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DIN EN 755-2

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DIN EN 755-2:2013-12

Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 2: Mechanical properties; English version EN 755-2:2016, English translation of DIN EN 755-2:2016-10

Aluminium und Aluminiumlegierungen –
Stranggepresste Stangen, Rohre und Profile –
Teil 2: Mechanische Eigenschaften;
Englische Fassung EN 755-2:2016,
Englische Übersetzung von DIN EN 755-2:2016-10

Aluminium et alliages d'aluminium –
Barres, tubes et profilés filés –
Partie 2: Caractéristiques mécaniques;
Version anglaise EN 755-2:2016,
Traduction anglaise de DIN EN 755-2:2016-10

Document comprises 60 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

National foreword

This document (EN 755-2:2016) has been prepared by Technical Committee CEN/TC 132 “Aluminium and aluminium alloys” (Secretariat: AFNOR, France), Working Group WG 5 “Extruded and drawn products” (Secretariat: SN, Norway).

The responsible German body involved in its preparation was *DIN-Normenausschuss Nichteisenmetalle* (DIN Standards Committee Nonferrous Metals), Working Committee NA 066-01-04 AA *Strangpresserzeugnisse*.

Amendments

This standard differs from DIN EN 755-2:2013-12 as follows:

a) the list of the tables of mechanical properties of the relevant aluminium and aluminium alloys has been reorganized;

b) the alloy EN AW-2618A [Al Cu2Mg1,5Ni] has been added in a new Table 9;

c) the alloy EN AW-6026 [Al MgSiBi] has been corrected in a new Table 36;

d) the alloy EN AW-6056 [Al Si1MgCuMn] has been added in a new Table 38;

e) the alloy EN AW-6060 [Al MgSi] has been modified in Table 39: the extruded profile T6 and T66 wall thickness-border has been changed from 3 mm to 5 mm;

f) the alloy EN AW-6063 [Al Mg0,7Si] has been modified in Table 45: the extruded profile T5 wall thickness-border has been changed from 3 mm to 10 mm;

g) the former Table 26 has been moved and is now Table 48.

Previous editions

DIN 1746: 1938-09, 1947-11, 1951-11, 1959-06
DIN 1746-1: 1963-06, 1968-12, 1976-12, 1987-01
DIN 1747: 1938-09, 1948-03, 1951-12, 1959-06, 1960-07
DIN 1747-1: 1963-06, 1968-12, 1977-01, 1983-02
DIN 1747-10: 1966-06
DIN 1748: 1938x-09, 1952-01, 1959-06
DIN 1748-1: 1963-06, 1968-12, 1976-12, 1983-02
DIN 1789: 1938-09, 1954-01, 1957-07
DIN 1790: 1938-09, 1954-01, 1957-09
DIN 17606: 1956-11
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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 755-2

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ICS 77.150.10

Supersedes EN 755-2:2013

English Version

Aluminium and aluminium alloys - Extruded rod/bar, tube and profiles - Part 2: Mechanical properties

Aluminium et alliages d'aluminium - Barres, tubes et profilés filés - Partie 2 : Caractéristiques mécaniques

Aluminium und Aluminiumlegierungen - Stranggepresste Stangen, Rohre und Profile - Teil 2: Mechanische Eigenschaften

This European Standard was approved by CEN on 10 January 2016.

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

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European foreword

This document (EN 755-2:2016) 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 September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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 755-2:2013.

CEN/TC 132 decided to revise EN 755-2:2013 as follows:

— reorganization of the list of the tables of mechanical properties of the relevant aluminium and aluminium alloys;

— addition of the alloy EN AW-2618A [AlCu2Mg1,5Ni] in a new Table 9;

— correction of the alloy EN AW-6026 [Al MgSiBi] in a new Table 36;

— addition of the alloy EN AW-6056 [Al Si1MgCuMn] in a new Table 38.

— Modification of the Alloy EN AW-6060 [Al MgSi] in Table 39: Extruded profile T6 and T66 wall thickness-border from 3 mm to 5 mm;

— Modification of the Alloy EN AW-6063 [Al Mg0,7Si] in Table 45: Extruded profile T5 wall thickness-border from 3 mm to 10 mm;

— The former Table 26 was moved, and is now Table 48.

EN 755, *Aluminium and aluminium alloys — Extruded rod/bar, tube and profiles* comprises the following parts:

— *Part 1: Technical conditions for inspection and delivery*

— *Part 2: Mechanical properties*

— *Part 3: Round bars, tolerances on dimensions and form*

— *Part 4: Square bars, tolerances on dimensions and form*

— *Part 5: Rectangular bars, tolerances on dimensions and form*

— *Part 6: Hexagonal bars, tolerances on dimensions and form*

— *Part 7: Seamless tubes, tolerances on dimensions and form*

— *Part 8: Porthole tubes, tolerances on dimensions and form*

— *Part 9: Profiles, tolerances on dimensions and form*

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1 Scope

This European Standard specifies the mechanical property limits resulting from tensile testing applicable to aluminium and aluminium alloy extruded rod/bar, tube and profile.

Technical conditions for inspection and delivery, including product and testing requirements, are specified in EN 755-1. Temper designations are defined in EN 515. The chemical composition limits for these materials are given in EN 573-3.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 755-1, *Aluminium and aluminium alloys- Extruded rod/bar, tube and profiles - Part 1: Technical conditions for inspection and delivery*

EN ISO 6892-1, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1)*

3 Mechanical property limits

3.1 General

The mechanical properties shall be in conformity with those specified in Table 1 to Table 61 or those agreed upon between supplier and purchaser and stated in the order document.

Table 1 to Table 61 contain limits of mechanical property values obtained by tensile testing according to EN ISO 6892-1 after sampling and test piece preparation according to EN 755-1.

NOTE The mechanical properties refer to test pieces taken in the longitudinal direction. Mechanical properties of test pieces taken in other directions can differ from those for the longitudinal direction quoted in this standard.

Brinell hardness values given in Table 1 to Table 61 expressed as HBW values are for information only.

3.2 Elongation

If not otherwise agreed, the *A* value shall be used.

The *A* value for elongation is the % elongation measured over a gauge length of $5{,}65\sqrt{S_0}$ (where S_0 is the initial cross-sectional area of the test-piece), and expressed in percent.

For certain products the supplier may choose (if not otherwise specified in the order documents) to use the elongation based on A_{50mm}. Consequently, values for the A_{50mm} are included in the following tables.

The A_{50mm} value is the elongation measured over a gauge length of 50 mm and expressed in percent.

Test pieces and their location in the specimen are given in EN 755-1.

3.3 Reference list of the tables of mechanical properties of the relevant aluminium and aluminium alloys