050-121, *International Electrotechnical Vocabulary — Chapter 121: Electromagnetism*

IEC 60050-221, *International Electrotechnical Vocabulary — Chapter 221: Magnetic materials and components*

3 Terms and definitions

For the purposes of this document, the terms and definitions of the principal terms relative to magnetic properties given in IEC 60050-121 and IEC 60050-221 and the following apply.

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation