

From the house of Visaka



Corporate Office:
Visaka Towers, 1-B-303/49/3, S. P Road, Secunderabad - 500 003.
Tel: +91 40 2781 3833, 2781 3835, Fax: +91 40 2781 3837
E-mail: vboard@visaka.in www.vboard.in

Factory:
Survey Nos. 95 & 96, Gopiguram Village,
Padaduru-Bopilly Post, Tripunnam Mandal,
Adjacent to Kukkadam Railway Station,
Nalgonda District - 508 207, Andhra Pradesh.



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Design, Configure, Create...

V-Board for endless possibilities in interiors





Fire Resistant



Water Resistant



Termite Resistant



V-Board offers unmatched quality, aesthetics, style and durability and is the ideal choice of smart and good looking interiors. V-Board is fire, water and termite resistant and has the same functional efficiency or workability as Timber/ Plywood giving you total dependability. Used for external as well as internal applications, V-Board is a top-line product of Visaka Industries Limited.

The production facilities are located at Miryalguda in Andhra Pradesh, exclusively meant for the production of Non-asbestos Board known as V-Board. The V-Board is made with world-class technology as backbone and therefore the product is unbeatable. Superior grade cellulose fibers and inorganic binders of siliceous base are used in the making of V-Board. The matrix once prepared is cured at high pressure and high temperature in autoclaves to achieve a high dimensional stability.

The in-built cement component adds to the overall strength and durability while the pulp content that is present within gives the board workability and also flexibility. A process called 'autoclave' helps attain crystalline structure that in turn results in declared dimensional stability of V-Board.

V-Board has good insulation and is a low thermal conductivity board compared to other materials or substitutes. V-Board can be highly effective when it comes to saving energy and to maintain a balanced temperature in closed air-conditioned or air cooled rooms.

V-Board has a range of applications and a whole lot of multiple deployment advantages, customers can choose as per their needs, budgets & decorative requirements.

Various finishes in which V-Board can be decorated



Veneer

Wallpaper

Texture

Paint

Polish

V-Board Applications

False Ceilings

Today almost all modern offices, corporate work spaces, industrial work spaces and even some up-market homes have false ceilings not just to enhance the look but to keep the space well-contained and well-maintained. V-Board fits to a T with all these places and has exceptional properties like long lasting, durability and aesthetic appeal for years. High humidity spaces like laboratories, kitchens, washrooms, healthcare units and even toilets can take advantage of V-Board false ceilings for optimum utility and to have a clean & pleasant ambience. And with the distinctive feature of being able to apply decorative paints on V-Boards, there is no reason why you should look at any other false ceiling! Now, that's what we call a complete false ceiling solution.

Available in thickness of 4, 6 mm.

Wall Partitions

V-Board wall partitions are robust, fire, water and termite resistant like all other V-Board products and can be utilized for optimization of spaces in all domestic and commercial establishments like offices, hospitals, shopping malls, etc. V-Board Partitions can also be effectively used in wet areas like laboratories, kitchens, washrooms, toilets, laundries, places that have high human traffic, etc. V-Board material withstands pressure and ensures years of stability. Paints, laminations, veneers, wallpapers, anything can be applied to the V-Board Wall Partition and great looking interiors can be built in no time.

Available in thickness of 8, 9, 10, 12 mm.

Wall Paneling

V-Board Wall Panels are built for visually appealing solutions in paneling. Different kinds of finishes like laminations, veneer, texture, wallpaper, etc., can be applied onto the V-Board Panels. In addition to being a smart interior option, moisture-prone

areas & dampness in walls can be effectively tackled and avoided by using V-Board Wall Panels.

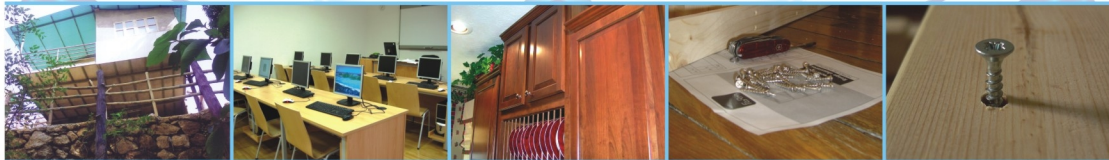
Available in thickness of 9, 10, 12 mm.



Door Panels

V-Board Door Panels are in demand from various domestic and industrial customers and are the preferred choice for kitchen, balcony, washroom and other areas where water is in regular contact. Needless to say, V-Board Door Panels is almost a lifetime! They are fire, water and termite resistant.

Available in thickness of 10, 12, 14 mm.



• Mezzanine Flooring

V-Board having higher thickness are tailor-made products to handle load and stress and are ever reliable. They make an excellent choice for mezzanine floorings, additional storage areas, etc. The boards can be erected and built to specifications in lesser time when compared to other conventional choices. To give the space a better finish, you can add vitrified or ceramic tiles, carpets or vinyl flooring maximizing the appeal of the décor.

