



SLOVENSKI STANDARD

SIST EN 10131:2006

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SIST EN 10131:1997

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Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape

Kaltgewalzte Flacherzeugnisse ohne Überzug und mit elektrolytischem Zink- oder Zink-Nickel-Überzug aus weichen Stählen sowie aus Stählen mit höherer Streckgrenze zum Kaltumformen - Grenzabmaße und Formtoleranzen

SIST EN 10131:2006

Produits plats laminés a froid, non revetus ou revetus de zinc ou de zinc-nickel par voie électrolytique, en acier a bas carbone et en acier a haute limite d'élasticité pour formage a froid - Tolérances sur les dimensions et sur la forme

Ta slovenski standard je istoveten z: EN 10131:2006

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English Version

Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape

Produits plats laminés à froid, non revêtus ou revêtus de zinc ou de zinc-nickel par voie électrolytique, en acier à bas carbone et en acier à haute limite d'élasticité pour formage à froid - Tolérances sur les dimensions et sur la forme

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This European Standard was approved by CEN on 12 June 2006.

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.

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.

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



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Foreword

This document (EN 10131:2006) has been prepared by Technical Committee ECISS/TC 13 “Flat products for cold working - Qualities, dimensions, tolerances and specific tests”, the secretariat of which is held by IBN.

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 January 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

This document supersedes EN 10131:1991.

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

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1 Scope

This European Standard applies to cold rolled uncoated and electrolytically zinc or zinc-nickel coated low carbon and high yield strength steel flat products for cold forming with a minimum thickness of 0,35 mm and, unless otherwise agreed at the time of ordering, less than or equal to 3 mm thick, delivered in sheet, wide strip, slit wide strip or cut lengths obtained from slit wide strip or sheet. The concerned standards are EN 10130, EN 10152, EN 10271, EN 10209, EN 10268 prEN 10336 and prEN 10338.

It does not apply to cold rolled strip (rolled width < 600 mm) or to flat cold rolled products for which there is a specific standard, in particular the following:

- cold rolled non-grain oriented magnetic steel sheet and strip (EN 10106);
- cold rolled electrical non-alloy and alloy steel sheet and strip delivered in the semi-processed state (EN 10341);
- tinsplate and ECCS (EN 10202);
- blackplate in coils (EN 10205);
- cold rolled uncoated non-alloy mild steel narrow strip for cold forming (EN 10139).

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 10079:1992, *Definition of steel products* [SIST EN 10131:2006
https://standards.iteh.ai/catalog/standards/sist/13ded2f0-f0d4-4d4e-9574-bd7557aee9c1/sist-en-10131-2006](https://standards.iteh.ai/catalog/standards/sist/13ded2f0-f0d4-4d4e-9574-bd7557aee9c1/sist-en-10131-2006)

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 10079:1992 and the following apply.

3.1 nominal thickness

whole specified thickness of the coated or uncoated product

NOTE In the case of coated products, it includes both substrate and coating.

4 Designation

4.1 Products conforming to this European standard shall be designated in the following order (see also clause 5):

- a) type of product (sheet, wide strip, slit wide strip or cut length);
- b) reference to this European Standard (EN 10131);
- c) nominal thickness in millimetres;
- d) letter S for products ordered with special tolerances on thickness;
- e) nominal width in millimetres;

- f) letter S for products ordered with special tolerances on width;
- g) nominal length in millimetres;
- h) letter S for products ordered with special tolerances on length (sheets and cut lengths only);
- i) letter FS for sheets or cut lengths ordered with special tolerances on flatness;
- j) letters CS for slit strip ordered with special tolerances on camber.

4.2 The product designation in accordance with 4.1 shall be followed by the complete designation of the steel ordered (e.g. according to EN 10130).

