



SLOVENSKI STANDARD

SIST EN 1715-4:1998

01-april-1998

Aluminij in aluminijeve zlitine - Debela žica - 4. del: Posebne zahteve za varjenje

Aluminium and aluminium alloys - Drawing stock - Part 4: Specific requirements for welding applications

Aluminium und Aluminiumlegierungen - Vordraht - Teil 4: Besondere Anforderungen für schweißtechnische Anwendungen

Aluminium et alliages d'aluminium - Fil machine - Partie 4: Exigences spécifiques pour les applications soudage

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Ta slovenski standard je istoveten z: EN 1715-4:1997

ICS:

77.150.10 Aluminijski izdelki Aluminium products

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ICS 77.150.10

Descriptors: aluminium, aluminium alloys, drawing stock, welding, specifications, quality, chemical composition, delivery condition, mechanical properties, inspection, tests

English version

**Aluminium and aluminium alloys - Drawing stock -
Part 4: Specific requirements for welding
applications**

Aluminium et alliages d'aluminium - Fil machine
- Partie 4: Exigences spécifiques pour les
applications soudage

Aluminium und Aluminiumlegierungen - Vordraht
- Teil 4: Besondere Anforderungen für
schweißtechnische Anwendungen

This European Standard was approved by CEN on 1997-08-21. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat 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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CEN

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 March 1998, and conflicting national standards shall be withdrawn at the latest by March 1998.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 4 "Wires and drawing stock" to prepare the following standard :

EN 1715-4 Aluminium and aluminium alloys - Drawing stock - Part 4 : Specific requirements for welding applications

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

EN 1715-1 Aluminium and aluminium alloys - Drawing stock - Part 1 : General requirements and technical conditions for inspection and delivery

EN 1715-2 Aluminium and aluminium alloys - Drawing stock - Part 2 : Specific requirements for electrical applications

EN 1715-3 Aluminium and aluminium alloys - Drawing stock - Part 3 : Specific requirements for mechanical uses (excluding welding)

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 1715 applies to drawing stock of aluminium alloys for welding and specifies characteristics and specific technical conditions for inspection and delivery of these products.

The general requirements and technical conditions for inspection and delivery are specified in EN 1715-1.

This standard does not apply to drawn wire.

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 product - Temper designations
EN 573-3	Aluminium and aluminium alloys - Chemical composition and forms of wrought products - Part 3 : Chemical composition
EN 1715-1	Aluminium and aluminium alloys - Drawing stock - Part 1 : General requirements and technical conditions for inspection and delivery

3 Specifications

3.1 Chemical composition

Aluminium grades and aluminium alloys used commonly for welding are given in table 1. These common alloys are the alloys classified "A" in EN 1715-1.

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**Table 1 : Alloys for mechanical purposes - Tempers for delivery -
Typical mechanical characteristics (tensile strength)**

Alloy designation	Temper	Tensile strength typical range R_m MPa
1 000 Series		
EN AW-1080A [Al 99,8(A)]	F	80 to 110
EN AW-1050A [Al 99,5]	F	80 to 130
4 000 Series		
EN AW-4043A [Al Si5 (A)]	O3	100 to 140
EN AW-4047A [Al Si12 (A)]	O3	125 to 180
5 000 Series		
EN AW-5154A [Al Mg3,5 (A)]	F	210 to 270
	O3	210 to 250
EN AW-5754 [Al Mg3]	F	190 to 250
	O3	190 to 230
EN AW-5356 [Al Mg5Cr (A)]	F	240 to 300
	O3	240 to 290
EN AW-5556A [Al Mg5Mn]	F	300 to 380
	O3	300 to 360
EN AW-5183 [Al Mg4,5Mn0,7 (A)]	F	290 to 360
	O3	290 to 350
EN AW-5087 [Al Mg4,5MnZr]	F	290 to 360
	O3	290 to 350
O : annealed ; O3: homogenised ; F : as fabricated.		

Their chemical compositions shall be in accordance with EN 573-3.

The elements determined and reported in the certificate of mass and analysis shall be :

Si, Fe, Cu, Mn, Mg, Cr, Zn, Be, Ti. (standards.iteh.ai)

If other elements (e.g. Zr, ...) are specified in EN 573-3, they shall be determined and reported in the certificate of mass and analysis.

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3.2 Temper of delivery

The variety of aluminium and aluminium alloys used requires a precise definition of the temper of delivery which is liable to exert a significant influence on the ability to process and on the final characteristics of the wires manufactured. Tempers shall be indicated in accordance with EN 515.

The usual tempers for drawing stock covered by this standard are :

- F : as fabricated ;
- O : annealed by heat treatment ;
- O3 : homogenised by high temperature treatment.

These tempers are listed in table 1 with typical ranges of mechanical characteristics (tensile strength).

If no temper is specified when ordering, the delivered temper shall be F.

Particular requirements concerning the mechanical strength range shall be agreed between supplier and purchaser.

4 Product inspection and testing methods

4.1 Chemical composition

The chemical composition shall be checked for each cast delivered in accordance with EN 1715-1.

4.2 Mechanical characteristics

The mechanical characteristics shall be measured once per coil in accordance with EN 1715-1.

Other sampling frequencies shall be agreed between supplier and purchaser.

5 Delivery documents and inspection documents

A certificate of mass and analysis shall be provided in accordance with EN 1715-1.