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A2 VERSAPANEL®

Cement Bonded Particle Board



BDA Agrément
BAW-19-093-P-A-UK

A2 VERSAPANEL

cement bonded partical board

A cement bonded particle board comprising of wood particles and cement with exceptional strength and durability compared with exterior gypsum boards. Intended for use as an SFS sheathing board but may be used for other applications such as timber frame, modular or off-site.



- A2 Versapanel® is conformity assessed (CE & UKCA) according to EN 13986
- Reaction to fire: A2-s1,d0 according to EN 13501-1
- Provides the benefits of traditional cement bonded particle boards with the added advantage of A2 reaction to fire making it a material of 'limited combustibility'
- Contains no hazardous volatiles, is asbestos free and its process dust is non-aggressive
- A2 Versapanel® board is relatively smooth in texture and light grey in colour
- Offers superior mechanical performance compared with exterior gypsum boards

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- Offers exceptional performance in the presence of moisture when compared with exterior gypsum boards. Cut edges do not require sealing to prevent degradation and there is no time limit of exposure before covering with other elements of the façade
 - Helps improve the air tightness of façades when sealed at any joints - test report available upon request
 - Due to the relative density A2 Versapanel® provides a high mass robust exterior lining to optimise acoustic performance of the building envelope
 - Can be provided in a pre-fabricated kit to reduce site works
 - Available as 2400mm x 1200mm boards and standard thicknesses of 10, 12, 16 & 18mm
 - Suitable for use as structural racking board for timber frame systems
 - Due to exceptional high strength 10mm A2 Versapanel® can be used in many façade systems saving cost
 - A2 Versapanel® in an untreated state is weather resistant and will not degrade significantly with permanent exposure, even if subjected to freeze/thaw conditions. However, in general, a surface treatment, such as a breather membrane, is recommended for external applications
 - A wide range of systems may be applied over A2 Versapanel® such as:
 - Approved insulated render systems
 - Terracotta cladding systems
 - High performance cladding systems
 - Traditional brick coursework
- The benefits of using A2 Versapanel® in these types of application are to help acoustic, fire, impact and pull out performance with approved fasteners.

Please contact Euroform for details

A2 VERSAPANEL Physical information

Parameter		Value	Tolerance / test standard
Sheet Length		2400 mm	+/- 5 mm
Sheet Width		1200 mm	+/- 5 mm
Sheet Thickness		10 mm	+/- 0.7 mm
		12 mm	+/- 1.0 mm
		16 mm	+/- 1.4 mm
		18 mm	+/- 1.6 mmNominal N
Nominal weight per sheet	- 10 mm	44.93 kg	+/- 10%
	- 12 mm	53.91 kg	+/- 10%
	- 16 mm	71.88 kg	+/- 10%
	- 18 mm	80.87 kg	+/- 10%
Sheets per pallet	- 10 mm	46	-
	- 12 mm	38	-
	- 16 mm	29	-
	- 18 mm	26	-

A2 VERSAPANEL Technical data

Parameter	Value	Tolerance / test standard
Reaction to Fire: EN 13501-1	A2-s1,d0	-
Density	1560 kg/m ³	+/- 10%
Modulus of elasticity	≥4000 N/mm ²	-
Bending strength	≥9 N/mm ²	-
Surface alkalinity	11 - 13 pH	-
Moisture Content (ex-production %)	9 %	+/- 3 %
Swelling in thickness - cyclic test	≤1.5 %	-
Space - Durability - Moisture	≤1.5 %	-
Thermal Conductivity	≤0.55 λW/(m ² K)	-
Transverse tensile strength - normal climate - under cyclic test	≥0.50 N/mm ² ≥0.30 N/mm ²	-
Water vapour transmission - wet - dry	30 μ 50 μ	-
Airborne sound insulation Rw (C; Ctr)	32 (-1;-4) dB	-
Formaldehyde release	E1 class	-

A2 VERSAPANEL Handling Safety

Component	CAS No.	EC No.	% w/w
Portland Cement	65997-15-1	266-043-4	70 - 75
Cellulose	9004-34-6	232-674-9	15 - 20
Water (moisture content)	7732-18-5	231-791-2	5 - 15
Binding Agent	-	-	<1

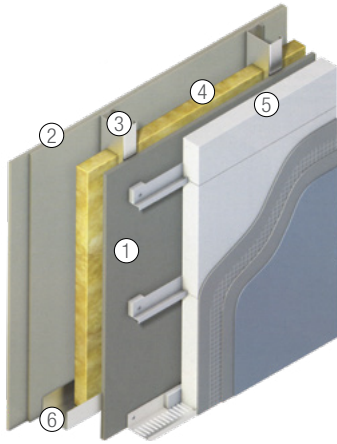
NOTE: Portland Cement is present in its hydrated form as a finished article.

Prolonged contact by exposed skin may show mild irritation at site of contact - long sleeved work clothing and abrasion resistant gloves are recommended for manual handling.

