

**Pidevas kuumsukelprotsessis metalliga kaetud leht- ja lintteras. Mõõtme- ja kujutolerantsid**

**Continuously hot-dip metal coated steel sheet and strip  
- Tolerances on dimensions and shape**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10143:2004 sisaldab Euroopa standardi EN 10143:1993 ingliskeelset teksti.	This Estonian standard EVS-EN 10143:2004 consists of the English text of the European standard EN 10143:1993.
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Võtmesõnad: con tinuous coating, designation, dimensional toleranc es, dimensions, form tolerances, hot dip coating, iron and steel products, metal coatings, metal plates, steel strips, steels,

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Descriptors: Iron and steel products, metal plate, steel strip, steels, metal coatings, continuous coating, hot-dip coating, designation, dimensions, dimensional tolerances, form tolerances.

**English version**

**Continuously hot-dip metal coated  
steel sheet and strip**

**Tolerances on dimensions and shape**

Tôles et bandes en acier revêtues d'un  
métal en continu par immersion à chaud;  
tolérances sur les dimensions et la forme

Kontinuierlich schmelztauchveredeltes  
Blech und Band aus Stahl; Grenzabmaße  
und Formtoleranzen

This European Standard was approved by CEN on 1993-01-12.

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 bibliographic references concerning such national standards may be obtained on application to the Central Secretariat 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 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

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## Contents

	Page		Page
<b>1 Scope</b> .....	2	6.5 Out-of-squareness .....	5
<b>2 Normative references</b> .....	2	6.6 Edge camber .....	6
<b>3 Definitions</b> .....	3	6.7 Superimposement of dimensions*) .....	6
<b>4 Designation</b> .....	3	<b>7 Testing</b> .....	6
<b>5 Condition on supply</b> .....	3	7.1 Thickness .....	6
<b>6 Tolerances on dimensions and shape</b> .....	3	7.2 Width .....	6
6.1 Thickness .....	3	7.3 Length .....	6
6.2 Width .....	4	7.4 Flatness .....	6
6.3 Length .....	5	7.5 Out-of-squareness .....	6
6.4 Flatness .....	5	7.6 Edge camber .....	6

## Foreword

This European Standard has been prepared by ECIS/TC 27 'Surface coated flat products', the Secretariat of which is held by DIN.

This European Standard supersedes the following EURONORMs, published by the European Coal and Steel Community (ECSC):

EU 143-79 Continuously hot-dip zinc-coated unalloyed mild steel sheet and coil for cold forming; tolerances on dimensions and shape

and

EU 148-79 Continuously hot-dip zinc-coated unalloyed steel sheet and coil with specific minimum yield strength for structural purposes; tolerances on dimensions and shape

At a meeting of ECIS/TC 27 held on 11 March 1992 in Düsseldorf, the text was agreed for publication as a European Standard. The following countries were represented at that meeting: Austria, Belgium, Finland, France, Germany, Luxembourg, Netherlands, Sweden and the United Kingdom.

This standard was approved by CEN on 1992-06-05.

National standards identical to this European Standard shall be published, and conflicting national standards withdrawn, by July 1993 at the latest.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

**1.1** This European Standard specifies tolerances on the dimensions and shape of continuously hot-dip metal-coated flat products (strip of all widths and sheet or lengths cut from it) made from low-carbon steels for cold forming or from structural steels, with thicknesses  $\leq 3,0$  mm. The thickness is the final thickness of the delivered product including the metal coating.

**1.2** This European Standard applies to all hot-dip flat products with metal coatings, for example, of

- zinc or zinc-iron alloy (see EN 10 142 and EN 10 147);
- aluminium-zinc alloy (see EN 10 215<sup>1)</sup>);
- zinc-aluminium alloy (see EN 10 214<sup>1)</sup>);
- aluminium-silicon alloy (see EURONORM 154);
- lead alloy (see EURONORM 153),

provided the relevant technical delivery conditions do not contain any different or additional specifications and no other agreements are reached at the time of ordering.

**1.3** This European Standard does not apply to

- cold rolled or hot rolled uncoated steel flat products (see EN 10 131 and EN 10 051);
- electrolytic coated steel flat products (see EN 10 152, for example).

## 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 European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- |             |   |
|-------------|---|
| EN 10 020   | Definition and classification of steel grades   |
| EN 10 027-1 | Designation systems for steels; steel names and principal symbols   |
| EN 10 051   | Continuously hot rolled uncoated unalloyed and alloy steel plate, sheet and strip; tolerances on dimensions and shape |
| EN 10 079   | Definition of steel products  |
| EN 10 131   | Cold rolled uncoated flat products in low carbon steel for cold forming; tolerances on dimensions and shape           |
| EN 10 142   | Continuously hot-dip galvanized mild steel sheet and strip for cold forming; technical delivery conditions            |

<sup>1)</sup> In course of preparation.

