



# SLOVENSKI STANDARD

## oSIST prEN 10334:2023

01-september-2023

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**Jekla za embalažo - Ploščati jekleni izdelki za uporabo v stiku s hrano, pijačami in drugimi izdelki za ljudi in živali - Nprevlečena (črna) pločevina**

Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Non-coated steel (blackplate)

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Verpackungsblech - Flacherzeugnisse aus Stahl für die Verwendung in Berührung mit Lebensmitteln, Produkten und Getränken für den menschlichen und tierischen Verzehr - Unbeschichteter Stahl (Feinstblech)

Acier pour emballage - Produits plats en acier destiné à entrer au contact des denrées, produits et boissons pour l'alimentation de l'homme et des animaux - Acier non revêtu (fer noir)

**Ta slovenski standard je istoveten z: prEN 10334**

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**ICS:**

67.250	Materiali in predmeti v stiku z živali	Materials and articles in contact with foodstuffs
77.140.50	Ploščati jekleni izdelki in polizdelki	Flat steel products and semi-products

**oSIST prEN 10334:2023**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 10334**

July 2023

ICS 67.250; 77.140.50

Will supersede EN 10334:2005

English Version

## Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Non-coated steel (blackplate)

Acier pour emballage - Produits plats en acier destiné à entrer au contact des denrées, produits et boissons pour l'alimentation de l'homme et des animaux - Acier non revêtu (fer noir)

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 459/SC 9.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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

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## European foreword

This document (prEN 10334:2023) has been prepared by Technical Committee CEN/TC 459 “Coated and uncoated flat products to be used for cold forming”<sup>1</sup>, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 10334:2005.

The main changes compared to the previous edition are listed below:

- the normative references have been updated;
- a note has been added in 6.2;
- Clause 9 has been updated.

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<sup>1</sup> Through its sub-committee CEN/TC 459/SC 9 “Coated and uncoated flat products to be used for cold forming” (secretariat: AFNOR).

**prEN 10334:2023 (E)****1 Scope**

This document specifies the maximum content for alloying and residual elements (see Table 1) present in steel (usually called blackplate) used in the manufacture of packaging and packaging components or for coated steel which, as a finished product, are intended for use in direct contact with foodstuffs, products and beverages for human and pet food. For such use blackplate is normally coated but can be used uncoated for some fatty or dry products.

The main examples of use are:

- tinplate and electrolytic chromium/chromium oxide coated steel for the manufacture of food and beverage cans;
- cans for conditioning foodstuffs (sugar, tea, cake, chocolate, pasta, etc.);
- non-mineral oil drums, kegs, barrels.

The choice of material is appropriate for the conditions of use.

This document applies to cold-rolled strips in the form a coil or sheets.

This document does not apply to categories of steel other than steel for packaging intended for use in contact with foodstuffs, products or beverages for human or animal consumption.

**2 Normative references**

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.

prEN 10205:2023, *Cold reduced tinmill products - Blackplate*

EN ISO 14284, *Steel and iron - Sampling and preparation of samples for the determination of chemical composition (ISO 14284)*

**3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

**3.1****blackplate**

low-carbon mild steel which has been subjected to cold reduction, is used mainly in the manufacture of tinplate and electrolytic chromium/chromium oxide coated steel and has a minimum iron content greater than 95 % by mass

**3.2****steel intended for use in contact with foodstuffs**

steel which under its normal or foreseeable conditions of use, does not transfer its constituents to foodstuffs in quantities which could endanger human or animal health or which could bring about an unacceptable change in the foodstuffs or a deterioration in their organoleptic properties

### 3.3

#### **steel for packaging**

alloyed/non alloyed steel flat product intended for manufacturing cans and other packaging components for drinks or food products

Note 1 to entry: According to the applications considered, this steel can be covered with a metal coating or with an additional organic coating.

### 3.4

#### **steel for other applications than packaging**

alloyed/non alloyed steel flat product or stainless steel that is not intended for the manufacture of cans and other packaging components for drinks or food products

Note 1 to entry: It can be used for the manufacture of articles intended to come into contact with foodstuffs.

