SLOVENSKI STANDARD
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Lesne plošče - Napotki za uporabo nosilnih plošč za pode, stene in strehe

Wood-based panels - Guidance on the use of load-bearing boards in floors, walls and roofs

Holzwerkstoffe - Leitfaden für die Verwendung von tragenden Platten in Böden, Wänden und Dächern

Panneaux à base de bois - Guide pour l'utilisation des panneaux structurels en planchers, murs et toitures

Ta slovenski standard je istoveten z: **FprCEN/TR 12872**

ICS:

79.060.01	Lesne plošče na splošno	Wood-based panels in general

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TECHNISCHER BERICHT

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English Version

Wood-based panels - Guidance on the use of load-bearing boards in floors, walls and roofs

Panneaux à base de bois - Guide pour l'utilisation des panneaux structurels en planchers, murs et toitures

Holzwerkstoffe - Leitfaden für die Verwendung von tragenden Platten in Böden, Wänden und Dächern

This draft Technical Report is submitted to CEN members for Technical Committee Approval. It has been drawn up by the Technical Committee CEN/TC 112.

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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

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Foreword

This document (FprCEN/TR 12872:2014) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

This document is currently submitted to the Technical committee approval.

This document will supersede CEN/TS 12872:2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Compared to CEN/TS 12872:2007 the following changes have been made:

a) deliverability changed from CEN/TS to CEN/TR;

b) references to requirements according to EN 12871 deleted after transformation of EN 12871 into a test method standard;

c) in 10.2, Table 2, values of dimensional changes depending on moisture content for multilayer solid wood panels added

d) presentation of wall and roof constructions in Clauses 14 and 15 indicated as basic examples;

e) recommended expansion gaps for walls and roofs in Clauses 14 and 15 reduced.

1 Scope

This Technical Report gives guidance on the use of wood-based panels in structural applications as structural floor and roof decking on joists or structural wall sheathing on studs in accordance with EN 12871. It provides information on:

— inspection at site;

— transport and delivery;

— handling;

— stacking;

— storage;

— moisture content, conditioning and the effects of moisture;

— cutting and machining;

— selection;

— installation.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 300, *Oriented Strand Boards (OSB) - Definitions, classification and specifications*

EN 312, *Particleboards - Specifications*

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

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

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

EN 634-2, *Cement-bonded particleboards - Specifications - Part 2: Requirements for OPC bonded particleboards for use in dry, humid and external conditions*

EN 636, *Plywood - Specifications*

EN 12871, *Wood-based panels - Determination of performance characteristics for load bearing panels for use in floors, roofs and walls*

EN 13353, *Solid wood panels (SWP) - Requirements*

EN 1995-1-1:2004, *Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
service classes
3.1.1
service class 1
is characterised by a moisture content in the materials corresponding to a temperature of 20 °C and the relative humidity of the surrounding air only exceeding 65 % for a few weeks per year

[SOURCE: EN 1995-1-1:2004, 2.3.1.3]

3.1.2
service class 2
is characterised by a moisture content in the materials corresponding to a temperature of 20 °C and the relative humidity of the surrounding air only exceeding 85 % for a few weeks per year

[SOURCE: EN 1995-1-1:2004, 2.3.1.3]

3.1.3
service class 3
climatic conditions leading to higher moisture contents than in service class 2

[SOURCE: EN 1995-1-1:2004, 2.3.1.3]

3.2
structural floor decking
assembly of wood-based panels supported on joists over which the decking spans

Note 1 to entry: The characteristic of the decking is that it is supported by joists and, when subjected to load, is free to deflect between the joists.

3.3
structural wall sheathing
wood-based panel capable of providing mechanical resistance to a wall structure

3.4
structural roof decking
assembly of wood-based panels supported on joists over which the roof decking spans

Note 1 to entry: The characteristic of the decking is that it is supported by joists and, when subjected to load, is free to deflect between the joists.

3.5
warm roof
roof design in which the panels supported on joists are placed below the insulation

Note 1 to entry: The panels are considered to be under conditions corresponding to service class 1.

3.6
cold roof
roof design in which the panels and some of the supporting joists are placed above the insulation

Note 1 to entry: The panels are considered to be under conditions corresponding to service class 2.

