



SLOVENSKI STANDARD
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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 und Aluminiumlegierungen - Stranggepreßte Präzisionsprofile aus Legierungen EN AW-6060 und EN AW-6063 - Teil 1: Technische Lieferbedingungen

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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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English version

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 European Standard was approved by CEN on 18 February 2001.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard 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 October 2001, and conflicting national standards shall be withdrawn at the latest by October 2001.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG5 "Extruded and drawn products" to prepare the following standard :

- *EN 12020-1, Aluminium and aluminium alloys - Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 - Part 1 : Technical conditions for inspection and delivery*

This standard is part of a set of two standards. The other standard deals with:

- *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.*

Annex A is normative.

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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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This part of EN 12020 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). It applies to as extruded products supplied without further surface treatment. Precision profiles covered in this standard are distinguished from extruded profiles for general applications covered in EN 755-9 by the following characteristics:

- they are mainly for architectural applications ;
- they meet more stringent requirements regarding the surface condition of visible surfaces ;
- the maximum diameter of the circumscribing circle CD is 300 mm ;
- they are made to closer tolerances on dimensions and form.

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

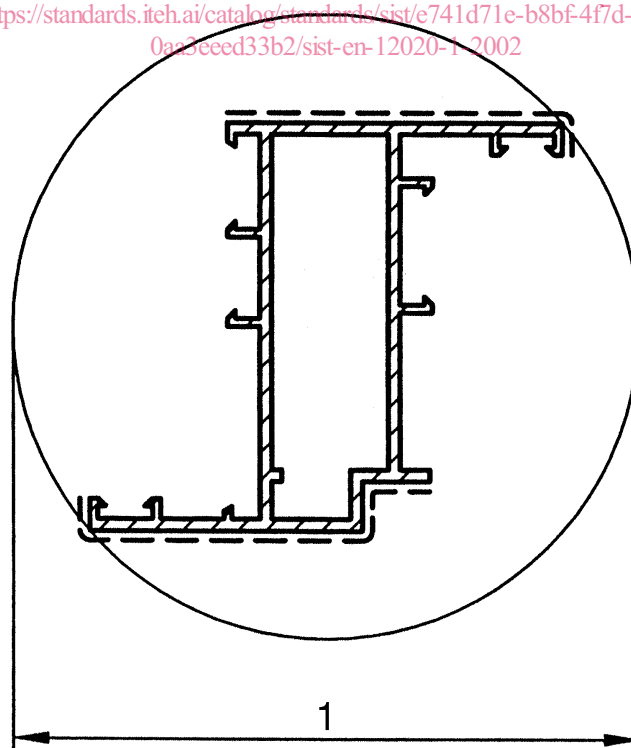
NOTE 1 The thermal barrier material is not covered by this standard.

NOTE 2 Some of the products listed in the present standard can be subject to patent or patent applications, and their listing herein does not in any way imply the granting of a license under such patent right.

CEN/TC 132 affirms it is its policy that in the case when a patentee refuses to grant licenses on standardized standards products under reasonable and not discriminatory conditions then this product shall be removed from the corresponding standard.

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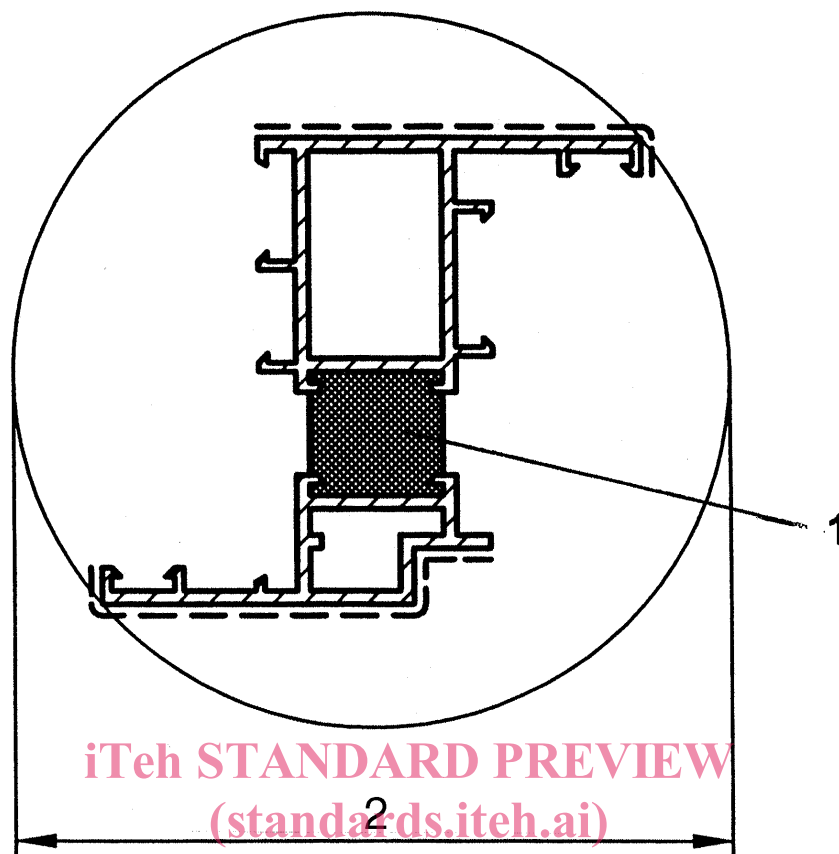
Dimensions in millimetres