Dry working (drilling, sanding, cutting) can release dusts which may irritate eyes and airways unless controlled. Positive ventilation is recommended. Tooling should have high efficiency particulate filtering (HEPA) extraction fitted where possible.

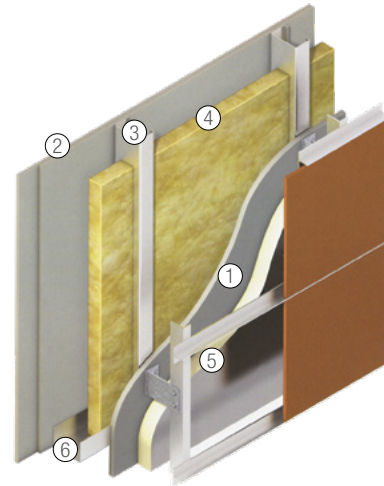


A2 VERSAPANEL Optional wall finishes



Externally Insulated Render System

The sheathing board is fixed to SFS and over clad with thermal insulation. This is then rendered to provide a decorative finish.

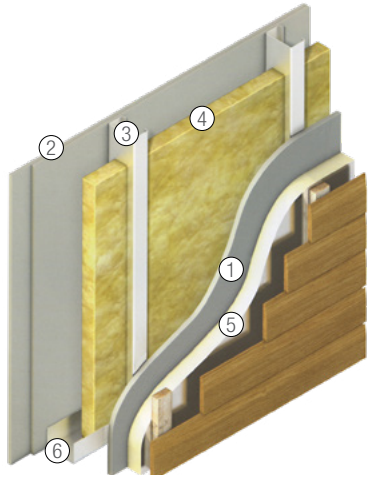


Ventilated Rainscreen

The sheathing board is fixed to SFS with helping hand brackets fixed to the studs through the sheathing board. The rainscreen cladding system is then installed to include a rail system. Such systems may incorporate EWI as approved.

Key: ① A2 Versapanel® ② Dry Lining ③ SFS ④ Internal Insulation ⑤ External Insulation ⑥ Base track

A2 VERSAPANEL Optional wall finishes

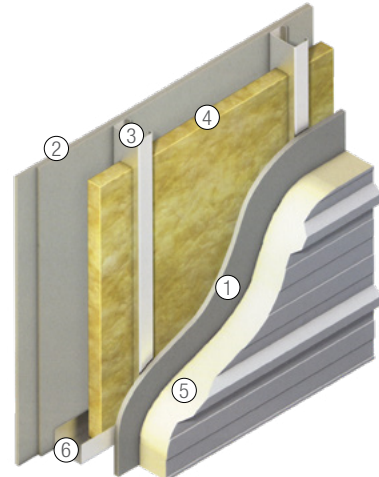


Timber Cladding

The sheathing board is fixed to SFS with rigid insulation typically fixed to the framing through the sheathing board.

Timber cladding is then installed on to counter battens.

WeatherClad® Low maintenance shiplap cladding is available. Please contact Euroform for details.



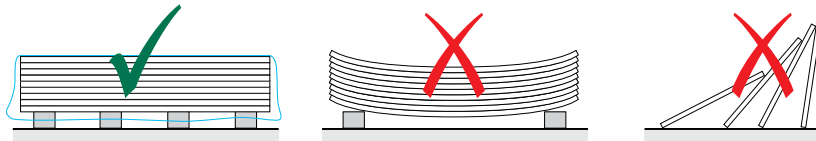
Composite Panels

The sheathing board is fixed to SFS and the composite panel is fixed to the steel frame through the sheathing board.

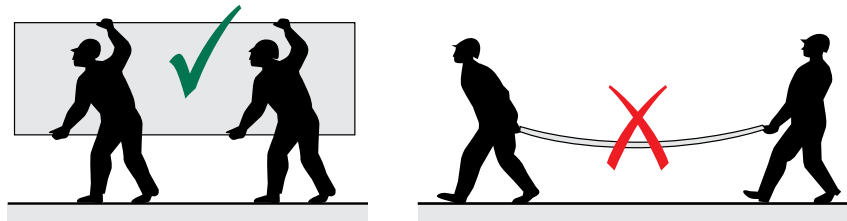
Key: ① A2 Versapanel® ② Dry Lining ③ SFS ④ Internal Insulation ⑤ External Insulation ⑥ Base track

A2 VERSAPANEL Delivery and storage

- Boards should be received in a dry state with pallets protected from weather with plastic sheeting or similar.
- Boards should be stored on flat, dry pallets elevated on skids/battens sufficiently from ground level to prevent board wetting.
- If boards are stored on site for a long period of time they should be kept under cover/ indoors if possible.



- When manually moving boards they should be carried in a vertical orientation.



A2 VERSAPANEL

Sawing

Equipment:

- Cross cut hand saws for thicknesses up to 12mm
- Jigsaw for thicknesses up to 12mm and small work
- Portable circular saw
- Fixed saw for dimensioning (vertical or horizontal)

Type of blade:

- Alternative or trapezoidal teeth
- Chart shows number of revolutions and number of teeth (Z)

Diameter (mm)	250	300	350	400
Panel thickness up to 12mm	Z=48	Z=60	Z=72	Z=72
Panel thickness exceeding 12mm	Z=36	Z=48	Z=54	Z=60
Number of revolutions (rpm)	3000/ 4500	3000	3000	3000/ 1500

Sanding

A2 Versapanel® can be sanded using a vibrating sanding machine or belt sanding machine.