3.7
sub floor
structural panel meant to be covered by overlays

4 Information on product performance

Information on product performance based on EN 13986 will be made available by the manufacturer or supplier.

5 Inspection at site

The following should be checked based on the marking of the panel and/or the manufacturer's documentation and/or the designers specification:

— grade or class according to EN specification standard;

— thickness;

— service class;

— suitability for biological durability use class;

— surface (sanded or un-sanded);

— edges (tongue and groove or other type of profile);

— joist or stud spacing;

— load category;

— main load-bearing direction for OSB, plywood and solid wood panels only.

6 Transport and delivery

Panels should be adequately protected by a waterproof covering during transportation. Edges should be well protected from rain or traffic spray. Edge protection should also be provided to avoid damage by ropes, straps or other banding. This applies particularly to profiled panels such as tongued and grooved panels.

Panels should be stacked properly to avoid sagging or other distortion, see Clause 8.

If packing includes banding or strapping this should be removed as soon as possible after delivery to prevent any permanent deformation of the panels. When packs are delivered with edge or face protection panels, these should be left in place until the pack is required for use.

7 Handling

When lifting, moving and stacking panels, edge protection should also be provided to avoid damage by lifting ropes and/or forklifts.

When handling pre-finished panels, it is essential to avoid damage or dirt on the finished surfaces.

Pre-finished panels should always be lifted from a stack and never slid.

8 Stacking

Panels should be stacked flat on a level surface with all four edges flush. The ideal base is a close boarded or slatted pallet.

If this is not possible the panels should be carefully stacked on battens of equal thickness at centres not exceeding 600 mm as shown in Figure 1.

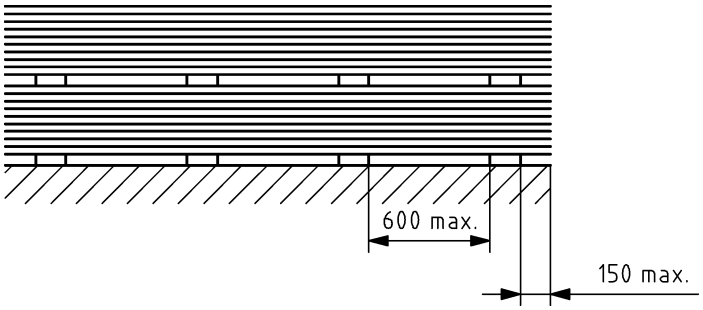
Intermediate battens are recommended every 15 to 20 panels to allow through ventilation, they shall be placed directly above those below. The battens should be placed parallel to the short edges across the full width. Overhang of the panels at the ends of the stack should not exceed 150 mm. Where stacks are placed on top of one another, the bearers should line up vertically to prevent distortion.

The top of the stack should be covered.

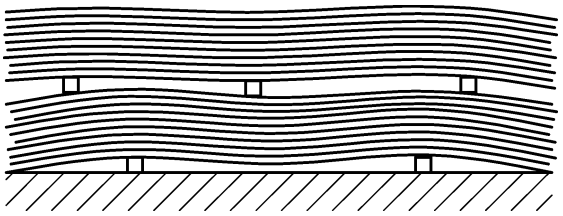
Stacking on edge should be avoided whenever possible. Where space will only permit edge stacking then the edges should not be permitted to come into direct contact with the floor to avoid possible moisture pick-up or damage to the edges. Panels should not be leant against walls but supported by a braced, purpose made rack using thick (>18 mm) base and back panels (see Figure 2).

In case of tongued and grooved panels, edge stacking on the tongue should be avoided.

Dimensions in millimetres



a) CORRECT



b) INCORRECT

Figure 1 — Panel storage

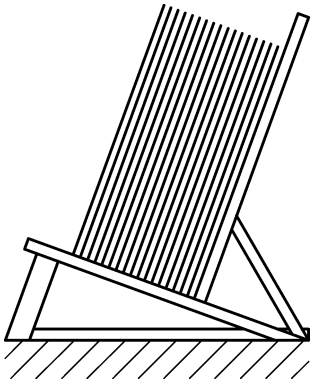


Figure 2 — Correct method of edge stacking