Available in thickness of 18, 20, 25 mm.

• Back liners

The usability of V-Board goes everywhere and everyday in utility spaces like cupboards, kitchen cabinets, furniture back liners and electrical board back liners that can be custom built with the super efficient V-Board. V-Board being completely safe and termite, moisture & fire resistant, all you get is peace of mind!

Boards with 6/8mm thickness are recommended and can be screwed on the rear side of the cabinets, cupboards and furniture liners (The board should be coated with primer on both sides).

• Structural Glazing Back Lining

V-Board is the most cost-effective and reliable solution when it comes to Back Lining Material. With inherent qualities like moisture resistant surface and having good thermal resistance in reducing heat transfer from structural glazing, V-Board's performance efficiency in this application is truly unbeatable.

6/8 mm thick boards are fixed in between the concrete beam and aluminum / powder coated structural glazing framework for effective condensation and temperature control.

• Other Applications

V-Boards have a wide range of applications and can be used to make fixed furniture like

- Computer Table
- Office Table
- Shoe Rack
- Cupboards
- Black Board
- School Bench
- Shelves
- Benches for Cafeteria
- Doors



• Working with V-Board

• Tools

The simple working method of V-Board is as easy as working with any other particle board and you can hardly find any difference - fastening is done compare with any other boards and no special tools are needed to do the same. For large volumes of cutting and sizing works, an electric power saw is ideal with a capacity of 1500w - 4000rpm with a blade measuring 250mm diameter having straight set teeth and tungsten carbide tips - this is most ideal for usage! Similarly, a hand - held electric drill with high speed steel bits will be faster to work.

• Fixing

Timber or Steel supports can be used to fix V-Boards and thin cold roll formed steel sections in the form of studs and tracks are available in the market that can ideally be used for applications like partitions, false ceilings, floors etc. The boards must be supported at all four edges and at intermediate positions at centers not exceeding 610mm, the board joint should occur on the center of the supports. Rust proof fixings should be used in all external works/applications or when conditions of high humidity and dampness are expected.

• Nails

8mm V-Boards can be directly nailed to timber supports with round wire nails. A pilot hole must be pre-drilled for boards with over 8mm thickness. The length of the nail should be approximately be 2.5 to 3 times of the board used.

• Screws

There are two types of screws that are available in the market-wood and metal screws. The wooden screws are used to fix V-Boards to wooden supports and a pre-hole should be made before putting the screws tight. If countersinking is mandatory, a slightly larger hole should be drilled to the required depth. The length of the screws must be 2.5 to 3 times the thickness of the board. While using metal screws, fully threaded self tapping metal screws must be used as they are best suited. The size of the screws must be according to the thickness of the board and the gauge of the frame. Pre-drilling of the board is absolutely mandatory. The length of the screws shall be 2.5 to 3 times the thickness of the board.





• Fixing points

The recommended fixing distance between two fixing points around the perimeter is 200 to 300mm. The fixing distance between two fixing points in the intermediate support is 300 to 600mm. The fixing point has to be 15mm (Minimum) away from the edge of the board. Similarly the fixing point shall be 40mm away from the corner of the board.

Board thickness	Recommended edge distance A	Spacing of edge fixing B	Intermediate C
6-12mm	12-15mm	200mm	400mm
16mm	20mm	300mm	500mm
20mm	20mm	400mm	600mm
25mm & above	same as thickness	600mm	800mm

• Jointing

Slight dimensional changes might occur due to shifting temperatures and relative humidity in air to V-Boards and therefore a provision should be made in the joint by allowing a gap of 2 to 3 mm. The gaps can be left seams or sealed with cover strips as suits best in the circumstances. The cover strips could be of PVC, Aluminum or Wood T type profiles and they are fixed in the gap by either screwing them or fixing with a synthetic adhesive.

• Binding

V-Board has an alkalinity pH value 11 to 13. So alkaline resistant glues or adhesives are to be used for binding the board. Please refer to adhesive manufacturer's specifications.

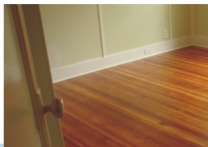
• Painting

Almost all kinds of paints can be applied on V-Boards - distempers, acrylic resins, acrylic emulsions, epoxy systems polyurethanes and any other alkali resistant paint. A primer coat has to be applied on

the board with cement primer or wood primer before any decorative paint is applied - almost all kinds of boards have the tendency to warp when exposed to unbalanced conditions like when one face is sealed and is left unsealed - so the other face of the board must also be equally coated and a proper balance be achieved to keep the board safe and free from warping. Painting should be applied on a completely dry board and when the atmospheric humidity is dry. At times when the board is exposed to different humidity conditions, the absorption or release of moisture in the board becomes relatively slow, therefore a minimum of 48 hours will have to be allowed to achieve moisture equilibrium in the board. Painting should not be done on wet boards.

