SLOVENSKI STANDARD
SIST EN 1715-4:2008

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SIST EN 1715-4:1998

Aluminij in aluminijeve zlitine - Vleļ eni polizdelki - 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

Ta slovenski standard je istoveten z: **EN 1715-4:2008**

ICS:

77.150.10	Aluminijski izdelki	Aluminium products

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

Aluminium et alliages d'aluminium - Fil machine - Partie 4: Exigences spécifiques relatives aux applications de soudage

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 1715-4:2008) 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of an identical text or by endorsement, at the latest by October 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

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 supersedes EN 1715-4:1997.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 4 "Wires and drawing stock" to revise EN 1715-4:1997.

Besides editorial adjustments in the text and update of normative references, the following changes have been made:

— Clause 3: text amended; title of Table 1 changed

— Clause 4: amended

— Clause 5: amended

— Clause 6: amended

EN 1715 comprises the following parts under the general title "Aluminium and aluminium alloys – Drawing stock":

— *Part 1: General requirements and technical conditions for inspection and delivery*

— *Part 2: Specific requirements for electrical applications*

— *Part 3: Specific requirements for mechanical uses (excluding welding)*

— *Part 4: Specific requirements for welding applications*

— *Part 5: Specific requirements for aluminium food packaging*[1)]

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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

1) Under preparation.

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 the United Kingdom.

1 Scope

This European Standard specifies specific requirements for drawing stock of aluminium and aluminium alloys for welding applications.

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

This European Standard does not apply to drawn wire.

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.

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

EN ISO 18273, *Welding consumables — Wire electrodes, wires and rods for welding of aluminium and aluminium alloys — Classification (ISO 18273:2004)*

3 Requirements

3.1 Chemical composition

Aluminium and aluminium alloys used commonly for welding are given in Table 1.

Their chemical compositions shall be in accordance with EN ISO 18273, and for alloys EN AW-1050A and EN AW-5154A 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, Ni, Zn, Ti, Ga, V and Be.

If other elements (e.g. Zr ...) are specified in EN ISO 18273 or EN 573-3, they shall be determined and reported in the certificate of mass and analysis.

Table 1 — Main alloys for brazing, welding and metal spraying - Tempers for delivery - Typical tensile strength values

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 280
	O3	210 to 250
EN AW-5754 [Al Mg3]	F	200 to 260
	O3	200 to 250
EN AW-5356 [Al Mg5Cr (A)]	F	260 to 320
	O3	260 to 310
EN AW-5556A [Al Mg5Mn]	F	300 to 380
	O3	300 to 360
EN AW-5183 [Al Mg4,5Mn0,7 (A)]	F	280 to 350
	O3	280 to 350
EN AW-5087 [Al Mg4MnZr]	F	290 to 360
	O3	290 to 350

3.2 Temper for delivery

The variety of aluminium and aluminium alloys used requires a precise definition of the temper for 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 European Standard are:

— F: as fabricated;

— 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.

Other tempers shall be agreed between manufacturer and purchaser.