



SLOVENSKI STANDARD

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Konstruktivni les - Trdnostni razredi - Določitev trdnostnih razredov na podlagi vizualnega razvrščanja in vrste lesa

Structural Timber - Strength classes - Assignment of visual grades and species

Bauholz für tragende Zwecke - Festigkeitsklassen - Zuordnung von visuellen Sortierklassen und Holzarten

Bois de structure - Classes de résistance - Affectation des classes visuelles et des essences

Ta slovenski standard je istoveten z: **EN 1912:2024**

ICS:

79.040 Les, hlodovina in žagan les Wood, sawlogs and sawn timber

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EUROPEAN STANDARD

EN 1912

NORME EUROPÉENNE

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English Version

Structural Timber - Strength classes - Assignment of visual grades and species

Bois de structure - Classes de résistance - Affectation
des classes visuelles et des essences

Bauholz für tragende Zwecke - Festigkeitsklassen -
Zuordnung von visuellen Sortierklassen und Holzarten

This European Standard was approved by CEN on 8 April 2024.

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European foreword

This document (EN 1912:2024) has been prepared by Technical Committee CEN/TC 124 “Timber structures”, 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of an identical text or by endorsement, at the latest by November 2024, and conflicting national standards shall be withdrawn at the latest by November 2024.

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.

This document supersedes EN 1912:2012.

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EN 1912:2024 (E)

1 Scope

This document lists visual strength grades, species and sources of timber, and specifies the strength classes to which they are assigned. The assignments listed are for strength classes documented in EN 338.

Structural timber that has previously been graded cannot be re-graded to the same or different grades unless the method of determining characteristic values has made allowances for changes to the timber population caused by the previous grading.

NOTE 1 Consequently, the assignments stated in this document apply to timber that has not been previously strength graded in a way that introduces a bias on the population of timber to be graded, as compared to ungraded material.

Species/grades or species combination/grades are assigned to strength classes in accordance with EN 14081-1 and supporting standards, such as EN 384.

This document contains a list of assignments but is not intended to be exhaustive.

NOTE 2 Timber graded by machine to EN 14081-1 is graded directly to the strength classes and marked accordingly. Machine grading is therefore not referenced in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 384, *Structural timber — Determination of characteristic values of mechanical properties and density*

EN 14081-1, *Timber structures — Strength graded structural timber with rectangular cross section — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1**Caribbean**

Bahamas, Belize, Colombia (Northern part), Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico (South Eastern part), Nicaragua, Panama

3.2**Central Europe**

Austria, Belgium, Czech Republic, France (Alsace region), Germany, Hungary, Italy (Northern part), Liechtenstein, Luxembourg, Netherlands, Poland, Slovakia, Slovenia, Switzerland

3.3**Eastern Europe**

Azerbaijan, Belarus, Georgia, Moldova, Romania, Russia (European part: Northwest Russia, Volga, South Russia, North Caucasus), Ukraine

3.4**Nordic countries**

Denmark, Finland, Iceland, Norway and Sweden

3.5**Northern Europe**

Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Sweden

3.6**South East Asia**

Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, Timor-Leste, Viet Nam

3.7**timber source**

identifiable geographical origin of a species or species combination from which timber is, or is intended to be, strength graded
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3.8**timber species**

individual species or combination of species, linked to botanical identification

3.9**Tropical Africa**

Angola, Benin, Burundi, Cameroon, Central African Republic, Chad, the Democratic Republic of the Congo, The Congo, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Kenya, Liberia, Malawi, Mozambique, Nigeria, Rwanda, Sierra Leone, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe

3.10**West Africa**

Benin, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Liberia, Nigeria, Sierra Leone, Togo

3.11**West and Central Africa**

Benin, Cameroon, Central African Republic, Chad, the Democratic Republic of the Congo, The Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Liberia, Niger, Nigeria, Sierra Leone, Togo, Uganda

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4 Symbols and abbreviations

AGR	Approved Grading Report
CNE Europe	Central Europe, Northern Europe and Eastern Europe

5 Requirements

Application of the grading assignments listed in in Tables 1, 2 and 3 shall be carried out in accordance with the requirements of EN 14081-1 and supporting standards, such as EN 384.

