

# Qualitative classification of softwood round timber —

## Part 1: Spruces and firs

ICS 79.040

## National foreword

This British Standard is the UK implementation of EN 1927-1:2008. It supersedes DD ENV 1927-1:1999 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/543, Round and sawn timber.

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.

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

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 May 2008

© BSI 2008

ISBN 978 0 580 56622 6

### Amendments/corrigenda issued since publication

Date	Comments

EUROPEAN STANDARD

**EN 1927-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2008

ICS 79.040

Supersedes ENV 1927-1:1998

English Version

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

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

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

This European Standard was approved by CEN on 23 February 2008.

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 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 Management Centre has the same status as the official versions.

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



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## Contents

Page

Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Qualitative classification for which the intended use is unknown.....	5
5 Rules for grading .....	6
6 Additional criteria .....	7
Annex A (informative) Qualitative classification for which the intended use is known.....	8
Annex B (informative) A–deviations .....	9

## Foreword

This document (EN 1927-1:2008) has been prepared by Technical Committee CEN/TC 175 “Round and sawn timber”, 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 September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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 will supersede ENV 1927-1:1998.

EN 1927 consists of the following parts with the main title *Qualitative classification of softwood round timber*:

- EN 1927-1, *Spruces and firs*
- EN 1927-2, *Pines*
- EN 1927-3, *Larches and Douglas fir*

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

## **1 Scope**

This European 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 Annex A. Clauses 4 and 5 describe the qualitative classification of round timber for which the intended use is unknown.

Informative Annex A gives a list of characteristics which serves as a guideline for contracts describing qualities for round timber of spruces and firs where the intended use is known.

## **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 844-1:1995, *Round and sawn timber — Terminology — Part 1: General terms common to round timber and sawn timber*

EN 844-2:1997, *Round and sawn timber — Terminology — Part 2: General terms relating to round timber*

EN 844-5:1997, *Round and sawn timber — Terminology — Part 5: Terms relating to dimensions of round timber*

EN 844-7:1997, *Round and sawn timber — Terminology — Part 7: Terms relating to anatomical structure of timber*

EN 844-8:1997, *Round and sawn timber — Terminology — Part 8: Terms relating to features of round timber*

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

EN 844-10:1998, *Round and sawn timber — Terminology — Part 10: Terms relating to stain and fungal attack*

EN 844-12:2000, *Round and sawn timber— Terminology — Part 12: Additional terms and general index*

EN 1309-2, *Round and sawn timber — Method of measurement of dimensions — Part 2: Round timber - Requirements for measurement and volume calculation rules*

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 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 844-1:1995, EN 844-2:1997, EN 844-5:1997, EN 844-7:1997, EN 844-8:1997, EN 844-9:1997, EN 844-10:1998 and EN 844-12:2000 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 or 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 EN 1309-2, EN 1310 and EN 1311.

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

EXAMPLE 1     Fir: *Abies alba* class B or ABIA-B<sup>1</sup>.

EXAMPLE 2     Spruce: *Picea abies* class B or PICA-B<sup>1</sup>.

---

<sup>1</sup> Symbols given in ISO 2036

## 5 Rules for grading

Table 1 — Grading of spruces and firs

Characteristics	Classes			
	A	B	C	D
<b>knots</b>				
intergrown, sound	not permitted <sup>a</sup>	≤ 4 cm	≤ 8 cm	permitted
dead	not permitted	≤ 3 cm	≤ 6 cm	permitted
unsound	not permitted	not permitted	≤ 3 cm	permitted
<b>resin pocket</b>	not permitted <sup>a</sup>	1 per cross-section	permitted	permitted
<b>rate of growth</b>	≤ 4 mm	≤ 7 mm	unlimited	unlimited
<b>growth</b>				
spiral grain	≤ 3 cm/m	≤ 7 cm/m	≤ 10 cm/m	unlimited
eccentric pith	≤ 10 %	≤ 15 %	unlimited	unlimited
reaction wood <sup>b</sup>	not permitted	≤ 10 %	≤ 33 %	unlimited
sweep <sup>c</sup> < 20 cm	no requirement	≤ 1 cm/m	≤ 1,5 cm/m	≤ 3 cm/m
≥ 20 cm to < 35 cm	≤ 1 cm/m	≤ 1 cm/m	≤ 1,5 cm/m	≤ 3,5 cm/m
≥ 35 cm	≤ 1 cm/m	≤ 1,5 cm/m	≤ 2 cm/m	≤ 4,5 cm/m
taper <sup>c</sup> < 20 cm	no requirement	≤ 1,25 cm/m	≤ 2 cm/m	unlimited
≥ 20 cm to < 35 cm	unlimited	≤ 1,5 cm/m	≤ 2,5 cm/m	unlimited
≥ 35 cm	unlimited	≤ 2 cm/m	≤ 4 cm/m	unlimited
<b>shakes</b>				
heart shakes < 35 cm (except check) <sup>c</sup>	not permitted	not permitted	≤ 1/2 Ø	permitted
≥ 35 cm	≤ 1/4 Ø	≤ 1/4 Ø	≤ 1/2 Ø	permitted
ring shakes <sup>c</sup> < 35 cm	not permitted	not permitted	not permitted	≤ 1/2 Ø
≥ 35 cm	not permitted	≤ 1/4 Ø	≤ 1/3 Ø	≤ 1/2 Ø
<b>insect attack</b>				
< 2 mm (e.g. <i>Trypodendron lineatum</i> )	not permitted	not permitted	not permitted <sup>d</sup>	permitted
≥ 2 mm (e.g. <i>Sirex</i> , <i>Cerambycidae</i> )	not permitted	not permitted	not permitted	Small-scale attack permitted



Table 1 (continued)

Characteristics	Classes			
	A	B	C	D
<b>dote</b>	not permitted	not permitted	For mid diameters < 35 cm permitted in the surface area up to 10 % of the mid diameter  For mid diameters ≥ 35 cm permitted in the surface area up to 20 % of the mid diameter	permitted
<b>rot</b>	not permitted	not permitted	not permitted <sup>e</sup>	permitted <sup>f</sup>
<b>stain</b>	not permitted	not permitted	permitted in the sap area <sup>g</sup>	permitted
<p><sup>a</sup> Refer to the general description of quality classes.</p> <p><sup>b</sup> Method of measurement: width of reaction wood as a function of the cross section diameter (in addition to EN 1310).</p> <p><sup>c</sup> Mid diameter under bark.</p> <p><sup>d</sup> Initial stages of <i>Trypodendron lineatum</i> attack permitted.</p> <p><sup>e</sup> Small areas of surface rot are permitted in the area of the butt swelling.</p> <p><sup>f</sup> Provided that at least 80 % of the cross section is usable on the complete length.</p> <p><sup>g</sup> Specific contract regulations are recommended.</p>				

## 6 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 with in this Standard.

Where some characteristics of round wood of the classes A and B do not fulfil 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 *Trypodendron lineatum*), 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 crosscut points. The minimum length, accepted for a theoretical crosscut point, is 3 m.

**Annex A**  
**(informative)**

**Qualitative classification for which the intended use is known**

The following list of characteristics should be considered for contracts where the intended use is known. EN 1309-2, EN 1310 and EN 1311 shall be used as a reference.

NOTE The following list is not exhaustive. Additional characteristics may be considered.

- butt swelling;
- eccentric pith;
- foreign body;
- insect attack;
- knots;
- rate of growth;
- reaction wood;
- resin pocket;
- rot;
- shakes;
- spiral grain;
- stain;
- sweep;
- taper;
- tapping cut;
- undercut.

## **Annex B** (informative)

### **A–deviations**

A- deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/ CENELEC national member.

This European Standard does not fall under any Directive of the EU. In the relevant CEN/ CENELEC countries these A- deviations are valid instead of the provisions of the European Standard until they have been removed.

#### Lithuania

- Apvaliosios medienos apskaitos tvarkos aprašas

*Order of description for registration of round timber* (Žin., (Official Gazette) **21-12-2007, No. 135-5502; valid since 01-01-2008**).

- Apvaliosios medienos klasifikavimo ir ženkinimo taisyklės

*Rules for classification and marking of round timber* (Žin., (Official Gazette) **13-07-2001, No. 61-2198; valid since 14-07-2001**).

---

---

## BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

### Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.  
Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

### Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001.  
Fax: +44 (0)20 8996 7001. Email: [orders@bsi-global.com](mailto:orders@bsi-global.com). Standards are also available from the BSI website at <http://www.bsi-global.com>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

### Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.  
Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: [info@bsi-global.com](mailto:info@bsi-global.com).

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.  
Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001.  
Email: [membership@bsi-global.com](mailto:membership@bsi-global.com).

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsi-global.com/bsonline>.

Further information about BSI is available on the BSI website at <http://www.bsi-global.com>.

### Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager.  
Tel: +44 (0)20 8996 7070. Fax: +44 (0)20 8996 7553.  
Email: [copyright@bsi-global.com](mailto:copyright@bsi-global.com).