BRITISH STANDARD

BS EN
622-1:2003

Fibreboards — Specifications —

Part 1: General requirements

The European Standard EN 622-1:2003 has the status of a British Standard

ICS 79.060.20

BSI
British Standards

National foreword

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The UK participation in its preparation was entrusted to Technical Committee B/541, Wood based panels, which has the responsibility to:

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English version

Fibreboards - Specifications - Part 1: General requirements

Panneaux de fibres - Exigences - Partie 1: Exigences générales

Faserplatten - Anforderungen - Teil 1: Allgemeine Anforderungen

This European Standard was approved by CEN on 3 March 2003.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 622-1:2003 E

Contents

Foreword

This document (EN 622-1:2003) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

This document supersedes EN 622-1:1997.

This standard is one of a series specifying requirements for fibreboards. The titles of the other parts of this series are listed in clause 2.

Compared to EN 622-1:1997 the following modifications have been made:

a) annex A with A-deviations for formaldehyde emission has been deleted. The formaldehyde classes according to EN 13986 have taken into account in Table 1 and Table 3.

b) EN 326-2 and EN 326-3 have been added as normative references in clause 4.

Annex A is normative.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the requirements for some properties which are common to all uncoated fibreboard types as defined in EN 316.

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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 120*, Wood-based panels — Determination of formaldehyde content — Extraction method called the perforator method.*

EN 316, *Wood fibreboards — Definition, classification and symbols.*

EN 322, *Wood-based panels — Determination of moisture content.*

EN 323, *Wood-based panels — Determination of density.*

EN 324-1, *Wood-based panels — Determination of dimensions of boards — Part 1: Determination of thickness width and length.*

EN 324-2, *Wood-based panels — Determination of dimensions of boards — Part 2: Determination of squareness and edge straightness.*

EN 326-2, *Wood-based panels — Sampling, cutting and inspection — Part 2: Quality control in the factory.*

EN 326-3, *Wood-based panels — Sampling, cutting and inspection — Part 3: Inspection of a consignment of panels.*

EN 622-2, *Fibreboards — Specifications — Part 2: Requirements for hardboards.*

EN 622-3, *Fibreboards — Specifications — Part 3: Requirements for medium boards.*

EN 622-4, *Fibreboards — Specifications — Part 4: Requirements for softboards.*

EN 622-5, *Fibreboards — Specifications — Part 5: Requirements for dry process boards (MDF).*

ENV 717-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the chamber method.*

EN 717-2, *Wood-based panels — Determination of formaldehyde release — Part 2: Formaldehyde release by the gas analysis method.*

3 Requirements

Fibreboards shall comply with the general requirements listed in Table 1 and the thickness tolerances listed in Table 2 when dispatched from the producing factory. For certain uses of fibreboards (see specific standards for fibreboards types and general performance standards for wood-based panels), in the case of dispatch in cut sizes, or when further machined (e.g. tongued ad grooved), special tolerances for nominal dimensions, squareness and edge straightness may be agreed upon. The values given in Table 1 and Table 2 for tolerances for nominal dimensions (thickness, width and length), squareness, edge straightness and density within a panel, are characterized by a moisture content in the material corresponding to a temperature of 20 °C and a relative humidity of 65 %. Properties not required for specific board types are marked "—".

The requirements relating to formaldehyde potential (perforator value) shall be met by the 95 percentile value based on test values of individual boards. The 95 percentile value shall be equal to or less than the value given in Table 1.

Table 1 — General requirements for different types of fibreboard at dispatch

Property	Test method	Board Type			
		Hard-boards (HB)	Medium boards (MBL and MBH)	Soft-boards (SB)	Dry process boards (MDF)
Tolerances on nominal dimensions:					
Thickness	EN 324-1	see Table 2			
Length and width	EN 324-1	± 2 mm/m, maximum ± 5 mm			
Squarencess tolerances	EN 324-2	2 mm/m			
Edge straightness tolerance	EN 324-2	1,5 mm/m			
Moisture content	EN 322	4 % to 9 %	4 % to 9 %	4 % to 9 %	4 % to 11 %
Tolerance on mean density within a panel	EN 323	—	—	—	± 7 %
Formaldehyde potential	EN 120 or ENV 717-1				
Class E1					
Perforator value[a]	EN 120 or	—	—	—	≤ 8 mg/100 g oven dry board
Steady state emission value[b]	ENV 717-1	—	—	—	Release ≤ 0,124 mg/m^3 air
Class E2					
Perforator value[a]	EN 120 or	—	—	—	≤ 30 mg/100 g oven dry board
Steady state emission value[b]	ENV 717-1	—	—	—	Release > 0,124 mg/m^3 air