6 Assignments to strength classes

The timber grades, species and sources listed are considered to meet the requirements of the strength classes of EN 338 to which they are assigned in Tables 1, 2 and 3. Softwoods are assigned to C or T classes. Hardwoods are usually assigned to D classes but may be assigned to C or T classes if their strength profile is similar to that of softwoods. Table 4 and Table 5 identify the botanical names and four digit code according to EN 13556 for the commercial names of timber species listed in Tables 1, 2 and 3. The grading of species combinations, either by commercial names or botanical names, is valid for a batch of timber even if only one of the species is present in the graded batch.

The assignments to strength classes given in this document are based on approved grading reports (AGRs) accepted by CEN/TC 124, other testing reports, or proven practice over time. Further assignments in future versions of this standard shall be approved by CEN/TC 124 based on AGRs. A current list of reports is available through CEN/TC 124 secretariat. Further AGRs may be used as documentation before the information they contain becomes available in an amendment or revision of EN 1912. In the event of any discrepancy between an earlier dated AGR and this standard, this standard shall take precedence.

The timber grades, species and sources listed meet the requirements of the strength classes to which they are assigned in Tables 1, 2 and 3, with reference to the grading standards listed in Annex A and the visual grading requirements given in EN 14081-1.

Table 1 — Assignment of grades of species to bending (C) strength classes

Strength Class	Grading standard	Grade	Timber species		Source	Basis of assignment ^a
			Commercial name(s)	Botanical name(s)		
C35	TS 1265:2012	Class 1	Anatolian black pine	<i>Pinus nigra subsp. pallasiana</i>	Türkiye	TC124-2021
C35	DIN 4074-1:2012	S13, S13K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany and Austria	TC124-2011
C35	ÖNORM DIN 4074-1:2012	S13, S13K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany and Austria	TC124-2011
C35	TS 1265:2012	Class 1	Scots pine (redwood)	<i>Pinus sylvestris</i>	Türkiye	TC124-2022
C35	UNE 56546:2022	MEF	Shining gum	<i>Eucalyptus nitens</i>	Spain	TC124-2022
C35	TS 1265:2012	Class 1	Turkish red pine	<i>Pinus brutia</i>	Türkiye	TC124-2022

Strength Class	Grading standard	Grade	Timber species		Source	Basis of assignment ^a
			Commercial name(s)	Botanical name(s)		
C30	UNI 11035-1:2022 <i>Width and thickness ≤ 100 mm</i>	S1	Douglas fir	<i>Pseudotsuga menziesii</i>	Italy	TC124-2010
C30	ČSN 73 2824-1:2015	S13, S13K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C30	DIN 4074-1:2012	S13, S13K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C30	ÖNORM DIN 4074-1:2012	S13, S13K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C30	SIA 265/2:2023	S13, S13K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C30	INSTA 142:2009	T3	European larch	<i>Larix decidua</i>	Northern Europe	Old
C30	NEN 5499:2007/A1:2011	T3	European larch	<i>Larix decidua</i>	Northern Europe	Old
C30	NF B 52-001-1:2018	ST-I	French pine (not including maritime)	<i>Pinus nigra subsp. laricio, Pinus nigra subsp. nigra, Pinus sylvestris</i>	France	TC124-2022
C30	STN 49 1531:2001	S0	Norway spruce	<i>Picea abies</i>	Slovakia	TC124-2007
C30	UNE 56544:2022	ME1	Salzmann pine	<i>Pinus nigra subsp. salzmannii</i>	Spain	TC124-2003
C30	ČSN 73 2824-1:2015	S13, S13K	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old
C30	DIN 4074-1:2012	S13, S13K	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	1994
C30	ÖNORM DIN 4074-1:2012	S13, S13K	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	1994
C30	SIA 265/2:2023	S13, S13K	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	1994
C30	INSTA 142:2009	T3	Scots pine (redwood)	<i>Pinus sylvestris</i>	Northern Europe	Old
C30	NEN 5499:2007/A1:2011	T3	Scots pine (redwood)	<i>Pinus sylvestris</i>	Northern Europe	Old
C30	ČSN 73 2824-1:2015	S13, S13K	Spruce and fir (whitewood)	<i>Picea abies, Abies alba</i>	CNE Europe	Old
C30	DIN 4074-1:2012	S13, S13K	Spruce and fir (whitewood)	<i>Picea abies, Abies alba</i>	CNE Europe	Old, 2020 for Central Europe
C30	ÖNORM DIN 4074-1:2012	S13, S13K	Spruce and fir (whitewood)	<i>Picea abies, Abies alba</i>	CNE Europe	Old, 2020 for Central Europe

