



# SLOVENSKI STANDARD SIST EN 316:2000

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Wood fibreboards - Definition, classification and symbols

Holzfaserplatten - Definition, Klassifizierung und Kurzzeichen

Panneaux de fibres de bois - Définition, classification et symboles

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**ICS:**

79.060.20 X|a } ^ } ^ ^ / ^ ^ } ^ ^ | [ z ^ Fibre and particle boards

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English version

## Wood fibreboards - Definition, classification and symbols

Panneaux de fibres de bois - Définition, classification et  
symbolesHolzfaserplatten - Definition, Klassifizierung und  
Kurzzeichen

This European Standard was approved by CEN on 22 August 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 112 "Wood-based panels", the secretariat of which is held by DIN.

This European Standard supersedes EN 316:1993.

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of an identical text or by endorsement, at the latest by March 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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

Compared to the version EN 316 : 1993 the following modifications have been made:

- a) The minimum density of dry process boards (MDF) has been reduced from 600 kg/m<sup>3</sup> to 450 kg/m<sup>3</sup>.
- b) Additional symbols for conditions of use and application purposes have been introduced.

## 1 Scope

This European Standard gives the definition, classification and symbols for wood fibreboards.

## 2 Definitions

For the purposes of this standard the following definition applies:

### 2.1 Wood fibreboard (subsequently referred to as fibreboard):

Panel material with a nominal thickness of 1,5 mm or greater, manufactured from lignocellulosic fibres with application of heat and/or pressure.

NOTE: The bond is derived:

- either from the felting of the fibres and their inherent adhesive properties,
- or from a synthetic adhesive added to the fibres.

Other additives can be included.

## 3 Classification

### 3.1 General

Fibreboards can be classified according to different criteria, e.g. related to production process, thickness, density, specific properties, conditions of use, or application purposes.

In this standard, a combined system of criteria is used for the classification of fibreboards, starting with the production process.

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### 3.2 Classification according to production process

#### 3.2.1 General

Fibreboards are classified by their production process as follows:

- Wet process fibreboards
- Dry process fibreboards

NOTE: The word "fibre" is mostly omitted from the denominations defined above. Hence, reference is made to "wet process boards" (e.g. hardboard), or "dry process boards" (MDF).

#### 3.2.2 Wet process boards

Fibreboards having a fibre moisture content of more than 20 % at the stage of forming. Wet process boards are classified according to their density, as follows:

- **Hardboards** (HB, density  $\geq 900 \text{ kg/m}^3$ )

They can be given additional properties, e.g. fire retardancy, moisture resistance, resistance against biological attack, workability (e.g. mouldability), either by specific treatment (e.g. "tempering", "oil tempering") or by the addition of a synthetic adhesive or other additives.

- **Medium boards** (MB, density  $\geq 400 \text{ kg/m}^3$  to  $< 900 \text{ kg/m}^3$ )

Medium boards are divided into two sub-categories according to their density, as follows:

- low density medium boards (MBL,  $400 \text{ kg/m}^3$  to  $< 560 \text{ kg/m}^3$ )
- high density medium boards (MBH,  $560 \text{ kg/m}^3$  to  $< 900 \text{ kg/m}^3$ )

They can be given additional properties, e.g. fire retardancy, moisture resistance.

- **Softboards** (SB, density  $\geq 230 \text{ kg/m}^3$  to  $< 400 \text{ kg/m}^3$ )

These boards have basic properties of thermal and acoustic insulation. They can be given additional properties, e.g. fire retardancy. Improved moisture resistance as well as enhanced strength properties are usually achieved by the addition of a petrochemical substance (e.g. bitumen).

### 3.2.3 Dry process boards (MDF)

Fibreboards having a fibre moisture content of less than 20 % at the forming stage, and having a density of  $\geq 450 \text{ kg/m}^3$ . These boards are essentially produced under heat and pressure with the addition of a synthetic adhesive.

NOTE: For marketing purposes, MDF of specific density ranges can be given different denominations. For example, the following, density-related marketing terms for MDF have become established:

HDF: MDF with a density of  $\geq 800 \text{ kg/m}^3$

light MDF: MDF with a density of  $\leq 650 \text{ kg/m}^3$

ultra-light MDF: MDF with a density of  $\leq 550 \text{ kg/m}^3$

Dry process fibreboards can be given additional properties, e.g. fire retardancy, moisture resistance, resistance against biological attack, either by changing the composition of the synthetic adhesive or by the inclusion of other additives.

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## 3.3 Classification according to additional properties and applications

### 3.3.1 General

Each of the fibreboard types defined in 3.2.2 and 3.2.3 is furthermore classified according to a set of criteria related to specific conditions of use and different application purposes.

NOTE: Detailed information on the conditions of use, the applications and the corresponding requirements can be found in the specification standards for fibreboards listed in annex A.

### 3.3.2 Classification according to conditions of use

Table 1 shows the classification criteria for fibreboards related to conditions of use.

**Table 1: Classification criteria for fibreboards related to conditions of use**

Conditions of use
dry conditions
humid conditions
exterior conditions

### 3.3.3 Classification according to application purposes

Table 2 shows the classification criteria for fibreboards related to application purposes.

**Table 2: Classification criteria for fibreboards related to application purposes**

Application purposes
general purpose use load-bearing applications <ol style="list-style-type: none"> <li>1) for all load duration categories</li> <li>2) for instantaneous or short-term load durations only</li> </ol>

## 4 Symbols

### 4.1 Symbols for different fibreboard types

Table 3 specifies the symbols which shall be used for the fibreboard types defined by this standard.

**Table 3: Symbols for different fibreboard types**

Fibreboard type	Symbol
Hardboard	HB
Low density medium board	MBL
High density medium board	MBH
Softboard	SB
Dry process board	MDF

### 4.2 Symbols related to conditions of use and application purposes

Table 4 specifies the symbols which shall be used to indicate the conditions of use and application purposes

**Table 4: Symbols related to conditions of use and application purposes**

Conditions of use/application purposes	Symbol
Conditions of use: dry conditions humid conditions exterior conditions	no symbol H E
Application purposes: general purposes load-bearing use <ol style="list-style-type: none"> <li>a) for all load duration categories</li> <li>b) for instantaneous or short-term load durations only</li> </ol>	no symbol L A S

Different load-bearing categories of boards are identified by adding the digits 1 or 2 after the symbol. The digit 1 is used for load-bearing boards and the digit 2 for heavy duty load-bearing boards.

### 4.3 Composition of symbols

The symbols indicating conditions of use and application purposes are added to the symbol of the fibreboard type after a full stop, in this sequence:

fibreboard type. condition of use + application purpose + load duration category<sup>1)</sup> + load-bearing category<sup>1)</sup>

EXAMPLES: HB.HLA 2 heavy duty load bearing hardboard for use in humid conditions for all load duration categories.

MDF.HLS load-bearing MDF for use in humid conditions for instantaneous or short-term load duration only.

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<sup>1)</sup> Where applicable