SLOVENSKI STANDARD
SIST EN 683-1:1998

01-april-1998

Aluminij in aluminijeve zlitine - Hladno valjani polizdelki za toplotne izmenjevalnike - 1. del: Tehniļ ni pogoji za prevzem in dobavo

Aluminium and aluminium alloys - Finstock - Part 1: Technical conditions for inspection and delivery

Aluminium und Aluminiumlegierungen - Vormaterial für Wärmeaustauscher (Finstock) - Teil 1: Technische Lieferbedingungen

Aluminium et alliages d'aluminium - Bandes pour échangeurs thermiques - Partie 1: Conditions techniques de contrôle et de livraison

Ta slovenski standard je istoveten z: **EN 683-1:1996**

ICS:

77.150.10	Aluminijski izdelki	Aluminium products

SIST EN 683-1:1998 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 683-1

June 1996

ICS 77.120.10

Descriptors: aluminium, aluminium alloys, rolled products, cold rolled products, sheets, heat exchangers, specifications, inspection, tests, delivery, marking

English version

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

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Contents

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of an identical text or by endorsement, at the latest by December 1996, and conflicting national standards shall be withdrawn at the latest by December 1996.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 6 "Foil and finstock" to prepare the following document for publication as a European Standard :

EN 683-1 Aluminium and aluminium alloys - Finstock - Part 1 : Technical conditions for inspection and delivery

This standard is part of a set of three standards. The other standards deal with :

EN 683-2 Aluminium and aluminium alloys - Finstock - Part 2 : Mechanical properties

EN 683-3 Aluminium and aluminium alloys - Finstock - Part 3 : Tolerances on dimensions and form

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Part of EN 683 specifies the technical conditions for inspection and delivery of wrought aluminium and aluminium alloy finstock.

The gauge range covered is 80 μm to 350 μm.

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.

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
prEN 683-2	Aluminium and aluminium alloys - Finstock - Part 2 : Mechanical properties
prEN 683-3	Aluminium and aluminium alloys - Finstock - Part 3 : Tolerances on dimensions and form
EN 10002-1	Metallic materials - Tenstile testing - Part 1 : Method of test (at ambient temperature)
EN 10204	Metallic products - Types of inspection documents

3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 finstock : Flat, cold rolled product of rectangular cross section and thickness in the range
80 μm to 350 μm suitable for heat exchanger applications.

3.2 inspection lot or batch : Consignment or a part thereof, submitted for inspection comprising products of the same grade or alloy, the same form, temper, thickness and cross section, processed in the same way and where applicable, submitted to a final heat treatment in the same furnace load.

3.3 sample : One or more products taken from an inspection lot.

3.4 specimen : One or more pieces taken from each product in a sample for the purpose of producing test pieces.

3.5 test piece : Piece taken from each specimen and suitably prepared for the test.

3.6 test : Operation to which the test piece is subjected in order to measure or classify a property.

4 Orders or tenders

The order or tender shall specify the product required and shall contain the following information.

a) type and form of product :

- the designation of the aluminium or aluminium alloy ;

- the form of the product ;

b) temper of the material to be delivered as specified in EN 515 ;

c) number of this European Standard ;

d) dimensions of the product :

- thickness ;

- width and type of specified tolerance on width as defined in prEN 683-3 (symmetrical, only plus, only minus) ;

- internal and external diameter of the coil / reel ;

- core size and type ;

e) mass and number of coils;

f) any special requirements agreed between supplier and purchaser, e.g. :

- test certificates and inspection reports ;

- marking of the products, e.g. identification ;

- reference to drawings, e.g. for packaging, coil axis orientation, etc. ;

- whether surface degreasing is required.

Where special requirements are specified, the application shall be stated.

5 Requirements

5.1 Production and manufacturing processes

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

5.2 Quality control

The supplier shall be responsible for the performance of all inspection and tests required by the relevant standard and / or the particular specification prior to the shipment of the product.

5.3 Chemical composition

The chemical composition shall be in conformity with EN 573-3.

5.4 Mechanical properties

The mechanical properties shall be in conformity with prEN 683-2.

5.5 Freedom from defects

The product shall be free from defects prejudicial to its suitable and proper use.

5.6 Tolerances on dimensions and form

The tolerances on dimensions and form shall be in conformity with prEN 683-3.

5.7 Special properties

Any special property requirements shall be agreed between purchaser and supplier.

6 Test procedure

6.1 Specimen

6.1.1 Chemical analysis

The specimens for chemical analysis shall be taken at the time of casting. Their shape and method of production (mould design, cooling rate, mass etc.) shall be so designed that their composition is homogeneous and be adapted to the method of analysis.

6.1.2 Specimens for mechanical testing

6.1.2.1 Location and size

Specimens shall be taken from samples in such a way that it is possible to orientate the test pieces in relation to the product, as specified in 6.1.2.2. The specimens shall be large enough to allow manufacture of the test pieces necessary to carry out the required tests and shall include sufficient metal to allow manufacture of test pieces for any retests required.

6.1.2.2 Orientation

Specimens shall be taken in such a manner that the test pieces can be prepared in the longitudinal direction.

6.1.2.3 Identification

Each specimen shall be identified in such a way that after removal, it is still possible to identify the product from which it was taken and its location and orientation. If during the course of subsequent operations removal of the markings cannot be avoided, new markings shall be made before the originals are removed.

6.1.2.4 Preparation

Specimens shall be taken from the sample after completion of all the mechanical and heat treatment operations that the product has to undergo before delivery and which can influence the mechanical properties of the metal. In cases where this is not possible, the sample or specimens may be taken at an earlier stage, but they shall be subjected to the same treatment as that to which it is intended to submit the product concerned.

Cutting shall be carried out in such a manner that it does not change the characteristics of the part of the specimen from which the test pieces are to be prepared. Thus, the dimensions of the specimens shall provide an adequate allowance to permit removal of the zone affected by cutting.

Specimens shall not be treated in any way that alters their mechanical properties.

6.1.2.5 Number

One specimen shall be taken from each inspection lot of 10 000 kg or part thereof. For single coils weighing more than 10 000 kg each, only one specimen per coil shall be taken.

6.1.3Test pieces for tensile test

6.1.3.1 Identification

Each test piece shall be marked in such a manner that it is possible to identify the inspection lot from which it was taken and, if required, its location and orientation in the product.

If a test piece is identified by stamping, this shall not be in a place or manner which can interfere with subsequent testing. Where it is not convenient to mark a test piece, an identification tag may be attached.

6.1.3.2 Number

One test piece shall be taken from each specimen.