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OTSTARBEKS. OSA 2: LEGEERIMATA KVALITEET- JA  
ERITERASED

Open die steel forgings for general engineering  
purposes - Part 2: Non-alloy quality and special steels

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10250-2:2022 sisaldab Euroopa standardi EN 10250-2:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 10250-2:2022 consists of the English text of the European standard EN 10250-2:2022.
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Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.03.2022.	Date of Availability of the European standard is 30.03.2022.
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ICS 77.140.45, 77.140.85

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English Version

Open die steel forgings for general engineering purposes -  
Part 2: Non-alloy quality and special steels

Pièces forgées en acier pour usage général - Partie 2:  
Aciers de qualité non alliés et aciers spéciaux

Freiformschmiedestücke aus Stahl für allgemeine  
Verwendung - Teil 2: Unlegierte Qualitäts- und  
Edelstähle

This European Standard was approved by CEN on 14 February 2022.

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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 foreword

This document (EN 10250-2:2022) 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of an identical text or by endorsement, at the latest by September 2022, and conflicting national standards shall be withdrawn at the latest by September 2022.

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 10250-2:1999.

In comparison with the previous edition, the following technical modifications have been made:

- updating of normative references;
- deletion of previous Table 2 - Permissible deviations between the product analysis and the limiting values given in Table 1 for the cast analysis;
- deletion of C 22 steel grade from all the tables.

EN 10250, *Open die steel forgings for general engineering purposes*, consists of the following parts:

- *Part 1: General requirements;*
- *Part 2: Non-alloy quality and special steels;*
- *Part 3: Alloy special steels;*
- *Part 4: Stainless steels.*

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 organisations 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, Turkey and the United Kingdom.

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<sup>1</sup> Through its sub-committee SC 11 “Steel castings and forgings” (secretariat: AFNOR).

## 1 Scope

This document specifies the technical delivery requirements for open die forgings, forged bars and products pre-forged and finished in ring rolling mills, manufactured from non-alloy quality and special steels and supplied in the normalized, normalized and tempered, quenched and tempered or annealed condition.

The majority of steels listed in this document, with properties in the quenched and tempered condition up to 160 mm thickness, are identical to steels specified in EN ISO 683-1 and EN ISO 683-2 and more extensive information on hardenability and technological properties is given in these standards.

General information on technical delivery conditions is given in EN 10021.

## 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 10250-1:2022, *Open die steel forgings for general engineering purposes - Part 1: General requirements*

EN ISO 683-1:2018, *Heat-treatable steels, alloy steels and free-cutting steels - Part 1: Non-alloy steels for quenching and tempering (ISO 683-1:2016)*

EN ISO 6506-1, *Metallic materials - Brinell hardness test - Part 1: Test method (ISO 6506-1)*

## 3 Terms and definitions

No terms and definitions are listed in this document.

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

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

## 4 Chemical composition

### 4.1 Cast analysis

The chemical composition of the steel shall be determined by cast analysis and shall conform to the analysis given in Table 1 (see EN 10250-1:2022, A.7 and A.8).

Measures should be taken to prevent the addition from the scrap, or other material used in the manufacture of the steel, of such elements which affect the hardenability, mechanical properties and applicability of the steel.

### 4.2 Product analysis

The product analysis shall not deviate from the specified cast analysis (see Table 1) by more than the values specified in EN ISO 683-1:2018, Table 4 (see EN 10250-1:2022, 9.2).