[a] The perforator values apply to panels with a moisture content H of 6,5 %. In the case of dry process boards with different moisture contents, the perforator value shall be multiplied by a factor F calculated from the following equations:

For panels with moisture contents in the range of 4 % ≤ H ≤ 9 %:
$F = -0{,}133\ H + 1{,}86$

Respectively for panels with moisture contents H < 4 % and H > 9 %:
$F = 0{,}636 + 3{,}12\ e^{(-0{,}346\ H)}$

[b] Required for initial type testing other than for established products where initial type testing may also be done on the basis of existing data with EN 120 or EN 717-2 testing, either from factory production control or from external inspection.

Table 2 — Tolerances on nominal thickness for fibreboards at dispatch

Board types				
	Hardboards (HB)	Nominal thickness (mm)		
		≤ 3,5	> 3,5 to 5,5	> 5,5
		± 0,3 mm	± 0,5 mm	± 0,7 mm
	Medium boards (MBL and MBH)	Nominal thickness (mm)		
		≤ 10		> 10
		± 0,7 mm		± 0,8 mm
	Softboards (SB)	Nominal thickness (mm)		
		≤ 10	> 10 to 19	> 19
		± 0,7 mm	± 1,2 mm	± 1,8 mm
	Dry process boards (MDF)	Nominal thickness (mm)		
		≤ 6	> 6 bis 19	> 19
		± 0,2 mm	± 0,2 mm	± 0,3 mm

4 Verification of compliance

4.1 General

Verification of compliance with this European Standard shall be carried out using the test methods listed in Table 1.

4.2 External control

External control of the factory, if any, shall be carried out according to EN 326-2.

The inspection of a consignment of panels shall be carried out according to EN 326-3.

In the case of formaldehyde potential determined by EN 120 perforator method, however, for both external control and inspection of a consignment of panels, the respective requirements set out in Table 1 shall be the arithmetic mean value of at least three boards. Additionally, no individual board shall exceed an upper tolerance limit of + 10 %.

4.3 Factory production control

Factory production control shall be carried out according to EN 326-2.

The properties listed in Tables 1 and 2 shall be controlled, using intervals between tests not exceeding those given in Table 3. Sampling shall be carried out at random. Alternative test methods and/or unconditioned test pieces may be used if a valid correlation to the specified test methods can be proven. The intervals between tests given in Table 3 are related to a production under statistical control.

Table 3 — Maximum intervals between tests for each production line

Property	Maximum test interval
Formaldehyde potential[a] Class E1 Class E2	 24 h per type of board 1 week per type of board
Moisture content	8 h per type of board
All other properties listed in Tables 1 and 2	8 h per type and thickness range

[a] Some types of fibreboards are known to release little or no formaldehyde. In these cases, maximum test intervals may be increased. However, it remains the responsibility of the producer or inspection agency, if any, to ensure compliance with this European Standard.

5 Marking

Marking of fibreboards shall be carried out in accordance with EN 622-2, EN 622-3, EN 622-4 and EN 622-5 as appropriate.

Colour coding is voluntary. If applied, it shall comply with the system shown in annex A. This standard does not exclude colour dyeing of the whole board or individual layers of the board according to traditional national practices.

Annex A
(normative)

Voluntary colour coding system for fibreboards

Two colours are used in each case. The first colour defines the panel as either intended for general purposes use or for load-bearing applications (either one or two stripes of this colour are used). The second colour identifies the panel as being suitable for use either in dry or in humid or in exterior conditions.

The colours used are as follows:

First colour	white	general purpose
First colour	yellow	load-bearing
Second colour	blue	dry conditions
Second colour	green	humid conditions
Second colour	brown	exterior conditions.

Bibliography

EN 13986, *Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking.*

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