



SLOVENSKI STANDARD

oSIST prEN 1912:2023

01-januar-2023

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

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Ta slovenski standard je istoveten z: prEN 1912

ICS:

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

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en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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November 2022

ICS 79.040

Will supersede EN 1912:2012

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 draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 124.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 1912:2022) has been prepared by Technical Committee CEN/TC 124 “Timber structures”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1912:2012.

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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. The assignments 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.

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

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

NOTE 2 For combinations of species and visual grades which meet the requirements of EN 14081 but are not listed in this document, the assignment to strength classes is made according to EN 384.

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 14081 (all parts), *Timber structures — Strength graded structural timber with rectangular cross section*

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/d3879fec-2c6f-4110-bfda-2788686348a6/osist-pren-1912-2023>
- 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, Panamá

**3.2
Central Europe**
Austria, Belgium, Czech Republic, France (Alsace region), Germany, Hungary, Italy (Northern part), Liechtenstein, Luxembourg, Netherlands, Poland, Slovak Republic, 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, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, Timor-Leste, Vietnam

3.7**timber source**

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

3.8**timber species**

individual species or combination of species

3.9**tropical Africa**

Angola, Benin, Burundi, Cameroon, Central African Republic, Chad, Congo (Democratic Republic), Congo Republic (Congo-Brazzaville), Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Ivory Coast, 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, Ivory Coast, Liberia, Nigeria, Sierra Leone, Togo

3.11**west and central Africa**

Benin, Cameroon, Central African Republic, Chad, Congo (Democratic Republic), Congo Republic (Congo-Brazzaville), Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Niger, Nigeria, Sierra Leone, Togo, Uganda

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 (all parts).

6 Assignments to strength classes

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.

Table 4 and Table 5 identify the botanical species for the commercial names listed in Tables 1, 2 and 3. The grading of species combinations, either by common name or botanical name, is valid for a batch of timber even if only one of the species is present in the graded batch.

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The assignments to strength classes given in this document are based on approved grading reports (AGRs) accepted by CEN TC 124, other historical testing reports, or historical use. 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.

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

Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C35	ÖNORM DIN 4074-1:2012	S13	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C35	ÖNORM DIN 4074-1:2012	S13K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C35	DIN 4074-1:2012	S13	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C35	DIN 4074-1:2012	S13K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C35	UNE 56546:2022	MEF	Shining gum	<i>Eucalyptus nitens</i>	Spain	TC124-2022	
C35	TS 1265-2012	Class 1	Anatolian black pine	<i>Pinus nigra</i> subsp. <i>pallasiana</i>	Turkey	TC124-2021	
C30	ÖNORM DIN 4074-1:2012	S13	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C30	ÖNORM DIN 4074-1:2012	S13	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C30	ÖNORM DIN 4074-1:2012	S13	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C30	ÖNORM DIN 4074-1:2012	S13K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C30	ÖNORM DIN 4074-1:2012	S13K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C30	ÖNORM DIN 4074-1:2012	S13K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old	
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	

Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C30	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S13K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old	
C30	NF B 52 001-1:2018	ST-I	French pine (not including maritime)	<i>Pinus nigra</i> subsp. <i>laricio</i> , <i>Pinus nigra</i> subsp. <i>nigra</i> , <i>Pinus sylvestris</i>	France	TC124-2022	
C30	NF B 52 001-1:2018	ST-I	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	France	Before 2010	
C30	DIN 4074-1:2012	S13	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C30	DIN 4074-1:2012	S13	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	1994	
C30	DIN 4074-1:2012	S13	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C30	DIN 4074-1:2012	S13K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C30	DIN 4074-1:2012	S13K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	1994	
C30	DIN 4074-1:2012	S13K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C30	UNI 11035-2:2022	LS	Sweet chestnut	<i>Castanea sativa</i>	Italy	TC124-2021	
C30	UNI 11035-1:2022	S1	Douglas fir	<i>Pseudotsuga menziesii</i>	Italy	TC124-2010	Maximum width and thickness 100 mm
C30	UNI 11035-1:2022	S1	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	Italy	TC124-2021	
C30	NEN 5499:2007/A1:2011	T3	Larch (European)	<i>Larix decidua</i>	Northern Europe	Old	
C30	NEN 5499:2007/A1:2011	T3	Scots pine (European redwood)	<i>Pinus sylvestris</i>	Northern Europe	Old	
C30	NEN 5499:2007/A1:2011	T3	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	Northern Europe	Old	
C30	INSTA 142:2009	T3	Larch (European)	<i>Larix decidua</i>	Northern Europe	Old	

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Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C30	INSTA 142:2009	T3	Scots pine (European redwood)	<i>Pinus sylvestris</i>	Northern Europe	Old	
C30	INSTA 142:2009	T3	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	Northern Europe	Old	
C30	STN 49 1531:2001	S0	Norway spruce	<i>Picea abies</i>	Slovak Republic	TC124-2007	
C30	UNE 56544:2022	ME1	Salzmann pine	<i>Pinus nigra</i> subsp. <i>Salzmannii</i>	Spain	TC124-2003	
C27	NF B 52 001-1:2018	ST-I	Larch (European)	<i>Larix decidua</i>	France	Before 2010	
C27	DIN 4074-5:2008	LS13	Poplar (nigra)	<i>Populus nigra</i>	Germany	TC124-2008	
C27	DIN 4074-5:2008	LS13K	Poplar (nigra)	<i>Populus nigra</i>	Germany	TC124-2008	
C27	UNE 56544:2022	ME1	Scots pine (European redwood)	<i>Pinus sylvestris</i>	Spain	TC124-2003	
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>	Turkey	TC124-2021	
C24	ÖNORM DIN 4074-1:2012	S10	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C24	ÖNORM DIN 4074-1:2012	S10	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C24	ÖNORM DIN 4074-1:2012	S10	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C24	ÖNORM DIN 4074-1:2012	S10	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C24	ÖNORM DIN 4074-1:2012	S10K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C24	ÖNORM DIN 4074-1:2012	S10K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C24	ÖNORM DIN 4074-1:2012	S10K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	

Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C24	ÖNORM DIN 4074-1:2012	S10K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C24	NLGA:2017	J&P Sel	Douglas fir-larch	<i>Larix occidentalis</i> , <i>Pseudotsuga menziesii</i>	USA & Canada	Old	
C24	NLGA:2017	J&P 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 & Canada	Old	
C24	NLGA:2017	J&P Sel	S-P-F	<i>Abies balsamea</i> , <i>Abies lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Picea glauca</i> , <i>Picea mariana</i> , <i>Picea rubens</i> , <i>Pinus banksiana</i> , <i>Pinus contorta</i> , <i>Pinus ponderosa</i>	USA & Canada	Old	
C24	NLGA:2017	SLF Sel	Douglas fir-larch	<i>Larix occidentalis</i> , <i>Pseudotsuga menziesii</i>	USA & Canada	Old	
C24	NLGA:2017	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 & Canada	Old	
C24	NLGA:2017	SLF Sel	S-P-F	<i>Abies balsamea</i> , <i>Abies lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Picea glauca</i> , <i>Picea mariana</i> , <i>Picea rubens</i> , <i>Pinus banksiana</i> , <i>Pinus contorta</i> , <i>Pinus ponderosa</i>	USA & Canada	Old	
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	

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Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old	
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C24	ČSN 73 2824-1:2004 and CSN 73 2824/Z1:2009	S10K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old	
C24	NF B 52 001-1:2018	ST-II	Douglas fir	<i>Pseudotsuga menziesii</i>	France	Before 2010	
C24	NF B 52 001-1:2018	ST-II	French pine (not including maritime)	<i>Pinus nigra</i> subsp. <i>laricio</i> , <i>Pinus nigra</i> subsp. <i>nigra</i> , <i>Pinus sylvestris</i>	France	TC124-2022	
C24	NF B 52 001-1:2018	ST-II	Larch (European)	<i>Larix decidua</i>	France	Before 2010	
C24	NF B 52 001-1:2018	ST-II	Maritime pine	<i>Pinus pinaster</i>	France	TC124-2022	
C24	NF B 52 001-1:2018	ST-II	Poplar (candensis)	<i>Populus × canadensis</i> cv 'Robusta', 'Dorskamp', 'I 214', 'I 4551'	France	Before 2010	
C24	NF B 52 001-1:2018	ST-II	Sitka spruce	<i>Picea sitchensis</i>	France	TC124-2012	
C24	NF B 52 001-1:2018	ST-II	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	France	Before 2010	
C24	NF B 52 001-1:2018	ST-II	Sweet chestnut	<i>Castanea sativa</i>	France	TC124-2016	
C24	DIN 4074-1:2012	S10	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C24	DIN 4074-1:2012	S10	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	
C24	DIN 4074-1:2012	S10	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	2007	
C24	DIN 4074-1:2012	S10	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C24	DIN 4074-1:2012	S10K	Douglas fir	<i>Pseudotsuga menziesii</i>	Germany & Austria	TC124-2011	
C24	DIN 4074-1:2012	S10K	Larch (European)	<i>Larix decidua</i>	CNE Europe	Old	

Strength Class	Grading standard	Grade	Species group	Botanical species	Source	Basis of assignment ^a	Comments
C24	DIN 4074-1:2012	S10K	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	2007	
C24	DIN 4074-1:2012	S10K	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old, 2020 for Central Europe	
C24	IS 127:2015	SS	Caribbean pitch pine	<i>Pinus caribaea</i> , <i>Pinus oocarpa</i>	Caribbean	Old	
C24	IS 127:2015	SS	Douglas fir-larch	<i>Larix occidentalis</i> , <i>Pseudotsuga menziesii</i>	USA & Canada	Old	
C24	IS 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 & Canada	Old	
C24	IS 127:2015	SS	Larch (European, Japanese and hybrid)	<i>Larix decidua</i> , <i>Larix × marschlinsii</i> , <i>Larix kaempferi</i>	UK	Old	
C24	IS 127:2015	SS	Paraná pine	<i>Araucaria angustifolia</i>	Brazil	Old	
C24	IS 127:2015	SS	Scots pine (European redwood)	<i>Pinus sylvestris</i>	CNE Europe	Old	
C24	IS 127:2015	SS	Southern pine	<i>Pinus echinata</i> , <i>Pinus elliottii</i> , <i>Pinus palustris</i> , <i>Pinus taeda</i>	USA	Old	
C24	IS 127:2015	SS	S-P-F	<i>Abies balsamea</i> , <i>Abies lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Picea glauca</i> , <i>Picea mariana</i> , <i>Picea rubens</i> , <i>Pinus banksiana</i> , <i>Pinus contorta</i> , <i>Pinus ponderosa</i>	USA & Canada	Old	
C24	IS 127:2015	SS	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	CNE Europe	Old	
C24	UNI 11035-1:2022	S2	Spruce & fir whitewood	<i>Abies alba</i> , <i>Picea abies</i>	Italy	TC124-2021	