

Laser welded tailored blanks - Technical delivery conditions

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10359:2023 sisaldab Euroopa standardi EN 10359:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 10359:2023 consists of the English text of the European standard EN 10359:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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English Version

## Laser welded tailored blanks - Technical delivery conditions

Flans raboutés laser - Conditions techniques de livraison

Laserstrahlgeschweißte Tailored Blanks aus Stahlfeinblech - Technische Lieferbedingungen

This European Standard was approved by CEN on 17 March 2023.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (EN 10359:2023) 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of an identical text or by endorsement, at the latest by November 2023 and conflicting national standards shall be withdrawn at the latest by November 2023.

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 10359:2015.

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

- addition of three definitions;
- modification of the convexity requirement when filler wire is added for cold stamped LWB;
- addition of a requirement in the case of hot stamped LWB;
- modification of the convexity requirement;
- heat treatment guidelines;
- modification of the destructive testing requirement (tensile test and hardness test);
- modification of the cross-section measurement method: exclusion of coating;
- definition of the weld cross section measurement method;
- suppression of the weld sagging defect as being redundant with other existing defects.

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 requirements for laser welded tailored blanks (LWB) made of steels for all cold or hot forming processes.

This document is applicable to all steel grades with or without metallic and/or organic coatings, having uniform or different sheet thickness, welded with or without extra material addition.

After the welding process, LWB are further processed to pressed parts by forming operations under the responsibility of the processor.

## 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 10131, *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*

EN 10143, *Continuously hot-dip coated steel sheet and strip — Tolerances on dimensions and shape*

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

## 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

#### **laser welded tailored blanks**

##### **LWB**

laser welded metal sheets of uniform and/or different thickness and/or uniform or different steel grades, both with and without surface coating

### 3.2

#### **part submission warrant**

##### **PSW**

technical report used in the automotive industry when submitting a new car part to a car part manufacturer for approval as part of a production car part approval process

Note 1 to entry: The part manufacturer can be a carmaker or a subcontracting company delivering car parts to the carmaker.

### 3.3

#### **supplier**

manufacturer of LWB

### 3.4

#### **customer**

purchaser of LWB