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Strength Class	Grading standard	Grade	Timber species		Source	Basis of assignment ^a
			Commercial name(s)	Botanical name(s)		
C30	SIA 265/2:2023	S13, S13K	Spruce and fir (whitewood)	<i>Picea abies</i> , <i>Abies alba</i>	CNE Europe	Old, 2020 for Central Europe
C30	NF B 52-001-1:2018	ST-I	Spruce and fir (whitewood)	<i>Picea abies</i> , <i>Abies alba</i>	France	Before 2010
C30	UNI 11035-1:2022	S1	Spruce and fir (whitewood)	<i>Picea abies</i> , <i>Abies alba</i>	Italy	TC124-2021
C30	INSTA 142:2009	T3	Spruce and fir (whitewood)	<i>Picea abies</i> , <i>Abies alba</i>	Northern Europe	Old
C30	NEN 5499:2007/A1:2011	T3	Spruce and fir (whitewood)	<i>Picea abies</i> , <i>Abies alba</i>	Northern Europe	Old
C30	UNI 11035-2:2022	LS	Sweet chestnut	<i>Castanea sativa</i>	Italy	TC124-2021
C27	TS 1265:2012	Class 1	Caucasian and taurus fir	<i>Abies nordmanniana</i> , <i>Abies cilicica</i> , <i>Abies bornmuelleriana</i> , <i>Abies equi-trojani</i>	Türkiye	TC124-2021
C27	NF B 52-001-1:2018	ST-I	European larch	<i>Larix decidua</i>	France	Before 2010
C27	TS 1265:2012	Class 1	Oriental spruce	<i>Picea orientalis</i>	Türkiye	TC124-2023
C27	DIN 4074-5:2008	LS13, LS13K	Poplar (nigra)	<i>Populus nigra</i>	Germany	TC124-2008
C27	UNE 56544:2022	ME1	Scots pine (redwood)	<i>Pinus sylvestris</i>	Spain	TC124-2003
C27	TS 1265:2012	Class 2	Scots pine (redwood)	<i>Pinus sylvestris</i>	Türkiye	TC124-2022
C24	TS 1265:2012	Class 2	Anatolian black pine	<i>Pinus nigra subsp. pallasiana</i>	Türkiye	TC124-2021
C24	BS 4978:2007+A2:2017	SS	Caribbean pitch pine	<i>Pinus caribaea</i> , <i>Pinus oocarpa</i>	Caribbean	Old
C24	I.S. 127:2015	SS	Caribbean pitch pine	<i>Pinus caribaea</i> , <i>Pinus oocarpa</i>	Caribbean	Old
C24	TS 1265:2012	Class 2	Caucasian and taurus fir	<i>Abies nordmanniana</i> , <i>Abies cilicica</i> , <i>Abies bornmuelleriana</i> , <i>Abies equi-trojani</i>	Türkiye	TC124-2021
C24	TS 1265:2012	Class 1	Cedar of Lebanon	<i>Cedrus libani</i>	Türkiye	TC124-2023