## 4 Information to be provided by the purchaser

The information to be provided by the purchaser at the time of enquiry and order shall satisfy the requirements of Clause 5 of prEN 10205:2023.

NOTE Furthermore, the purchaser can specify the type of oil suitable for food contact to be used when the product is delivered oiled.

## 5 Dimensions and dimensional tolerances

The nominal dimensions shall be agreed at the time of enquiry and order.

Dimensional tolerances shall meet the requirements of prEN 10205:2023.

## 6 Requirements

### 6.1 Steel-making process

The steel-making process which meets the requirements of this document shall be left to the choice of the manufacturer.

The continuous cast process is recommended.

### 6.2 Chemical composition

The chemical composition of steel shall comply with Table 1.

NOTE This table is identical in EN 10333, EN 10334 and EN 10335.

**Table 1 — Chemical composition <sup>a, b</sup>**

<b>Specified elements</b>	<b>Max. Content in % (of mass)</b>
Al Aluminium	1,0
As Arsenic	0,030
B Boron	0,05
C Carbon	0,30
Cd + Pb + Hg <sup>b</sup>	0,0100
Cd Cadmium <sup>b</sup>	0,0100
Pb Lead <sup>b</sup>	0,0100
Hg Mercury <sup>b</sup>	0,005
Cr Chromium	0,50
Cu Copper	0,40
Mn Manganese	2,50
Mo Molybdenum	0,10
N Nitrogen	0,10
Nb Niobium	0,10
Ni Nickel	0,30
P Phosphorus	0,10
S Sulphur	0,050
Si Silicon	1,0
Sn Tin	0,10
Ti Titanium	0,30
V Vanadium	0,10
W Tungsten	0,10
Zr Zirconium	0,050
Other elements measured individually <sup>a</sup>	0,050
<p><sup>a</sup> The chemical elements contained within the section “other elements measured individually” are those that can appear in a very small quantity but are not added deliberately during the steel making process.</p> <p><sup>b</sup> The elements Cd, Pb and Hg are not added deliberately during the steel making process. The specification relating to the amount of these 3 elements makes reference to Directive 94/62/EC – see point 3.</p>	



### 6.3 Oiling

Unless otherwise specified at the time of enquiry and order, the products shall be delivered covered with oil suitable for use in contact with foodstuffs.

NOTE Where blackplate is used in a process (e.g. conversion to tinfoil or electrolytic chromium/chromium oxide coated steel) which involves rigorous pre-cleaning of the blackplate surface this requirement is not necessary.

## 7 Checks

At the request of the purchaser, conformity to the order requirements shall be proven, in accordance with this document.

## 8 Sampling

The sampling process and the preparation of the sample shall be in accordance with the requirements of EN ISO 14284.

Unless otherwise agreed at the time of enquiry and the order, the choice of physical or chemical analytical method shall be at the discretion of the manufacturer. In cases of dispute, the analysis shall be conducted by a laboratory which has been approved by both parties. In such cases, an agreement shall be drawn up relating to the analytical method to be used and, if possible, reference shall be made to the relevant European standards.

## 9 Designation

The designation shall be in accordance with Clause 5 of prEN 10205:2023 with no additional information relating to food safety.

## 10 Marking, labelling and packaging

Each coil or bundle shall have a label indicating the reference to this document, the name and trademark of the manufacturer and the batch identification.

The packaging specifications shall be agreed at the time of enquiry and order.

## Bibliography

- [1] Council Directive 89/109/EEC of 21 December 1988 on materials and articles intended to come into contact with foodstuffs
- [2] Directive 94/62/EC of the European Parliament and Council of 20 December 1994 on packaging and packaging waste
- [3] Council of Europe: Guidelines on metals and alloys intended to come into contact with foodstuffs
- [4] EN 10333, *Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Tin coated steel (tinplate)*
- [5] EN 10335, *Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products or beverages for human and animal consumption - Non alloyed electrolytic chromium/chromium oxide coated steel*

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