Belts should be 40-80 grains; open coat structure with linear speed of 20 to 28 m/sec.

When working in confined areas dust extraction equipment is recommended.

Hand-held orbital or belt sander should be connected to a vacuum dust extractor.



A2 VERSAPANEL Mounting and fixing STEEL frame

The following table is a guide to fixing distances for most common applications.

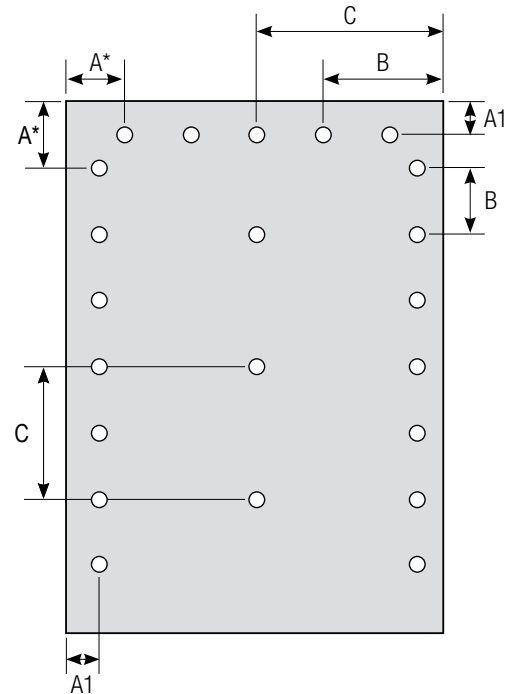
Board Thickness	Fixing Distance Centres (mm)			
	A	A1	B	C
10 - 18 mm	40	15	300	600

A2 Versapanel® has been tested for wind serviceability to CWCT standards with vertical supporting SFS studs at 600mm centres and EMF fixings installed as shown.

Please ask for test report.

A* - The first fixing in from the corner for both horizontal and vertical sides must be 40mm in from the edge.

(Illustration NOT to scale)



A2 VERSAPANEL Mounting and fixing

Steel Frame Fixings

Steel Substrate	Board Thickness	Screw Type
0.9 - 3.0mm	up to 16mm	EMF1 4.8 x 45mm
0.9 - 3.0mm	18 - 22mm	EMF2 4.8 x 66mm

BDA Agrément® BAW-19-093-P-A-UK steel frame construction.

Timber Frame Fixing

The use of a cordless nail gun enables the rapid fixing of A2 Versapanel® to timber frame or battens.

The advantage of this method is the speed of erection time and the subsequent cost reduction.

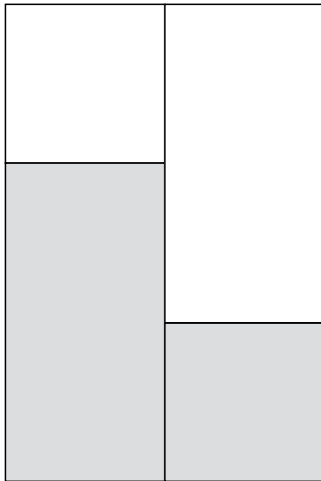
Euroform recommends ITW Paslode nails, 2.8mm diameter x 50mm length, conforming to EN 14592 for timber frame service class 2 applications according to Euro code 5.

Care should be taken to ensure that pressure settings on nail guns is set to ensure that nail head is flush to face of panel.

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Board arrangement

Euroform recommends that A2 Versapanel® is installed in brick bond fashion as per the diagram.



NOTE:

- 4 way joints are not recommended
- Minimum board width should not be less than 600mm

Expansion/Movement Joints

- A2 Versapanel® can be affected by slight dimensional changes according to variation in relative humidity
- Leave a 3 - 6mm gap at all joints
- Board edges will not degrade with exposure to exterior conditions however, generally a joint filler/cover is recommended
- Joints can be filled with Versaseal® Intumescent Joint Compound or approved tapes

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Water proofing

Where boards are used below and within 150mm of DPC level a compatible waterproofing membrane should be applied.

Compatible EPDM membranes should be used around other areas at risk of water ingress - e.g. at window openings.

Use of breather membranes

A suitable breather membrane should be used when using A2 Versapanel® as a sheathing board. The board should not be relied on to prevent moisture ingress.

Screw withdrawal performance

- A2 Versapanel® may be able to contribute to the securing of external wall insulation.
- Screw withdrawal (pull-out) tests should be carried out on site by a qualified consultant to determine board performance.
- Number and type of insulation fixings should be determined by wind loading assessment to be carried out by an appropriately qualified engineer.
- Any rails/profiles to be used to support cladding etc. should be fixed back to pick up on supporting SFS studs.



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