Key

1 CD max. 300

Figure 1 — Profile without thermal barrier



Key

- 1 thermal barrier
- 2 CD max. 300

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Figure 2 — Profile with thermal barrier

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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.*

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 10002-1, *Metallic materials - Tensile testing - Part 1 : Method of test (at ambient temperature).*

EN ISO 6506-1, *Metallic materials - Brinell hardness test - Part 1 : Test method (ISO 6506-1 :1999).*

EN 10204, *Metallic products - Types of inspection documents.*

EN 12258-1, *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.*

3 Terms and definitions

For the purposes of this part of this European Standard, the terms and definitions given in EN 12258-1 apply.

4 Orders or tenders

4.1 General

The order or tender shall define the product required and shall contain the following information :

- a) the designation of the aluminium alloy as specified in EN 573-3 ;
- b) the temper of the material for delivery as specified in EN 515 ;
- c) the application, in particular, when surface treatment is intended; this shall be expressly stated on the order (see Annex A) ;
- d) the number of this European Standard or if not appropriate, the properties agreed between purchaser and supplier ;
- e) reference to a drawing defining the product (see 4.2), cross sectional dimensions, surface requirements and any other relevant information ;
- f) length ¹⁾ :
 - fixed or random ;
 - for random lengths minimum and maximum shall be specified ;
- g) quantity :
 - weight or number of pieces or total length ;
 - tolerance on quantity ;
- h) special requirements :
 - any special requirements agreed between the purchaser and supplier ;
 - any requirement for inspection documents ;
 - marking of products ;
 - reference to other standards, if tolerances on dimensions and form differ from this standard ;
 - additional or special testing ;
 - installation length ;
 - surface protection ;

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1) An allowance for process contact points may be necessary.

- i) packaging information :
— pack weight/size.

4.2 Reference to a drawing

On the basis of the order documentation submitted, 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 standard 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 seams are to be located on visible surfaces, their position shall be indicated by the manufacturer on the drawing.

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

For profiles to be surface treated, surfaces and areas that are to be so treated is indicated on the drawing.

If the outline of a profile is modified by machining, it is recommended that the final shape is indicated.

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5 Requirements

5.1 Production and manufacturing processes

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Unless otherwise specified in the order, the production and manufacturing processes shall be left to the discretion of the producer. Unless it is explicitly stated in the order, no obligation shall be placed on the producer 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 supplier's works, he shall notify the supplier at the time of placing the order.

5.3 Chemical composition

The chemical composition shall comply with the requirements of EN 573-3.

If the purchaser requires special limits for elements not specified in the above standard, these limits shall be stated on the order and after agreement between purchaser and supplier.

5.4 Mechanical properties

The mechanical properties shall comply with the requirements of EN 755-2 or those agreed between purchaser and supplier and stated on the order.

Hardness testing may be used for release purposes subject to agreement between purchaser and supplier.

5.5 Freedom from surface defects

The extruded surface shall be free from defects prejudicial to its suitable and proper use. Slight scoring and other minor defects are permissible providing that an R_z of $9 \mu\text{m}$ and R_a of $3 \mu\text{m}$ are not exceeded. Any discolouration or minor blemishes that are likely to be eliminated by the intended pretreatment for anodising or by painting shall be permitted (see Annex A).