

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 10335:2024 sisaldab Euroopa standardi EN 10335:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.11.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 10335:2024 consists of the English text of the European standard EN 10335:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 20.11.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 67.250, 77.140.50

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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/oxyde de chrome électrolytique

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

This European Standard was approved by CEN on 23 October 2024.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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## European foreword

This document (EN 10335:2024) has been prepared by Technical Committee CEN/TC 459 “ECISS – European Committee for Iron and Steel Standardization”<sup>1</sup>, the secretariat of which is held by AFNOR.

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 2025 and conflicting national standards shall be withdrawn at the latest by May 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 10335:2005.

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

- the normative references have been updated;
- definitions 3.1, 3.2, 3.3, 3.4, 3.5 have been updated;
- a note has been added in 6.1;
- Clauses 7 and 8 have been updated;
- the Bibliography has been updated.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

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

## 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