• Laminations

V-Board is the ideal choice for cold pressing or low temperature laminating. The surface of the board can take wood veneer, PVC, Foils, Melamine Laminates, Paper Overlays etc. Prior to lamination, the board has to go through the acclimatization process for at least 48 hours and then decorative laminates should be provided, this process should always be balanced by putting a compensating laminate on other side of the board. The surface of the board should be primed with a dilution of adhesive so as to control the absorption of the adhesive.



• Partitions

The excellent qualities of fire resistance and acoustic insulation apart from natural resistance to weather, fungus, termite and vermin attack, makes the V-Board an ideal choice for Partitions, Residential, Commercial Industrial Complexes and Public Buildings.

V-Board is an ideal material for many types of dry wall partitions including double skin, single skin with steel aluminium and timber studs. These partitions are light weight and economical.

• Single Skin Partitions with Timber Studs

Single skin partitions with V-Board provide an easy and economical answer to the division of space in basic building. V-Board in 610mm widths are supported in a timber frame which is fixed between floor and ceiling. The panels are retained by timber beadings screwed to the frame work. V-Board 10mm or 12mm thickness will normally be suitable in combination with a frame of 75mm x 38mm timber section with 25mm x 20mm beading.

• Partition Systems Fire Rating & Sound Reduction

• Timber studs

- 10mm V-Board panels with each side 75mm x 50mm timber at 610mm center with 25mm thickness. Fiber glass 12kg/m) to cavity- 1/2 hour: 44 db at 100-3150 Hz.
- 16mm V-Board panel with each side 75mm x 50mm timber studs at 610mm centers:- 1/2 hour: 45 db at 100-3150 Hz.
- 12mm V-Board panel with each side 75mm x 50mm timber studs at 610mm centers with 40mm thick Rockwood (43kg/m) to cavity: 1 1/2 hour: 46 db at 100-3150 Hz.

- 16mm V-Board panel with each side 75mm x 50mm timber studs at 610mm centers with 40mm thick Rockwood (43kg/m) to cavity: 1 1/2 hour: 47 db at 100-3150 Hz.
- As above but with 75mm rockwood (43kg/m) to cavity: 2 hour: 47 db at 100-3150 Hz.
- Two layers of 10mm V-Board panel with each side 100mm x 50mm thick timber studs at 610mm centers with 100mm thick rockwood (60kg/m) to cavity: 4 hours: 48db at 100 -3150 Hz.

• Steel Studs

- 10mm V-Board panel with each side 48mm x 32mm galvanised steel studs at 610mm centers faced with 100mm x 10mm V-Board panel strips with 25mm thick fiber glass (60kg/m) to cavity 1/2 hours: 45 db at 100-3150 Hz.
- 12mm V-Board panel with each side 48mm x 32mm galvanised steel studs at faced with 100mm x 10mm V-Board panel strips with 50mm thick fiber glass (60kg/m) to cavity 1 hour: 52 db at 100-3150 Hz.
- 16mm V-Board panel with each side 48mm x 32mm galvanised steel studs at 610mm V-Board panel strips with 50mm thick fiber glass (60kg/m) to cavity 1 1/2 hours: 53 db at 100-3150 Hz.





• Doors

V-Board is excellent for doors and window shutters. It is durable and economical. The board is used both as panel inserts and flush doors. In doors shutter making, the following guidelines may be followed.

As panel inserts

- V-Board 8, 10 and 12mm can be used as panel insert depending on the size of the door.
- A thickness equal to 4 times the thickness of the panel insert is recommended for wooden frame. This will ensure sufficient thickness of wood on either sides of the grooves.

As flush doors

- V-Board panel 16mm thick with lipping can be directly used as door shutters. The lipping can be either with steel, timber or plastic or pre-painted sections.

False ceilings

- The ceiling system adopted for V-Boards panel is the usual suspended ceiling system which has gained popularity in the building & industrial sector. The usual methods adopted for any other suspension ceiling will also hold good for the V-Board panel.
- The thickness of the V-Board panel for false ceiling can be 4mm or 6mm depending on the requirement of the thermal comfort.
- The false ceiling can be T grid type. The longitudinal support shall be spaced at 610mm intervals and cross supports at 610mm or 1220mm centers.

• Grid System

- Grid can be made either with steel over aluminum T sections or with timber with suitable wall line supports. The suspension arrangement can be with GI wires of adequate gauge taken required level from the loft.
- V-Board panels 4 and 8mm thickness are recommended for false ceilings.
- The grid shall be 610 x 610mm or 2' x 2' grid.



