

**Alumiinium ja alumiiniumisulamid. Lehed, ribad ja  
plaadid. Osa 1: Tehnilised kontrolli- ja tarnetingimused  
KONSOLIDEERITUD TEKST**

Aluminium and aluminium alloys - Sheet, strip and plate -  
Part 1: Technical conditions for inspection and delivery  
CONSOLIDATED TEXT

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 485-1:2008+A1:2009 sisaldab Euroopa standardi EN 485-1:2008+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.12.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.10.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 485-1:2008+A1:2009 consists of the English text of the European standard EN 485-1:2008+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 28.10.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

## Aluminium and aluminium alloys - Sheet, strip and plate - Part 1: Technical conditions for inspection and delivery

Aluminium et alliages d'aluminium - Tôles, bandes et tôles  
épaisses - Partie 1: Conditions techniques de contrôle et de  
livraison

Aluminium und Aluminiumlegierungen - Bänder, Bleche  
und Platten - Teil 1: Technische Lieferbedingungen

This European Standard was approved by CEN on 19 January 2008 and includes Amendment 1 approved by CEN on 20 September 2009.

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## Foreword

This document (EN 485-1:2008+A1:2009) has been prepared by Technical Committee CEN/TC 132 "Aluminium and aluminium alloys", 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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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

This document includes Amendment 1, approved by CEN on 2009-09-20.

This European Standard supersedes  $\square_{A1}$  EN 485-1:2008  $\square_{A1}$ .

The start and finish of text introduced or altered by amendment is indicated in the text by tags  $\square_{A1}$   $\square_{A1}$ .

Within its programme of work, Technical committee CEN/TC 132 entrusted CEN/TC 132/WG 7 "Sheets, strips and plates" to revise EN 485-1:1993.

EN 485 comprises the following parts under the general title "Aluminium and aluminium alloys — Sheet, strip and plate":

- *Part 1: Technical conditions for inspection and delivery*
- *Part 2: Mechanical properties*
- *Part 3: Tolerances on dimensions and form for hot-rolled products*
- *Part 4: Tolerances on shape and dimensions for cold-rolled products*

Besides very slight additional adjustments in the text and update of normative references, the following technical changes have been made:

- Clause 1: thickness increased to 400 mm;
- addition of Clause 6 (previously in EN 485-2);
- Clause 7 amended;
- addition of Clause 10;
- addition of Bibliography.

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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, Cyprus, Czech Republic,

Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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## 1 Scope

This document specifies the technical conditions for inspection and delivery of wrought aluminium and wrought aluminium alloy sheet, strip and plate for <sup>A1</sup> general applications <sup>A1</sup>. It also includes <sup>A1</sup> provisions <sup>A1</sup> for ordering and testing.

It applies to products with a thickness over 0,20 mm up to and including 400 mm.

<sup>A1</sup> *deleted text* <sup>A1</sup>

<sup>A1</sup> For many special applications of aluminium strip, sheet and plate, specific European Standards exist, where different or additional requirements are formulated and the appropriate alloys and tempers are selected: see Annex A. Most of these special European Standards refer to provisions of this document.

The selection of the relevant special European Standards is under the responsibility of the purchaser.

Whenever the application involves special properties, such as corrosion resistance, toughness, fatigue strength, surface appearance and welding properties, the user should consult the supplier and consider the relevant special European Standard, as applicable. <sup>A1</sup>

## 2 Normative references

The following referenced documents are indispensable for the application 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.

<sup>A1</sup> EN 485-2:2008 <sup>A1</sup>, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 2: Mechanical properties*

EN 485-3, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 3: Tolerances on dimensions and form for hot-rolled products*

EN 485-4, *Aluminium and aluminium alloys — Sheet, strip and plate — Part 4: Tolerances on shape and dimensions for cold-rolled products*

EN 515, *Aluminium and aluminium alloys — Wrought products — Temper designations*

EN 573-3, *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Part 3: Chemical composition and form of products*

EN 1669, *Aluminium and aluminium alloys — Test methods — Earing test for sheet and strip*

EN 2004-1, *Aerospace series — Test methods for aluminium and aluminium alloy products — Part 1: Determination of electrical conductivity of wrought aluminium alloys*

EN 10002-1, *Metallic materials — Tensile testing — Part 1: Method of test at ambient temperature*

EN 10204, *Metallic products — Type of inspection documents*

EN 12258-1:1998, *Aluminium and aluminium alloys — Terms and definitions — Part 1: General terms*

EN 14242, *Aluminium and aluminium alloys — Chemical analysis — Inductively coupled plasma optical emission spectral analysis*

EN 14361, *Aluminium and aluminium alloys — Chemical analysis — Sampling from metal melts*

EN ISO 7438, *Metallic materials — Bend test (ISO 7438:2005)*

EN ISO 20482, *Metallic materials — Sheet and strip — Erichsen cupping test (ISO 20482:2003)*

ISO 9591, *Corrosion of aluminium alloys — Determination of resistance to stress corrosion cracking*

ASTM G34, *Standard Test Method for Exfoliation Corrosion Susceptibility in 2XXX and 7XXX Series Aluminum Alloys (EXCO Test)*

ASTM G47, *Standard Test Method for Determining Susceptibility to Stress-Corrosion Cracking of 2XXX and 7XXX Aluminum Alloy Products*

ASTM G66, *Standard Test Method for Visual Assessment of Exfoliation Corrosion Susceptibility of 5XXX Series Aluminum Alloys (ASSET Test)*

ASTM G67, *Standard Test Method for Determining the Susceptibility to Intergranular Corrosion of 5XXX Series Aluminum Alloys by Mass Loss After Exposure to Nitric Acid (NAMLT Test)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12258-1:1998 and the following apply.

#### 3.1

##### **sheet/plate**

flat rolled product of rectangular cross-section with uniform thickness between 0,20 mm and 6 mm for sheet or above 6 mm for plate, supplied in straight lengths (i.e. flat) usually with trimmed or sawn edges

NOTE 1 For sheet, the thickness does not exceed one-tenth of the width.

NOTE 2 Corrugated, embossed (with patterns, for example grooves, ribs, checkers, tears, buttons, lozenges), coated, edge conditioned and perforated products in this general form when derived from sheet as defined above are classified as sheet.

NOTE 3 Flat sheets and plates material between 3 mm and 15 mm are sometimes called "shate".

#### 3.2

##### **strip**

flat rolled product of rectangular cross-section with uniform thickness over 0,20 mm, supplied in coils usually with trimmed edges

NOTE 1 The thickness does not exceed one-tenth of the width.

NOTE 2 Corrugated, embossed (with patterns, for example grooves, ribs, checkers, tears, buttons, lozenges), coated, edge conditioned and perforated products in this general form when derived from sheet as defined above are classified as sheet.

NOTE 3 "Strip" is sometimes called "coil".

#### 3.3

##### **order document**

document or set of documents agreed between supplier and purchaser at the time of ordering

NOTE An order document can be an order of the purchaser confirmed by the supplier or a quotation of the supplier confirmed by the purchaser.

### 4 Ordering information

The order document shall contain the following:

- a) form and type of product: