



SLOVENSKI STANDARD

oSIST prEN 10335:2023

01-september-2023

Jekla za embalažo - Ploščati jekleni izdelki za uporabo v stiku s hrano, pijačami in drugimi izdelki za ljudi in živali - Nelegirana pločevina, galvansko prekrita s kromom/kromovim oksidom

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

Verpackungsblech - Flacherzeugnisse aus Stahl für die Verwendung in Berührung mit Lebensmitteln, Produkten und Getränken für den menschlichen und tierischen Verzehr - Unlegierter elektrolytisch spezialverchromter Stahl

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 allié revêtu de chrome

Ta slovenski standard je istoveten z: prEN 10335

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 10335:2023

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 10335

July 2023

ICS 67.250; 77.140.50

Will supersede EN 10335:2005

English Version

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

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 allié revêtu de chrome

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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 10335:2023) has been prepared by Technical Committee CEN/TC 459 “Coated and uncoated flat products to be used for cold forming”¹, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 10335:2005.

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

- the normative references have been updated;
- a note has been added in 6.1;
- Clauses 7 and 8 have been updated.

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

prEN 10335:2023 (E)

1 Scope

This document specifies the base steel to be used and the composition of the metallic coating to be used for the manufacture of lacquered electrolytic chromium/chromium oxide coated steel and articles which, as a finished product, are intended for use in direct contact with foodstuffs or products for human or animal consumption.

The main examples of use are:

- drinks cans;
- food cans;
- closures and ends.

The material is to be chosen in accordance with the conditions for its use.

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.

EN 10202:2022, *Cold reduced tinmill products - Electrolytic tinplate and electrolytic chromium/chromium oxide coated steel*

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

electrolytic chromium/chromium oxide coated steel

cold reduced low carbon mild steel sheet or coil electrolytically treated to produce on both surfaces a duplex film of metallic chromium adjacent to the steel substrate with a top layer of hydrated chromium oxides or hydroxides

Note 1 to entry: This can either be produced by a hexavalent chromium process (ECCS) or by a trivalent chromium process (ECCS-RC).

3.2

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

3.3

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

3.4

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.

3.5

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 EN 10202:2022.

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.

The dimensional tolerances shall meet the requirements of EN 10202:2022, Clause 9.

6 Requirements

6.1 Base metal

The composition of the base metal shall meet the requirements of Table 1.

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

Table 1 — Chemical composition ^{a, b}

Specified elements	Max. Content in % (of mass)
Al Aluminium	1,0
As Arsenic	0,030
B Boron	0,05
C Carbon	0,30
Cd + Pb + Hg ^b	0,0100
Cd Cadmium ^b	0,0100
Pb Lead ^b	0,0100
Hg Mercury ^b	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 ^a	0,050
<p>^a 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>^b 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>	

6.2 Chromium coating

The chromium coating shall comply with the requirements of EN 10202:2022.

6.3 Oiling

Unless otherwise specified, at the time of enquiry and order, the products delivered shall be lubricated with an oil which is suitable for contact with foodstuffs, as defined in EN 10202:2022.

7 Checks

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

8 Designation

The designation shall comply with EN 10202 with no additional information relating to food safety.

9 Marking, labelling, packaging

Each coil or bundle shall display 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.

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Bibliography

- [1] Directive 89/109/EEC of 21 December 1988 on materials and articles intended for use 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 10334, *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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