

Panelvent® DWD

Sheathing Board



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 Chain of Custody
- CE marked

What is Panelvent® DWD?

Panelvent® DWD is a structural MDF.RWH fibreboard manufactured in accordance with EN 622-5 and complies with the German technical approval certificate Z-9.1-382 and European standard DIN EN14964.

Panelvent® DWD has been developed to combine high racking strength and durability under service class 1 and 2 conditions.

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 comes into it's own where vapour open (breathing wall) construction has been specified.

Panelvent® DWD is designed to be used on the outer face of insulated wall framing 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 face however the wall make-up must be checked by a qualified person to ensure condensation does not occur. In many situations, the application of a breather membrane is not required, unless in areas of severe exposure, where rain screens or timber cladding is being used or where required by the NHBC or local authority.

Manufacturing Process

Panelvent® DWD is manufactured on a modern hot press ContiRoll line to EN622-5:2006 using a moisture resistant 100% formaldehyde free PU resin as the binding agent.

Environmental Advantages

Panelvent® DWD is manufactured using woodchips from debarked coniferous softwood sourced from local sawmills and cultivated from sustainable forests and 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)

Breather Membrane

Panelvent® DWD sheathing boards have a natural wax additive and therefore, in certain wall applications, there is no requirement for the introduction of a breather membrane. A breather membrane should be used where the external finish to be used is a rain screen, timber boarding (ie:shiplap) or in areas of high exposure where wind driven rain could penetrate the external finishes. For projects where a NHBC warranty is to be provided, a breather membrane must be provided to comply with their regulations. Cut joints, trimmed edges and penetrations should be taped with a suitable adhesive tape if no membrane is proposed. Site conditions may also dictate the use of a membrane or tapes to prevent moisture ingress through the expansion gaps during the construction period. For roofs, always use a breather membrane.



Panel Agency Limited
Established 1971

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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/mm ³ to BS EN323:1993
Board Weight	20.68kg
Bending Strength	14.0 N/mm ²
M.O.E	1600 N/mm ²
Tensile Strength	7.2 N/mm ²
Panel Shear	3.70 N/mm ²
Racking	2.10kN/m to BS5268 (see "storage and fixing" for nail centres etc)
Design lateral load for single 3.00mm nail	F _{RRd} 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

Panelvent® is a trademark of Panel Agency Ltd. Panelvent® DWD is manufactured by Sonae Arauco Deutschland GmbH, Meppen, Germany and distributed in the UK and the Republic of Ireland by Panel Agency Ltd. It is marketed in Europe under the product name Agepan® DWD.



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