

Electrolytically zinc-nickel (ZN) coated steel flat products - Technical delivery conditions

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10271:2001 sisaldab Euroopa standardi EN 10271:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10271:2001 consists of the English text of the European standard EN 10271:1998.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies requirements for continuously electrolytic zinc-nickel coated cold rolled flat products of low carbon steels suitable for cold forming in rolled widths ≥ 600 mm and thicknesses from 0,35 mm up to and including 3 mm, delivered as strip (in coil form), sheet, slit strip or cut lengths obtained from slit strip or sheet. The coating is composed of Zn with a Ni-content of 10,5 % to 13 %.</p>	<p>Scope: This European Standard specifies requirements for continuously electrolytic zinc-nickel coated cold rolled flat products of low carbon steels suitable for cold forming in rolled widths ≥ 600 mm and thicknesses from 0,35 mm up to and including 3 mm, delivered as strip (in coil form), sheet, slit strip or cut lengths obtained from slit strip or sheet. The coating is composed of Zn with a Ni-content of 10,5 % to 13 %.</p>
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Võtmesõnad: chemical composition, coated metal, cold rolled products, designation, electrodeposited coatings, galvanizing, grades, inspection, marking, mechanical properties, metal plates, nickel coatings, quality, steel products, surface treatment, tests

Hinnagrupp M

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Descriptors: Steel, electrodeposited coatings, testing.

English version

Electrolytically zinc-nickel (ZN) coated steel flat products
Technical delivery conditions

Produits plats en acier, revêtus de
zinc-nickel (ZN) par voie électrolyti-
que – Conditions techniques de
livraison

Flacherzeugnisse aus Stahl mit
elektrolytisch abgeschiedenen Zink-
Nickel (ZN)-Überzügen – Technische
Lieferbedingungen

This European Standard was approved by CEN on 1998-11-05.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

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

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee ECISS/TC 27 "Surface coated flat products -Qualities,dimensions, tolerances and specific tests", 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 May 1999, and conflicting national standards shall be withdrawn at the latest by May 1999.

ECISS/TC 27 met on 1996-11-26 in Düsseldorf and agreed on the text for submission of this draft European Standard to Formal Vote. The following countries were represented in that meeting: Austria, Belgium, France, Germany, Netherlands and United Kingdom.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

1.1 This European Standard specifies requirements for continuously electrolytic zinc-nickel coated cold rolled flat products of low carbon steels suitable for cold forming according to table 1 and table 2 in rolled widths ≥ 600 mm and thicknesses from 0,35 mm up to and including 3 mm, delivered as strip (in coil form), sheet, slit strip or cut lengths obtained from slit strip or sheet. The coating is composed of Zn with a Ni-content of 10,5 % to 13 %.

1.2 This European Standard may also be applied to the coating requirements of continuously electrolytic zinc-nickel coated cold rolled flat products of

- a) steels according to EN 10139 (cold rolled strip in rolled widths < 600 mm),
- b) other types of low carbon steel for cold forming,
- c) steels normally characterized by minimum yield strength values in addition to formability parameters, e. g.
 - steels with high yield strength and improved formability according to EN 10268 or other microalloyed steels,
 - rephosphorized steels and bake-hardening steels,
 - general purpose structural steels.

1.3 By special agreement at the time of ordering this European Standard may be applied to the coating requirements of continuously electrolytic zinc-nickel coated hot-rolled steel flat products (e.g. according to EN 10025, EN 10111, EN 10149-1 to EN 10149-3 etc.).

1.4 The coating masses, surface qualities and surface finishes are given in 5.9, 5.11 and table 3. As the mass of the zinc-nickel coating applied is relatively small, the material is not intended to withstand outside exposure without further chemical treatment and painting.

1.5 This European Standard is not applicable to

- hot-dip zinc coated steel strip and sheet (see EN 10142 and EN 10147),
- electrolytically zinc coated cold rolled flat products (see EN 10152),
- continuously hot-dip aluminium-silicon (AS) coated steel strip and sheet (see EN 10154).
- continuously organic coated steel flat products (see EN 10169),

- continuously hot-dip zinc-aluminium (ZA) coated steel strip and sheet (see EN 10214),
- continuously hot-dip aluminium-zinc (AZ) coated steel strip and sheet (see EN 10215).

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this draft European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

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| ENV 606 | Bar coded transport and handling labels for steel products |
| EN 10002-1 | Metallic materials - Tensile testing - Part 1: Method of testing (at ambient temperature) "including Addendum AC1:1990" |
| EN 10002-2 | Metallic materials - Tensile testing - Part 2: Verification of the force measuring system of the tensile testing machines |
| EN 10002-4 | Metallic materials - Tensile testing - Part 4: Verification of extensometers used in uniaxial testing |
| EN 10020 | Definition and classification of grades of steel |
| EN 10021 | General technical delivery requirements for steel and iron products |
| EN 10027-1 | Designation systems for steels - Part 1: Steel names, principal symbols |
| EN 10027-2 | Designation systems for steels - Part 2: Numerical system |
| EN 10079 | Definition of steel products |
| EN 10130 | Cold rolled low carbon steel flat products for cold forming - Technical delivery conditions |

- EN 10131 Cold-rolled non-coated flat products in low carbon steel for cold forming - tolerances on dimensions and shape
- EN 10139 Cold rolled uncoated low carbon steel strip for cold forming - Technical delivery conditions
- EN 10204 Metallic products - Types of inspection documents (includes amendment A1:1995)
- EN 10268 Cold-rolled flat products made of high yield strength steels for cold forming - General technical delivery conditions
- CR 10260 ECISS IC 10- Designation systems for steel - Additional symbols for steel names
- EURONORM 12 (1955)¹⁾ Bend test for steel sheet and strip less than 3 mm thick
- ISO 10113 Metallic materials - Sheet and strip - Determination of plastic strain ratio
- ISO 10275 Metallic materials - Sheet and strip - Determination of tensile strain hardening exponent

3 Definitions

For the purposes of this European Standard the following definition applies in addition to the definitions in EN 10020, EN 10021, EN 10079 and EN 10204.

3.1 Electrolytic zinc-nickel coating (ZN): Application of a zinc-nickel coating by electrolysis on a suitably prepared steel surface from an aqueous salt solution by the use of an electric current.

NOTE: Flat products may have a zinc-nickel coating on one or both surfaces. If both surfaces are zinc-nickel coated, a different coating thickness may be applied on each side (this process being referred to as differential zinc-nickel coating).

¹⁾ Until they are transformed into European Standards, either the EURONORMS referred to or the corresponding national standards may be applied.