EXAMPLE 1 Wide strip according to this European standard of nominal thickness 1,20 mm, nominal width of 1500 mm in steel DC04-A-m as specified in EN 10130:

Wide strip EN 10131-1,20x1500
Steel EN 10130-DC04-A-m

EXAMPLE 2 Sheet according to this European standard of nominal thickness 0,80 mm ordered with special thickness tolerance (S), nominal width of 1200 mm with special tolerances on width (S), nominal length of 2500 mm and with special tolerances on flatness in steel DC06-B-g as specified in EN 10130:

Sheet EN 10131-0,80Sx1200Sx2500FS
Steel EN 10130-DC06-B-g

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5 Condition of delivery

5.1 Flat products according to this European standard may be delivered as follows:

- a) with normal or special thickness tolerances (see Tables 1 to 4);
- b) with normal or special width tolerances (see Tables 5 and 6);
- c) with normal or special length tolerances for sheet or cut lengths (see Table 7);
- d) with normal or special flatness tolerances for sheet or cut lengths (see Tables 8 and 9);
- e) with normal or special tolerances on camber for slit strip of width less than 600 mm (see clause 11).

5.2 In the absence of information on the order in respect of the condition of delivery given in 5.1 the flat products shall be delivered with normal tolerances on thickness, width, length, flatness and camber.

6 Tolerances on thickness

The thickness may be measured at any point located more than 40 mm from the edges.

In the case of slit coils or cut lengths having a width of 80 mm or below, the position of the measurement shall be at the middle axis.

The tolerances on thickness shall be as given in Tables 1 to 4 and apply over the whole length.

Tolerances more severe than special tolerances may be agreed at the time of the order.

Table 1 — Tolerances on thickness for steel grades with a specified minimum yield strength $Re < 260 \text{ MPa}^1$

Dimensions in millimetres

Nominal thickness	Normal tolerances ^a for a nominal width w			Special tolerances (S) ^a for a nominal width w		
	≤ 1200	> 1 200 to ≤ 1 500	> 1500	≤ 1 200	> 1 200 to ≤ 1 500	> 1 500
= 0,35 to 0,40	± 0,03	± 0,04	± 0,05	± 0,020	± 0,025	± 0,030
> 0,40 to 0,60	± 0,03	± 0,04	± 0,05	± 0,025	± 0,030	± 0,035
> 0,60 to 0,80	± 0,04	± 0,05	± 0,06	± 0,030	± 0,035	± 0,040
> 0,80 to 1,00	± 0,05	± 0,06	± 0,07	± 0,035	± 0,040	± 0,050
> 1,00 to 1,20	± 0,06	± 0,07	± 0,08	± 0,040	± 0,050	± 0,060
> 1,20 to 1,60	± 0,08	± 0,09	± 0,10	± 0,050	± 0,060	± 0,070
> 1,60 to 2,00	± 0,10	± 0,11	± 0,12	± 0,060	± 0,070	± 0,080
> 2,00 to 2,50	± 0,12	± 0,13	± 0,14	± 0,080	± 0,090	± 0,100
> 2,50 to 3,00	± 0,15	± 0,15	± 0,16	± 0,100	± 0,110	± 0,120

^a The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50 % over a length of 10 metres. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal and special tolerances over or under.

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Table 2 — Tolerances on thickness for steel grades with a specified minimum yield strength $260 \text{ MPa} \leq Re < 340 \text{ MPa}^1$

Dimensions in millimetres

Nominal thickness	Normal tolerances ^a for a nominal width w			Special tolerances (S) ^a for a nominal width w		
	≤ 1200	> 1200 to ≤ 1500	> 1500	≤ 1 200	> 1 200 to ≤ 1 500	> 1 500
= 0,35 to 0,40	± 0,04	± 0,05	± 0,06	± 0,025	± 0,030	± 0,035
> 0,40 to 0,60	± 0,04	± 0,05	± 0,06	± 0,030	± 0,035	± 0,040
> 0,60 to 0,80	± 0,05	± 0,06	± 0,07	± 0,035	± 0,040	± 0,050
> 0,80 to 1,00	± 0,06	± 0,07	± 0,08	± 0,040	± 0,050	± 0,060
> 1,00 to 1,20	± 0,07	± 0,08	± 0,10	± 0,050	± 0,060	± 0,070
> 1,20 to 1,60	± 0,09	± 0,11	± 0,12	± 0,060	± 0,070	± 0,080
> 1,60 to 2,00	± 0,12	± 0,13	± 0,14	± 0,070	± 0,080	± 0,100
> 2,00 to 2,50	± 0,14	± 0,15	± 0,16	± 0,100	± 0,110	± 0,120
> 2,50 to 3,00	± 0,17	± 0,18	± 0,18	± 0,120	± 0,130	± 0,140

^a The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50 % over a length of 10 metres. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal and special tolerances over or under.

