

polytec EVABOARD

Evaboard is an Ultra High Moisture Resistant MDF panel developed specifically for use in a wide range of applications making it a suitable substrate for laminating of decorative surfaces for use in areas of frequent exposure to moisture. Evaboard also gives all the design freedom of interior MDF.

Evaboard utilises MDI resin (Methylene Diphenyl Diisocyanate), improving indoor air quality and helps meet more stringent regulations for the manufacturing composite wood based products.

MDI provides a very strong bond with the wood particles as it reacts with the wood itself when put under intense heat, creating a non-reversible chemical weld. It is a different and superior type of bond compared to the mechanical weld that the Formaldehyde based product produces. Unlike traditional Urea Formaldehyde resins, MDI resins do not break down gradually over time in the presence of moisture, improving the durability significantly.

Product Properties

PROPERTY	UNIT	16mm	18mm
Thickness Tolerance	mm	+/-0.2	+/-0.2
Length and Width Tolerance	mm/m	+/-0.2	+/-0.2
Squareness (max. diagonal)	mm/m	≤ 2.0	≤ 2.0
Density	kg/m ³	760	760
Internal Bond	Mpa	1.10	1.10
Moisture Content	%	7.5+/-1.5	7.5+/-1.5
Modulus of Elasticity	MPa	3400	3600
Screw Holding Face	N	≥500	≥500
Screw Holding Edge	N	≥500	≥500
Thickness Swell (24 hr 20°C)	%	4.2	3.7
Thickness Swell (2 hr 70°C)	%	13.0	11.5
Thickness Swell (1 hr boil)	%	18	16
Wet Bending Strength (MoR _a)	Mpa	14.0	13.5
Formaldehyde Emission	mg/L	< 0.3	< 0.3

(Typical properties when tested to AS/NZS 1859.2)

Improved Moisture Resistant Properties

All wood and wood-based products react to moisture and Evaboard is no exception. Wood cells expand and shrink slightly in width and length as they absorb or lose moisture. This phenomenon is not fully reversible, as relieved stresses do not completely recover.

The specially formulated MDI resin used in the production of Evaboard increases the physical properties and durability of MDF and increases protection against thickness swell to create a premium composite panel for demanding conditions.

Application

Evaboard is a highly durable engineered wood product (MDF) designed for use in areas where moisture may be present. Evaboard is manufactured with tightly controlled and measured physical properties, has uniform density, is free of knots and splinters and can be cut, drilled and sawn like regular solid wood. Evaboard,

as with all wood products in external applications, must be coated on all surfaces and edges with an exterior based system to control both moisture uptake and moisture loss. Evaboard is designed for use in areas that are protected from direct exposure to the weather.

Stapling

Staples can be used effectively for joint fitting. For best results it is helpful to add adhesive to the joint prior to assembly. When stapling into Evaboard, it is important to have good control of air pressure to avoid excessive penetration of staples and that multiple staples are inserted on a slight angle to offset the legs to each other. Staples inserted into the edges should be not less than 25mm from the corners.

Screws

The position of screws inserted into the faces and edges of MDF should be decided in relation to board thickness and screw size. Screws inserted into the edges should be not less than 25mm from the corners. The screw must not be over tightened as further turning will reduce the holding strength. Evaboard provides good screw holding strength both in the faces and edges. The best results are obtained with the parallel thread screws such as the Twinfast or particle board screws. Conventional wood screws are not recommended. A pilot hole is essential to avoid splitting during edge screw fixing. Pilot holes should be drilled approximately 2-3 mm beyond the expected depth of insertions of the screws.

Machining

Evaboard can be worked easily with standard wood working machinery. The homogeneous nature of MDF ensures that a good finish can be achieved on the edges. Tungsten carbide cutters and saws are recommended.

Conditioning

A minimum of 3-4 days conditioning is recommended to allow Evaboard to reach equilibrium moisture content with its surroundings but this can only be achieved if air is allowed to move freely over both surfaces to reduce the risk of the boards warping.

Sanding and Finishing

Special attention to sanding edges gives excellent results. Use 120 grit paper followed by 240 or 320 grit paper.

Stopping

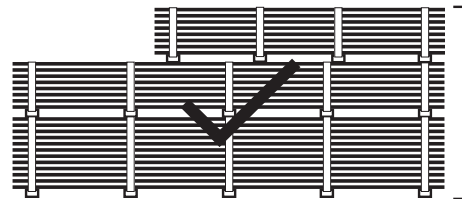
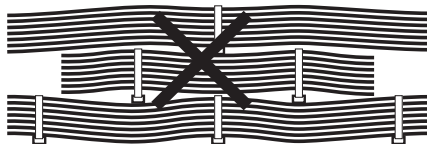
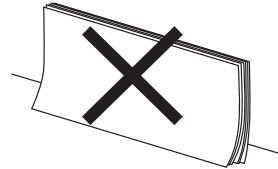
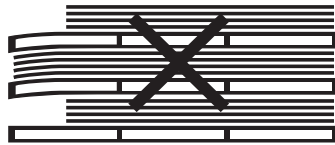
Stop all nail and staple holes with a low shrinkage wood filler. Match and blend colours as required to suit. Lightly sand with 320 grit paper before priming.

Storage

The method of manufacturing MDF ensures a balanced construction resulting from the uniform distribution of fibres throughout the thickness of the board. The maintenance of this inherent flatness is dependent upon the use of correct storage and handling procedures. Without these, boards may develop a permanent set under their own weight particularly if they are not adequately supported on a flat pallet or by sufficient bearers during any storage period.

The following storage procedures are recommended:

- MDF sheets should preferably be stored horizontally and lifted clear of the floor using dry bearers as supports.
- Where individual bearers are used they should be of equal thickness and placed at not more than 800mm intervals for boards of 15mm thickness or more. Closer spacing is required for thinner boards.
- The bearers supporting successive layers should be in vertical alignment.
- Stacks of boards should have flush sides to minimise damage to protruding edges or overhanging corners.
- Vertical storage of small numbers of boards is acceptable provided the boards are well supported close to vertical position.
- The storage area should be well ventilated and the conditions should be reasonably dry. An average relative humidity of 50% will maintain board moisture content in the range 7-9%.
- Boards should be fully protected from the weather during transportation and storage.
- One or two scrap boards should be placed on top of stacked boards, to reduce the effect of short term changes in environmental conditions.



Maximum
6 metres

Contact

For further information on this product contact:

Borg Manufacturing (ABN 31 003 246 357), 2 Wella Way, Somersby, NSW 2250, Australia

Telephone: 1300 300 547 Fax: 1300 320 547

Whilst the information contained in this document is based on data, which, to the best of our knowledge, was accurate and reliable at the time of preparation, we can accept no responsibility for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of any patent rights or breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Since the information contained in this document may be applied under conditions beyond our control, we can accept no responsibility for any loss or damage caused by any person acting or refraining from action as a result of this information.