Strength Class	Grading standard	Grade	Timber species		Source	Basis of assignment ^a
			Commercial name(s)	Botanical name(s)		
C24	UNI 11035-1:2022	S2 and better	Corsican pine	<i>Pinus nigra subsp. laricio</i>	Italy	TC124-2010
C24	NF B 52-001-1:2018	ST-II	Douglas fir	<i>Pseudotsuga menziesii</i>	France	Before 2010
C24	DIN 4074-1:2012	S10, S10K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany and Austria	TC124-2011
C24	ÖNORM DIN 4074-1:2012	S10, S10K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany and Austria	TC124-2011
C24	UNI 11035-1:2022	S2 and better	Douglas fir	<i>Pseudotsuga menziesii</i>	Italy	TC124-2021
C24	BS 4978:2007+A2:2017	SS	Douglas fir-Western larch	<i>Pseudotsuga menziesii, Larix occidentalis</i>	USA and Canada	Old
C24	I.S. 127:2015	SS	Douglas fir-Western larch	<i>Pseudotsuga menziesii, Larix occidentalis</i>	USA and Canada	Old
C24	NLGA:2022	J&P Sel, SLF Sel	Douglas fir-Western larch	<i>Pseudotsuga menziesii, Larix occidentalis</i>	USA and Canada	Old
C24	ČSN 73 2824-1:2015	S10, S10K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C24	DIN 4074-1:2012	S10, S10K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C24	ÖNORM DIN 4074-1:2012	S10, S10K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C24	SIA 265/2:2023	S10, S10K	European larch	<i>Larix decidua</i>	CNE Europe	Old
C24	NF B 52-001-1:2018	ST-II	European larch	<i>Larix decidua</i>	France	Before 2010
C24	INSTA 142:2009	T2	European larch	<i>Larix decidua</i>	Northern Europe	Old
C24	NEN 5499:2007/A1:2011	T2	European larch	<i>Larix decidua</i>	Northern Europe	Old
C24	NF B 52-001-1:2018	ST-II	French pine (not including maritime)	<i>Pinus nigra subsp. laricio, Pinus nigra subsp. nigra, Pinus sylvestris</i>	France	TC124-2022
C24	BS 4978:2007+A2:2017	SS	Hem-fir	<i>Abies amabilis, Abies concolor, Abies grandis, Abies magnifica, Abies</i>	USA and Canada	Old

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Strength Class	Grading standard	Grade	Timber species		Source	Basis of assignment ^a
			Commercial name(s)	Botanical name(s)		
				<i>procera</i> , <i>Tsuga heterophylla</i>		
C24	I.S. 127:2015	SS	Hem-fir	<i>Abies amabilis</i> , <i>Abies concolor</i> , <i>Abies grandis</i> , <i>Abies magnifica</i> , <i>Abies procera</i> , <i>Tsuga heterophylla</i>	USA and Canada	Old
C24	NLGA:2022	J&P Sel, SLF Sel	Hem-fir	<i>Abies amabilis</i> , <i>Abies concolor</i> , <i>Abies grandis</i> , <i>Abies magnifica</i> , <i>Abies procera</i> , <i>Tsuga heterophylla</i>	USA and Canada	Old
C24	BS 4978:2007+A2:2017	SS	Larch (European, Japanese and hybrid)	<i>Larix decidua</i> , <i>Larix × marschlinsii</i> , <i>Larix kaempferi</i>	UK	Old
C24	I.S. 127:2015	SS	Larch (European, Japanese and hybrid)	<i>Larix decidua</i> , <i>Larix × marschlinsii</i> , <i>Larix kaempferi</i>	UK	Old
C24	NF B 52-001-1:2018	ST-II	Maritime pine	<i>Pinus pinaster</i>	France	TC124-2022
C24	UNE 56544:2022	ME1	Maritime pine	<i>Pinus pinaster</i>	Spain	TC124-1999
C24	STN 49 1531:2001	SI	Norway spruce	<i>Picea abies</i>	Slovakia	TC124-2007
C24	BS 4978:2007+A2:2017	SS	Paraná pine	<i>Araucaria angustifolia</i>	Brazil	Old
C24	I.S. 127:2015	SS	Paraná pine	<i>Araucaria angustifolia</i>	Brazil	Old
C24	NF B 52-001-1:2018	ST-II	Poplar (canadensis)	<i>Populus × canadensis</i> cv 'Robusta', 'Dorskamp', 'I 214', 'I 4551'	France	Before 2010
C24	UNE 56544:2022	ME1	Radiata pine	<i>Pinus radiata</i>	Spain	TC124-1999
C24	BS 4978:2007+A2:2017	SS	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old
C24	I.S. 127:2015	SS	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old
C24	ČSN 73 2824-1:2015	S10, S10K	Scots pine (redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old