EN 10147	Continuously hot-dip zinc-coated structural steel sheet and strip; technical delivery conditions
EN 10152	Electrolytically zinc coated cold rolled steel flat products; technical delivery conditions
EN 10214 <sup>1)</sup>	Continuously hot-dip zinc-aluminium (ZA) coated steel sheet and strip; technical delivery conditions
EN 10215 <sup>1)</sup>	Continuously hot-dip aluminium-zinc (AZ) coated steel sheet and strip; technical delivery conditions
EURONORM 153-80 <sup>2)</sup>	Hot-dip terne (lead alloy) coated cold reduced carbon steel flat rolled products of commercial and drawing qualities; technical delivery conditions
EURONORM 154-80 <sup>2)</sup>	Hot-dip aluminium-silicon coated carbon steel flat rolled products of commercial and drawing qualities; technical delivery conditions

### 3 Definitions

For the purposes of this standard, and in addition to the definitions given in EN 10020 and EN 10079, the following definitions apply.

**3.1 hot-dip metal coating:** Application of a metal coating by dipping suitably prepared products in a bath of molten metal, e.g. aluminium, lead, zinc or their alloys. For the purposes of this standard, wide steel strip is continuously hot-dip coated and where necessary, further processed by longitudinal division into narrower strip (slit strip) or by being cut to form sheet or cut lengths.

**3.2 coating mass:** Total mass of coating on both sides of product (expressed in grams per square metre).

### 4 Designation

**4.1** The products covered by this European Standard shall be designated as follows in the order given:\*)

- name of product (strip, sheet or cut length);
- number of this European Standard (EN 10143);
- nominal thickness, in mm;
- letter S for products ordered with special thickness tolerances;
- nominal width, in mm;
- letter S for products ordered with special width tolerances;
- nominal length, in mm (for sheet and cut lengths only);
- letter S for sheet and cut lengths ordered with special length tolerances;
- letters FS for sheet and cut lengths ordered with special flatness tolerances.

**4.2** The designation in accordance with 4.1 shall be supplemented by the complete designation of the steel grade ordered (e.g. as specified in EN 10142, EN 10147, EN 10214, etc.; see 1.2).

### 4.3 Examples of designation

a) Strip according to this European Standard with a nominal thickness of 1,20 mm and a nominal width of 1500 mm, made from steel designated FeE 250G Z275 NA-C in EN 10147:

Strip EN 10143 – 1,20 × 1500

Steel EN 10147 – FeE 250G Z275 NA-C

NOTE: In the example mentioned above, the designation of the steel grade complies with the November 1991 edition of EN 10147. In the revised edition of that standard (which will be based on EN 10027-1), the designation of that steel grade will read: S250GD + Z275-NA-C.

b) Sheet according to this European Standard with a nominal thickness of 0,80 mm, ordered with special thickness tolerances (S), a nominal width of 1200 mm, ordered with special width tolerances (S), and a nominal length of 2500 mm, ordered with special flatness tolerances (FS), made from steel designated DX53D + ZA 130-B-C in EN 10214:

Sheet EN 10143 –

0,80 S × 1200 S × 2500 – FS

Steel EN 10214 – DX53D + ZA 130-B-C

### 5 Condition on supply

**5.1** Flat products according to this European Standard shall be supplied with:

- normal or special tolerances on thickness (see tables 1 and 2);
- normal or special tolerances on width (see tables 3 and 4);
- normal or special tolerances on length for sheet and cut lengths (see table 5);
- normal or special tolerances on flatness for sheet and cut lengths (see tables 6 and 7).

**5.2** In the absence of information in the order for the condition on supply according to 5.1, the products shall be supplied with normal tolerances on thickness, width, length and flatness.

### 6 Tolerances on dimensions and shape

#### 6.1 Thickness

**6.1.1** The tolerances on thickness are given in

- table 1 for hot-dip metal-coated flat products made from low-carbon steels for cold forming (e.g. as specified in EN 10142) and from structural steels with a minimum yield strength < 280 N/mm<sup>2</sup>, or grade FeE 550G (to be redesignated S 550GD) with a minimum yield strength of 550 N/mm<sup>2</sup> in the unannealed condition;
- table 2 for hot-dip metal-coated flat products made from structural steels with a minimum yield strength ≥ 280 N/mm<sup>2</sup>.

**6.1.2** Thickness tolerances that are closer than the special tolerances given in tables 1 and 2 may be agreed at the time of ordering.

<sup>2)</sup> Prior to adoption as European Standards, either the EURONORMs referred to or the corresponding national standards may be applied.