SLOVENSKI STANDARD
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Qualitative classification of softwood round timber - Part 1: Spruces and firs

Qualitäts-Sortierung von Nadel-Rundholz - Teil 1: Fichten und Tannen

Classement qualitatif des bois ronds résineux - Partie 1: Epicéas et sapins

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English version

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

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 175 "Round and sawn timber", the secretariat of which is held by AFNOR.

This standard is one of a series concerning round timber (softwood and hardwood).

Other parts of this standard are :

ENV 1927-2 Qualitative classification of softwood round timber - Part 2 : Pines

ENV 1927-3 Qualitative classification of softwood round timber - Part 3 : Larches and Douglas fir

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the qualitative classification for the roundwood of spruces *(Picea spp)* and firs *(Abies spp)*. The classification is made either using clauses 4 and 5 or using clause 6. Clauses 4 and 5 describe the qualitative classification of round timber for which the intended use is unknown. Clause 6 gives the characteristics to be included in all national standards describing a qualitative classification or as guideline for contracts describing qualities for round timber of spruces and firs where the intended use is known.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this part of European standard, only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to, applies.

EN 844-1	Round and sawn timber - Terminology - Part 1 : General terms common to round and sawn timber
EN 844-2	Round and sawn timber - Terminology - Part 2 : General terms relating to round timber
EN 844-5	Round and sawn timber - Terminology - Part 5 : Terms relating to dimensions of round timber
EN 844-7	Round and sawn timber - Terminology - Part 7 : Terms relating to anatomical structure of timber
EN 844-8	Round and sawn timber - Terminology - Part 8 : Terms relating to the features of round timber
prEN 1309-2	Round and sawn timber - Method of measurement of dimensions - Part 2: Round timber
EN 1310	Round and sawn timber - Method of measurement of features
EN 1311	Round and sawn timber - Method of measurement of biological degrade
ISO 2036	Wood for manufacture of wood flooring - Symbols for marking according to species

3 Definitions

For the purposes of this standard, the definitions in EN 844-1, EN 844-2, EN 844-5, EN 844-7 and EN 844-8 apply.

4 Qualitative classification for which the intended use is unknown

The qualitative grading has four classes : A, B, C and D. The grading is based on the following general description of quality classes :

- **Quality class A**

  First quality timber. Generally corresponding to a butt log with clear timber, without defects or with only minor defects and with few restrictions to its use.

- **Quality class B**

  Timber of average to first quality, with no specific requirements for clear wood. Knots are permitted to such an extent as is considered to be average for each species.

- **Quality class C**

  Timber of average to low quality, allowing all quality characteristics which do not seriously reduce the natural characteristics of the wood.

- **Quality class D**

  Timber which can be sawn into usable wood, which, because of its characteristics, falls into none of the quality classes A, B, C.

The classes are defined more precisely in table 1. All the listed qualitative characteristics in table 1 shall be taken into account when a class is assigned and measurements shall be made according to prEN 1309-2, EN 1310 and EN 1311.

This classification shall be completed with the latin name of specified species. The abbreviation of this latin name can also be used instead of the full name.

Examples :

1) Fir :

Abies alba Class B or ABIA[1] class B

2) Spruce :

Picea abies Class B or PICA[1)] class B

[1] Symbols given in ISO 2036

5 Rules for grading

Table 1 : Grading for spruces and firs

Spruces / Firs		CLASSES			
CHARACTERISTICS		**A**	**B**	**C**	**D**
KNOTS (cm)					
- Intergrown, sound		not permitted (1)	≤ 4	permitted	permitted
- Dead			≤ 3	≤ 6	permitted
- Unsound		not permitted	not permitted	≤ 6	permitted
		not permitted			
RESIN POCKET		not permitted (1)	1 per section	permitted	permitted
RATE OF GROWTH (mm)		≤ 4	≤ 7	unlimited	unlimited
GROWTH					
- Spiral grain (cm/m)		≤ 3	≤ 7	unlimited	unlimited
- Excentric pith (%)		10	15	unlimited	unlimited
- Reaction wood (%) (2)		not permitted	10	30	unlimited
- Sweep (3) < 20 cm (cm/m)		≤ 1	≤ 1	≤ 1	≤ 5
	< 35 cm	≤ 1	≤ 1	≤ 1,5	≤ 5
	≥ 35 cm	≤ 1	≤ 1,5	≤ 2	≤ 5
- Taper (3) (cm/m)	< 20 cm	unlimited	≤ 1	unlimited	unlimited
	< 35 cm	unlimited	≤ 1,5	unlimited	unlimited
	≥ 35 cm	unlimited	≤ 2	unlimited	unlimited
SHAKES					
- Heart shakes (except dry shakes)	< 35 cm	not permitted	not permitted	≤1/2 ∅	permitted
	≥ 35 cm	≤ 1/4 ∅	≤ 1/4 ∅	≤ 1/2 ∅	permitted
- Ring shakes	< 35 cm	not permitted	not permitted	not permitted	permitted
	≥ 35 cm	≤ 1/4 ∅	≤ 1/4 ∅	≤ 1/3 ∅	permitted
INSECT ATTACK					
- < 3 mm (e.g. : Trypodendron lineatum)		not permitted	not permitted	not permitted (1)	permitted
- ≥ 3 mm (e.g. : Sirex, Cerambyciden)		not permitted	not permitted	not permitted	permitted
DOTE		not permitted	not permitted	not permitted	permitted
ROT		not permitted	not permitted	not permitted	not permitted (1)
STAIN		not permitted	not permitted	permitted (4)	permitted

(1) Refer to the general description of quality classes
(2) Method of measurement : width of reaction wood as a function of the cross section diameter (in addition to EN 1310)
(3) Mid diameter under bark
(4) Only permitted in the sap area

6 Qualitative classification for which the intended use is known

In any national standard or as guideline for contracts, the following list of characteristics shall be included as given in table 2. prEN 1309-2, EN 1310 and EN 1311 shall be used as a reference.

Table 2: Qualitative classification for which the intended use is known

KNOTS	➢ intergrown, sound ➢ dead ➢ unsound
RESIN POCKETS	
RATE OF GROWTH	
GROWTH	➢ spiral grain ➢ excentric ➢ reaction wood ➢ sweep ➢ taper
SHAKES	➢ heart shakes ➢ ring shakes
INSECT ATTACK	
DOTE ROT	
STAIN	

7 Additional criteria

In case of doubt, any externally visible or possible hidden flaws (e.g. knots under buckles, overgrown shakes, stripping damage) shall be laid bare and the revealed flaws assessed according to the quality specifications. Foreign bodies (e.g. shrapnel) are not dealt by this Standard.

Where some characteristics of round wood of the classes A and B do not fulfill the quality criteria on agreement, they can be compensated by higher quality in other characteristics.

Generally, the following characteristics cannot be compensated : insect attack (especially Xyloterus lineatus), rot and stain. If there is compensation for minor rot of little consequence, an agreement is necessary.

Each log can be graded either in a single class or in more than one class by using theoretical places for crosscut divisions. The minimum length, accepted for a theoretical crosscut point division, is 3 m.