# PANELVENT DWD

## Sheathing Board

## What is Panelvent® DWD?

Panelvent® DWD is a structural MDF.RWH fibreboard manufactured in accordance with EN 622-5 and complies with European standard EN13986.

Panelvent® DWD has been developed to combine high racking strength and durability under service class 1 and 2 conditions to Eurocode 5 [EN 1195-1-1]

Panelvent® DWD is used as a vapour permeable sheathing board for the timber frame industry and can be used as an alternative to the more traditional boards. It is widely used where vapour open (breathing wall) construction has been specified.

Panelvent® DWD is designed to be used on the outer face of insulated wall framing, behind a ventilated cavity, due to it's high vapour permeability and strength. We recommend it's use with OSB sheathing and/or a vapour check layer on the internal wall face, depending on the overall construction. The final wall make-up must be checked by a suitably qualified person to ensure there is no risk of interstitial condensation, in accordance with the design guidance set out in BS5250:2021 Management of Moisture in Buildings – Code of Practice. Reference should be made to EN ISO 13788 for the method of calculation or by reference to EN 15026.

It is recommended that Panelvent® DWD is used in conjunction with an appropriate breather membrane. An external breather membrane should always be used: in areas of severe exposure, on roofs, where rain screens or timber cladding are being used or where required by the NHBC or local authority. Cut joints, trimmed edges and penetrations as well as breather membrane overlaps should be taped with a suitable adhesive building tape. Panelvent® DWD sheathing boards have a natural wax additive and are able to withstand temporary site exposure, during the construction phase.

## Manufacturing Process

Panelvent® DWD is manufactured on a modern hot press ContiRoll line to EN622-5:2006 using a moisture resistant 100% formaldehyde free PMDI resin as the binding agent. It is classed as an E1 board to EN13986.

## Key Features

- **For use in racking panels to BS5268-6.1;1996, BS5268-6.2;2001 EN 1995-1-1:2004 (EC5)**
- **Rigid sheathing /sarking for diffusion-permeable timber frame walls and roofs**
- **Ultra low formaldehyde emissions**
- **Service Class 1 and 2 durability**
- **1198 x 2398 x 12mm sheet size**
- **PEFC certification and full Chain of Custody**
- **CE marked**

## Environmental Advantages

Panelvent® DWD is manufactured using woodchips from debarked coniferous softwood sourced from local sawmills and cultivated from sustainable forests. It is fully PEFC certified, complete with chain of custody through Panel Agency Ltd.

Panelvent® DWD sheathing has a formaldehyde emission of less than 0.03ppm to comply with strict European directives.

Panelvent® DWD is more vapour open than many types of sheathing materials currently in use throughout the construction industry. It therefore lends itself to be used in conjunction with suitable hygroscopic insulation materials to create "breathing wall construction." Typically, the water vapour transmission resistance of plywood is 4.78 MNs/g whereas Panelvent® DWD is 0.72 MNs/g (wet cup test)

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## Storage and Fixing

Prior to fixing, remove all packaging and steel banding from the boards and store them flat, off the ground and loosely covered with waterproof sheeting so as to allow air circulation. The boards are conditioned to approximately 5% moisture content in the factory and it is therefore necessary to store the boards in the environment in which they are to be fixed, for at least 24 hours prior to fixing, to allow them to reach an equilibrium moisture content.

The boards should be fixed with the "Panelvent DWD" stamp on the outer face. On fixing the boards, a min. 2mm expansion gap should be left at all edges of the board in compliance with EN/TS 12872:2000. Boards should be placed vertically, with the first fixing at the top middle of the board, working outwards and downwards to prevent buckling.
A minimum edge support of 18mm should be provided on all framing. We recommend the use of machine nailing, due to the density of the board, with a min 3.0mm dia. X 50mm long galv. or stainless steel nail. In accordance with EC5/BS5268, the perimeter nail spacing to each board should not exceed 150mm centres with maximum 300mm centres on intermediate studs and a minimum recommended edge nailing distance of 10mm. In all cases the fixings and their centres are to be as the Engineer's detailed specification.

Panelvent® DWD is suitable for sheathing timber frame panels with stud framing not less than 38mm width and at centres not exceeding 600mm.
Panelvent® DWD when fixed to vertical wall panels, can withstand weather exposure for up to 4 weeks, without the application of a breather membrane. For roofs we advise applying a breather membrane as soon as possible to prevent water ingress through the joints. The boards must not be placed where there is a risk of standing water or pooling.

## Health and Safety

Like all other wood based products Panelvent® DWD will generate dust when it is sawn or machined.
Regulation 7 of COSHH requires that exposure to dust is either prevented or, if this is not practical, adequately controlled. PPE should be used, to suit the type of equipment being operated and dust masks should be used to prevent the inhalation of fine particles. Users should ensure that the workplace exposure limit is not exceeded.
Panelvent® DWD should not be used in areas where there is contact with food or animal feed.

If used as part of a roof system, please note that the boards are not suitable to walk on and caution is highly advised.

## Board Properties

| | |
|---|---|
| Board Standard | Moisture resistant glued wood fibreboard to Z-9.1-382 and BS EN 622-5 |
| Certification | CE marked, PEFC chain of custody |
| Thickness | 12.00mm |
| Nominal size | 1198 x 2398 |
| Density | 600 (+/-10)kg/mm3 to BS EN323:1993 |
| Board Weight | 20.68kg |
| Bending Strength | 14.0 N/mm2 |
| M.O.E | 1600 N/mm2 |
| Tensile Strength | 7.2 N/mm2 |
| Panel Shear | 3.70 N/mm2 |
| Racking | 2.10kN/m to BS5268 (see "storage and fixing" for nail centres etc) |
| Design lateral load for single 3.00mm nail | $F_{fRd}$ 0.715Kn (Characteristic EC5) |
| Mean water vapour resistance | 0.72Mns/g (using wet cup method) |
| Extractable Formaldehyde | Class E1 |
| Thickness Swelling | 10% after 24 hours immersion |
| Fire rating | E |
| Packing | 60 sheets per pallet |

PEFC Cert no. for Sonae Arauco Deutschland GmbH – 11.553.801. PEFC cert no. for Panel Agency Ltd. COC – GB16/872250



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