



# SLOVENSKI STANDARD

kSIST prEN 1715-4:2008

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SIST EN 1715-4:1998

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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**

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77.150.10

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ICS 77.150.10

Will supersede EN 1715-4:1997

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 relatives aux applications de  
soudage

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

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

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## Foreword

This document (prEN 1715-4:2007) 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 Formal Vote.

This document will supersede 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<sup>1)</sup>*

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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

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1) Under preparation.

## 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 prEN 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*

prEN 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, 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
<b>1 000 Series</b>		
EN AW-1080A [Al 99,8(A)]	F	80 to 110
EN AW-1070A [Al 99,5]	F	80 to 130
<b>4 000 Series</b>		
EN AW-4043A [Al Si5 (A)]	O3	100 to 140
EN AW-4047A [Al Si12 (A)]	O3	125 to 180
<b>5 000 Series</b>		
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;
- 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.

Other tempers shall be agreed between manufacturer 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 prEN 1715-1.

### **4.2 Mechanical properties**

The mechanical properties shall be at least measured once per coil in accordance with prEN 1715-1.

Other sampling frequencies shall be agreed between manufacturer and purchaser.

## **5 Delivery documents and inspection documents**

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

In addition, a test report in accordance with prEN 1715-1, shall be delivered for each cast in a consignment with reference to the order, and giving the following information:

- identification of the alloy;
- temper;
- diameter;
- list of coil identification numbers;
- results of test for mechanical properties;
- date of manufacture;
- date of heat treatment if any;
- net mass.

NOTE Other inspection documents may be defined between manufacturer and purchaser in accordance with prEN 1715-1.

## **6 Marking and packaging**

Marking and packaging shall be carried out in accordance with prEN 1715-1.