

<b>STN</b>	<b>Rebríky</b> <b>Časť 2: Požiadavky, skúšanie, označovanie</b>	<b>STN</b> <b>EN 131-2+A2</b>  49 3801
------------	--	---

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

Obsahuje: EN 131-2:2010+A2:2017

Oznámením tejto normy sa od 31.12.2017 ruší  
STN EN 131-2+A1 (49 3801) z októbra 2012  
Oznámením tejto normy sa ruší  
STN P CEN/TS 16665 (49 3820) z augusta 2014

**124943**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.



EUROPEAN STANDARD

**EN 131-2:2010+A2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2017

ICS 97.145

Supersedes EN 131-2:2010+A1:2012

English Version

**Ladders - Part 2: Requirements, testing, marking**

Échelles - Partie 2: Exigences, essais, marquage

Leitern - Teil 2: Anforderungen, Prüfung,  
Kennzeichnung

This European Standard was approved by CEN on 16 April 2012 and includes Amendment 2 approved by CEN on 17 September 2016.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	3
Introduction .....	4
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Requirements</b> .....	<b>7</b>
4.1 General.....	7
4.2 Materials.....	7
4.3 Design.....	12
4.4 Surface finish .....	12
4.5 Hinges (turning points).....	13
4.6 Opening restraints.....	13
4.7 Rungs/steps/platforms.....	13
4.8 Platform.....	14
4.9 <b>A<sub>2</sub></b> Ladder feet and anti-skid devices <b>A<sub>2</sub></b> .....	14
4.10 Extending and sectional ladders.....	15
<b>5 Testing</b> .....	<b>15</b>
5.1 General.....	15
5.2 <b>A<sub>2</sub></b> Strength test for all ladders <b>A<sub>2</sub></b> .....	15
5.3 Bending test of the stiles.....	18
5.4 Lateral deflection test of the ladder .....	19
5.5 Bottom stile ends test.....	20
5.6 Vertical load on rungs, steps and platforms.....	21
5.7 Torsion test of rungs and steps.....	22
5.8 Test of opening restraints and hinges of standing ladders.....	23
5.9 Test for ladder rung/step hooks of extending ladders and combination ladders .....	24
5.10 Kick-up test of the platform of standing ladders .....	25
5.11 Feet pull test.....	26
5.12 Test on hand-/kneerails .....	28
5.13 Maximum extension of ladder.....	29
5.14 3-part combination ladder in A-position test .....	30
5.15 <b>A<sub>2</sub></b> Torsion test for standing ladders <b>A<sub>2</sub></b> .....	30
5.16 Test methods for plastic ladders .....	33
<b>6 Marking and user instructions</b> .....	<b>51</b>
<b>7 Certification</b> .....	<b>51</b>
<b>Annex A (normative) Test sequence</b> .....	<b>52</b>
<b>Annex B (informative) A-deviations</b> .....	<b>55</b>
<b>Bibliography</b> .....	<b>58</b>

## European foreword

This document (EN 131-2:2010+A2:2017) has been prepared by Technical Committee CEN/TC 93 “Ladders”, the secretariat of which is held by DIN.

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 July 2017 and conflicting national standards shall be withdrawn at the latest by December 2017.

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 A2 EN 131-2:2010+A1:2012 and CEN/TS 16665:2014 A2.

This document includes Amendment 1, approved by CEN on 2012-04-16 and Amendment 2 approved by CEN on 2016-09-17.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1 and A2 A2.

A2 *deleted text* A2

This European Standard is one of a series about ladders. The other standards of this series are listed in Clause 2 and in the Bibliography.

A2 Classification is determined in the strength test for all ladders and additionally in the durability test for standing ladders.

A test protocol is being considered for an alternative base slip test on behalf of an expert group of the GPSD committee. A2

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Introduction**

Due to the unhomogeneity of the material wood, special requirements have been appropriated on this item.

## 1 Scope

This European Standard specifies the general design features, requirements and test methods for portable ladders.

It does not apply to step stools or ladders for specific professional use such as firebrigade ladders, roof ladders and mobile ladders.

It does not apply to ladders used for work on or near live electrical systems or installations. For this purpose EN 61478 applies.

Ⓐ<sub>2</sub>

NOTE For insulating ladders for use on or near low voltage electrical installations EN 50528 applies. Ⓐ<sub>2</sub>

This European Standard is intended to be used in conjunction with EN 131-1.

For single or multiple hinge joint ladders EN 131-4 applies.

Ⓐ<sub>2</sub> For telescopic ladders EN 131-6 applies.

For mobile ladders with a platform EN 131-7 applies. Ⓐ<sub>2</sub>

## 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 59, *Glass reinforced plastics — Measurement of hardness by means of a Barcol impressor*

Ⓐ<sub>2</sub> EN 131-1:2015 Ⓐ<sub>2</sub>, *Ladders — Part 1: Terms, types, functional sizes*

EN 131-3, *Ladders — Part 3: User Instructions*

EN 204, *Classification of thermoplastic wood adhesives for non-structural applications*

EN 301, *Adhesives, phenolic and aminoplastic, for load-bearing timber structures — Classification and performance requirements*

EN 385, *Finger jointed structural timber — Performance requirements and minimum production requirements*

EN 386:2001, *Glued laminated timber — Performance requirements and minimum production requirements*

EN 391:2001, *Glued laminated timber — Delamination test of glue lines*

EN 392, *Glued laminated timber — Shear test of glue lines*

EN 408, *Timber structures — Structural timber and glued laminated timber — Determination of some physical and mechanical properties*

Ⓐ<sub>2</sub> EN 572-2, *Glass in building — Basic soda lime silicate glass products — Part 2: Float glass* Ⓐ<sub>2</sub>

EN 844-9:1997, *Round and sawn timber — Terminology — Part 9: Terms relating to features of sawn timber*

**EN 131-2:2010+A2:2017 (E)**

EN 1310, *Round and sawn timber — Method of measurement of features*

**A2** EN 10088-2:2014, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes* **A2**

EN 61478, *Live working — Ladders of insulating material (IEC 61478:2001)*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1:2000)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:1993 including Corr 1:1994)*

EN ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 3834-1, *Quality requirements for fusion welding of metallic materials — Part 1: Criteria for the selection of the appropriate level of quality requirements (ISO 3834-1:2005)*

EN ISO 3834-2, *Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements (ISO 3834-2:2005)*

EN ISO 3834-3, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements (ISO 3834-3:2005)*

EN ISO 3834-4, *Quality requirements for fusion welding of metallic materials — Part 4: Elementary quality requirements (ISO 3834-4:2005)*

EN ISO 4892-2:2006, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 4892-2:2006)*

EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1:2009)*

EN ISO 14125, *Fibre-reinforced plastic composites — Determination of flexural properties (ISO 14125:1998)*

**A2** EN ISO 14644-1, *Cleanrooms and associated controlled environments — Part 1: Classification of air cleanliness by particle concentration (ISO 14644-1)* **A2**

EN ISO 14731, *Welding coordination — Tasks and responsibilities (ISO 14731:2006)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**