• Floorings

V-Board in many countries is preferred as the No.1 quality alternative to wooden floorings. V-Board suits different climatic conditions as a thermal insulating floor, as a covering floor under floor heating systems, hollow flooring and mezzanine flooring.

Follow these basic guidelines while going in for basic flooring:

- A 20mm thickness board is the basic requirement of any flooring.
- Always supporting rafters are to be spaced at 610mm center or less. The edges of the boards must be totally supported and fixed to rafters with screws at 400mm centers. Large or oversized holes are to be drilled into the board to allow for expansion.
- Leave a gap of 10mm to 15mm on the periphery of the floor adjoining the walls to allow room for expansion. The gap can be concealed with a skirting board.
- While or after laying the boards, the boards must be staggered length wise preferably by their length but at least by a third of the length from one row to the other - you can lay the boards on the supports or fully float them.
- The board joints must always be positioned over a support apart from fastening with screws.
- It is a better option to bond together the joints with flexible jointing adhesives that hold the panels in a firm way and improve overall rigidity.

- Choosing steel or timber should be based on their thermal insulation properties, fire resistance and sound insulation is requirement.
- A primer may be used to coat the boards and keep it in dry condition - damp boards must not be used, as water vapor may collect and cause the floor covering (PVC etc) to separate from the boards.





• Prefabricated Buildings

Model Constructions and Prefab Construction is the norm in many construction sites and V-Board can be the most ideal material for such fast-track prefabricated constructions that last for a while and then dismantled. Excellent dimensional stability, durability and flexibility are the essential strengths of V-Board offering definite advantages to all Prefabricated structures. The Prefabricated structures built with V-Board are light weight, fast and easy to erect even in remote areas, as V-Board can be easily transported. V-Board being a technologically superior product and having excellent durability, can withstand all kinds of weather and even in high altitude locations.

The Prefabs built using V-Board are fire, moisture and termite resistant. The eco-friendly feature of V-Board makes all the prefabricated structures safe and comfortable to live in and provide a work-friendly ambience inside and out. The V-Board Prefabs can be used in residential constructions like rooftop extensions, storage rooms, serenity post, cottages, farm house, site-offices etc and commercial applications like Offices, laborers quarters, transit camps, rehabilitation centers, schools, healthcare centers, kiosks, etc.

Available in thickness of 8, 9, 10, 12 mm.

• Roofing: Substrate – Tiles

The Fire-Water-Termite Resistant V-Board can be used as an efficient non-corrosive surface under the roofing tiles, popular applications. Clay tiles are fixed/laid on the V-Board made out of 10 or 12 mm thickness. With V-Board application, the number of secondary supporting members of purlins can be reduced, thereby giving a larger surface area of contact for tiles that are fixed on either battens or laid over screed layer of cement mortar / PCC reinforced with chicken wire mesh.

It is mandatory that only dry V-Boards are used for roof tile substrate applications duly coated with minimum two coats of oil based primer before fixing the same on to the framework.

• Floor Coverings

V-Board is primarily meant for dry floor applications however, occasional wetting will not cause any serious problems. A whole range of flooring finishing choices can be used like Tiles, PVC Coverings etc with V-Board.



Application	Thickness mm										
Internal	4	6	8	9	10	12	14	16	18	20	25
False Ceiling	✓	✓									
Partitions			✓	✓	✓	✓					
Wall Cladding											
Mezzanine Flooring					✓	✓					
Doors											
External											
Prefab Structures						✓	✓				
Wall Cladding			✓	✓	✓	✓	✓				
Sign Boards											

• Technical Specification

[V-Board manufactured as per IS-14862-2000, Type B Category 3]

S. No.	Properties	Units	Performance
01	Apparent Density	Kg/m ³	>1250
02	Standard Weight (for 6 mm)	Kg/m ²	7.5
Mechanical Characteristics			
03	Min. Modulus of rupture at EMC	Mpa, N/mm ²	> 10.5
04	Rupture (MOR) in wet condition	Mpa, N/mm ²	> 6.0
05	Impact Strength (Charpy Method)	KJ/m ²	4.3 Wet, 1.7 dry
06	Adhesion/Lamina Bond Strength	Mpa, N/mm ²	0.9 - 1.0
07	Screw withdrawal Strength (Face)	N	2200
Additional Characteristics			
08	Thermal Conductivity at (50° C Mean Temperature)	W/m. K	0.21
09	Linear Coefficient of thermal expansion	Per °C	7.5x10 E-6
10	pH value	(72 Hrs.)	12
11	Acoustic insulation	dB	26 (6mm V-Board) 35 with 50mm mineral wool 44 with 100mm mineral wool

• Handling and Storage Instructions

V-Board should be carried on edges and stocked on a firm, smooth and level surface. V-Board should always be stored under a covered shed. For optimum use of V-Board, keep them dry before fixing, painting/coating. If boards are wet, allow them to dry thoroughly before fixing & finishing.