



**SLOVENSKI STANDARD**  
**oSIST prEN 12020-1:2021**

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**Aluminij in aluminijeve zlitine - Precizni iztiskani profili v zlitinah EN AW-6060 in EN AW-6063 - 1. del: Tehnični pogoji za pregled in dobavo**

Aluminium and aluminium alloys - Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 - Part 1: Technical conditions for inspection and delivery

Aluminium und Aluminiumlegierungen - Stranggepresste Präzisionsprofile aus Legierungen EN AW-6060 und EN AW-6063 - Teil 1: Technische Lieferbedingungen

Aluminium et alliages d'aluminium - Profils de précision filés en alliages EN AW-6060 et EN AW-6063 - Partie 1: Conditions techniques de contrôle et de livraison

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**Ta slovenski standard je istoveten z: prEN 12020-1**

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**ICS:**

77.150.10      Alumijski izdelki      Aluminium products

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ICS 77.150.10

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## Aluminium and aluminium alloys - Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 - Part 1: Technical conditions for inspection and delivery

Aluminium et alliages d'aluminium - Profilés de précision filés en alliages EN AW-6060 et EN AW-6063  
- Partie 1: Conditions techniques de contrôle et de livraison

Aluminium und Aluminiumlegierungen - Stranggepresste Präzisionsprofile aus Legierungen EN AW-6060 und EN AW-6063 - Teil 1: Technische Lieferbedingungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 132.

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**

<b>Contents</b>	<b>Page</b>
<b>Foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Ordering information</b> .....	<b>6</b>
<b>4.1 General</b> .....	<b>6</b>
<b>4.2 Reference to a drawing</b> .....	<b>7</b>
<b>5 Requirements</b> .....	<b>8</b>
<b>5.1 Production and manufacturing processes</b> .....	<b>8</b>
<b>5.2 Quality control</b> .....	<b>8</b>
<b>5.3 Chemical composition limit</b> .....	<b>8</b>
<b>5.4 Mechanical properties</b> .....	<b>9</b>
<b>5.5 Freedom from surface defects</b> .....	<b>9</b>
<b>5.6 Tolerances on dimensions and form</b> .....	<b>9</b>
<b>5.7 Section mass</b> .....	<b>9</b>
<b>6 Test procedures</b> .....	<b>9</b>
<b>6.1 Sampling</b> .....	<b>9</b>
<b>6.2 Test methods</b> .....	<b>9</b>
<b>7 Inspection documents</b> .....	<b>10</b>
<b>8 Marking of products</b> .....	<b>10</b>
<b>9 Packaging</b> .....	<b>10</b>
<b>10 Arbitration</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>11</b>

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oSIST prEN 12020-1:2021  
<https://standards.iteh.ai/catalog/standards/sist/37bac542-0d22-4916-8080-07dc0d0545ab/osist-pr-en-12020-1-2021>

prEN 12020-1:2021 (E)

## Foreword

This document (prEN 12020-1:2021) has been prepared by Technical Committee CEN/TC 132 “Aluminium and aluminium alloys”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12020-1:2008.

The following technical modifications have been introduced during the revision:

— Modification of the scope.

EN 12020 comprises the following parts under the general title “*Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063*”:

— *Part 1: Technical condition for inspection and delivery*

— *Part 2: Tolerances on dimensions and form.*

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## 1 Scope

This document specifies technical conditions for inspection and delivery of alloys EN AW-6060 and EN AW-6063 extruded precision profiles manufactured with and without a thermal barrier (see Figures 1 and 2) and without further surface treatment.

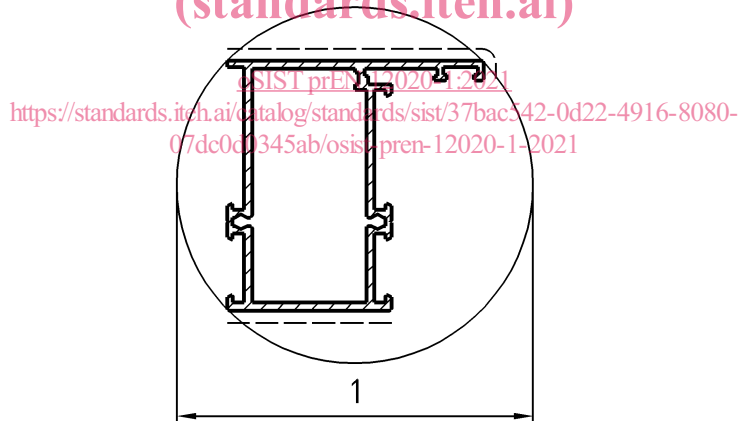
Precision profiles covered in this document are distinguished from extruded profiles for general applications covered in EN 755-9 by the following characteristics:

- they are designed with mostly uniformly wall thicknesses;
- they are mainly used for mechanical engineering, architectural and automotive (except crash-elements) applications;
- the maximum weight by meter is 10 kg/m;
- the maximum wall thickness proportion ( $S_{max}/S_{min}$ ) is 3,5.

In the case of profiles, which, due to the complexity of their design, are difficult to manufacture and specify, special agreements between supplier and purchaser may need to be reached.

NOTE The effect of the thermal barrier material on the dimensional tolerances is covered by EN 12020-2 although the actual thermal barrier material itself is not (see EN 14024).

