BS EN 754-2:2013

BSI Standards Publication

Aluminium and aluminium alloys — Cold drawn rod/bar and tube

Part 2: Mechanical properties

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National foreword

This British Standard is the UK implementation of EN 754-2:2013. It supersedes BS EN 754-2:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee NFE/35, Light metals and their alloys.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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English Version

Aluminium and aluminium alloys - Cold drawn rod/bar and tube - Part 2: Mechanical properties

Aluminium et alliages d'aluminium - Barres et tubes étirés - Partie 2: Caractéristiques mécaniques

Aluminium und Aluminiumlegierungen - Gezogene Stangen und Rohre - Teil 2: Mechanische Eigenschaften

This European Standard was approved by CEN on 22 August 2013.

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Contents

Page

Foreword

This document (EN 754-2:2013) 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of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by April 2014.

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.

CEN/TC 132 affirms its policy that if a patentee refuses to grant licenses on standardized products under reasonable and not discriminatory conditions, this product will be removed from the corresponding document.

This document supersedes EN 754-2:2008.

CEN/TC 132 has decided to revise this European Standard as follows:

— addition of the alloys EN AW-6026 in a new Table 24 and EN AW-6064A in a new Table 31;

— EN 10002-1 was replaced by EN ISO 6892-1.

EN 754 comprises the following parts under the general title *"Aluminium and aluminium alloys — Cold drawn rod/bar and tube*":

— *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*

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1 Scope

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

Technical conditions for inspection and delivery, including product and testing requirements, are specified in EN 754-1. 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 754-1:2008, *Aluminium and aluminium alloys — Cold drawn rod/bar and tube — 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 37 or those agreed upon between supplier and purchaser and stated in the order document.

For all alloys the condition F (as fabricated) can be used, but without guaranteed mechanical properties.

Table 1 to Table 37 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 754-1.

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 37 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 $A_{50\text{mm}}$. Consequently, values for the $A_{50\text{mm}}$ are included in the following tables.

The $A_{50\text{mm}}$ 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 754-1.