1) 1 MPa = 1 N/mm².

**Table 3 — Tolerances on thickness for steel grades with a specified minimum yield strength
340 MPa ≤ Re ≤ 420 MPa¹⁾**

Dimensions in millimetres

Nominal thickness	Normal tolerances ^a for a nominal width w			Special tolerances (S) ^a for a nominal width w		
	≤ 1200 ^b	> 1 200 to ≤ 1 500	> 1500	≤ 1200 ^b	> 1 200 to ≤ 1 500	> 1 500
= 0,35 to 0,40	± 0,04	± 0,05	± 0,06	± 0,030	± 0,035	± 0,040
> 0,40 to 0,60	± 0,05	± 0,06	± 0,07	± 0,035	± 0,040	± 0,050
> 0,60 to 0,80	± 0,06	± 0,07	± 0,08	± 0,040	± 0,050	± 0,060
> 0,80 to 1,00	± 0,07	± 0,08	± 0,10	± 0,050	± 0,060	± 0,070
> 1,00 to 1,20	± 0,09	± 0,10	± 0,11	± 0,060	± 0,070	± 0,080
> 1,20 to 1,60	± 0,11	± 0,12	± 0,14	± 0,070	± 0,080	± 0,100
> 1,60 to 2,00	± 0,14	± 0,15	± 0,17	± 0,080	± 0,100	± 0,110
> 2,00 to 2,50	± 0,16	± 0,18	± 0,19	± 0,110	± 0,120	± 0,130
> 2,50 to 3,00	± 0,20	± 0,20	± 0,21	± 0,130	± 0,140	± 0,150

^a The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50 % over a length of 10 metres. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal and special tolerances over or under.

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**Table 4 — Tolerances on thickness for steel grades with a specified minimum yield strength
420 MPa < Re¹⁾**

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Dimensions in millimetres

Nominal thickness	Normal tolerances ^a for a nominal width w			Special tolerances (S) ^a for a nominal width w		
	≤ 1200	> 1 200 to ≤ 1 500	> 1 500	≤ 1200	> 1 200 to ≤ 1 500	> 1 500
= 0,35 to 0,40	± 0,05	± 0,06	± 0,07	± 0,035	± 0,040	± 0,050
> 0,40 to 0,60	± 0,05	± 0,07	± 0,08	± 0,040	± 0,050	± 0,060
> 0,60 to 0,80	± 0,06	± 0,08	± 0,10	± 0,050	± 0,060	± 0,070
> 0,80 to 1,00	± 0,08	± 0,10	± 0,11	± 0,060	± 0,070	± 0,080
> 1,00 to 1,20	± 0,10	± 0,11	± 0,13	± 0,070	± 0,080	± 0,100
> 1,20 to 1,60	± 0,13	± 0,14	± 0,16	± 0,080	± 0,100	± 0,110
> 1,60 to 2,00	± 0,16	± 0,17	± 0,19	± 0,100	± 0,110	± 0,130
> 2,00 to 2,50	± 0,19	± 0,20	± 0,22	± 0,130	± 0,140	± 0,160
> 2,50 to 3,00	± 0,22	± 0,23	± 0,24	± 0,160	± 0,170	± 0,180

^a The thickness tolerances in the region of cold rolled welds may be increased by a maximum of 50 % over a length of 10 metres. This increase is applicable to all thicknesses and, unless otherwise agreed at the time of order, to normal and special tolerances over or under.

1) 1 MPa = 1 N/mm².