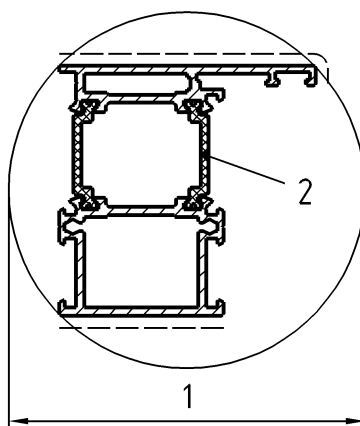
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### Key

- 1 CD maximum 350 mm

**Figure 1 — Profile without thermal barrier**



### Key

- 1 CD maximum 350 mm
- 2 thermal barriers

**Figure 2 — Profile containing thermal barrier**

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

EN 755-1, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 1: Technical conditions for inspection and delivery*

EN 755-2, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles — Part 2: Mechanical properties*

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

EN 12206-1, *Paints and varnishes — Coating of aluminium and aluminium alloys for architectural purposes — Part 1: Coatings prepared from coating powder*

EN 12258-1:2012, *Aluminium and aluminium alloys — Terms and definitions — Part 1: General terms*

EN 12020-2, *Aluminium and aluminium alloys — Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 — Part 2: Tolerances on dimensions and form*

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

EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1)*

EN ISO 7599, *Anodizing of aluminium and its alloys — Method for specifying decorative and protective anodic oxidation coatings on aluminium (ISO 7599)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12258-1:2012 and the following apply.

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

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

#### 3.1

##### order document

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

## 4 Ordering information **ITeh STANDARD PREVIEW** (standards.iteh.ai)

### 4.1 General

The order document shall contain the following: oSIST prEN 12020-1:2021

- a) the designation of the aluminium alloy (https://standards.iteh.ai/catalog/standards/sist/37bac542-0d22-4916-8080-0000345ab031st-prEN-12020-1-2021 EN AW-6060 or EN AW-6063);
- b) the temper of the material for delivery in accordance with EN 755-2 (The temper designations to be used are according to EN 515.);
- c) the application, in particular, when surface treatment is intended; this shall be expressly stated on the order document;
- d) a reference to this document (prEN 12020-1:2021);
- e) reference to a drawing defining the product (see 4.2), cross sectional dimensions, mass per meter calculated on nominal section dimensions, surface requirements and any other relevant information;
- f) length:
  - fixed or random,
  - for random lengths minimum and maximum shall be specified,
  - an allowance for process contact points of surface treatment may be necessary;
- g) quantity:
  - mass or number of pieces or total length,
  - tolerance on quantity;



prEN 12020-1:2021 (E)

h) special requirements:

- any special requirements agreed between the supplier and purchaser,
- agreement on plane parallelism,
- any requirement for inspection documents,
- marking of products,
- reference to other standards, if tolerances on dimensions and form differ from those specified in EN 12020-2,
- additional or special testing,
- installation length,
- surface protection;

i) packaging information:

- pack mass/size.

#### 4.2 Reference to a drawing

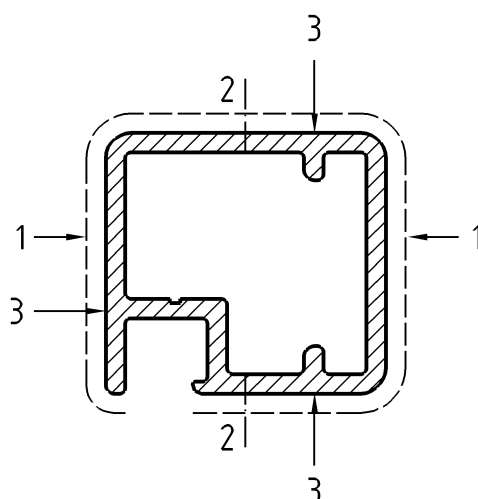
On the basis of the order document, the manufacturer shall prepare drawings, which are to be checked by the purchaser for accuracy, and approved, the profiles then being manufactured in strict accordance with the approved drawing.

If for dimensions critical to function, tolerances other than those specified in this document are to be used, they shall be entered in the drawing adjacent to the associated nominal size. This also applies to the tolerances on form. Where profiles are intended for later assembly, it is recommended that the manufacturer is provided with a drawing giving appropriate details.

Where for manufacturing reasons weld lines are to be located on visible surfaces their position or approximate area of appearance should be indicated by the manufacturer on the drawing.

Visible surfaces shall be identified, indicating main and, if necessary, secondary order visible surfaces.

Figure 3 presents marking of visible surfaces of approximate area of appearance of weld lines and T-joint streaks.



### Key

- 1 visible surface
- 2 area of probable appearance of weld lines
- 3 area of probable appearance of T-joint streaks

**Figure 3 — Marking of visible surfaces of approximate area of appearance of weld lines and T-joint streaks**  
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For profiles intended for surface treatment, surfaces and areas that are to be so treated should be indicated on the drawing. If the outline of a profile is modified by machining, it is recommended that the final shape is also indicated.

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## 5 Requirements

### 5.1 Production and manufacturing processes

Unless otherwise specified in the order document, the production and manufacturing processes shall be left to the discretion of the manufacturer. Unless it is explicitly stated in the order document, no obligation shall be placed on the manufacturer to use the same processes for subsequent or similar orders.

### 5.2 Quality control

The supplier shall be responsible for the performance of all inspection and tests required by the relevant European Standard and/or the particular specification prior to shipment of the product. If the purchaser wishes to inspect the product at the manufacturer's works, he shall notify the supplier at the time of placing the order.

### 5.3 Chemical composition limit

The chemical composition limit shall be in conformity with the requirements specified in EN 573-3.

If the purchaser requires closer limits for elements than those specified in the above standard, these limits shall be according to an agreement between supplier and purchaser and stated in the order document.