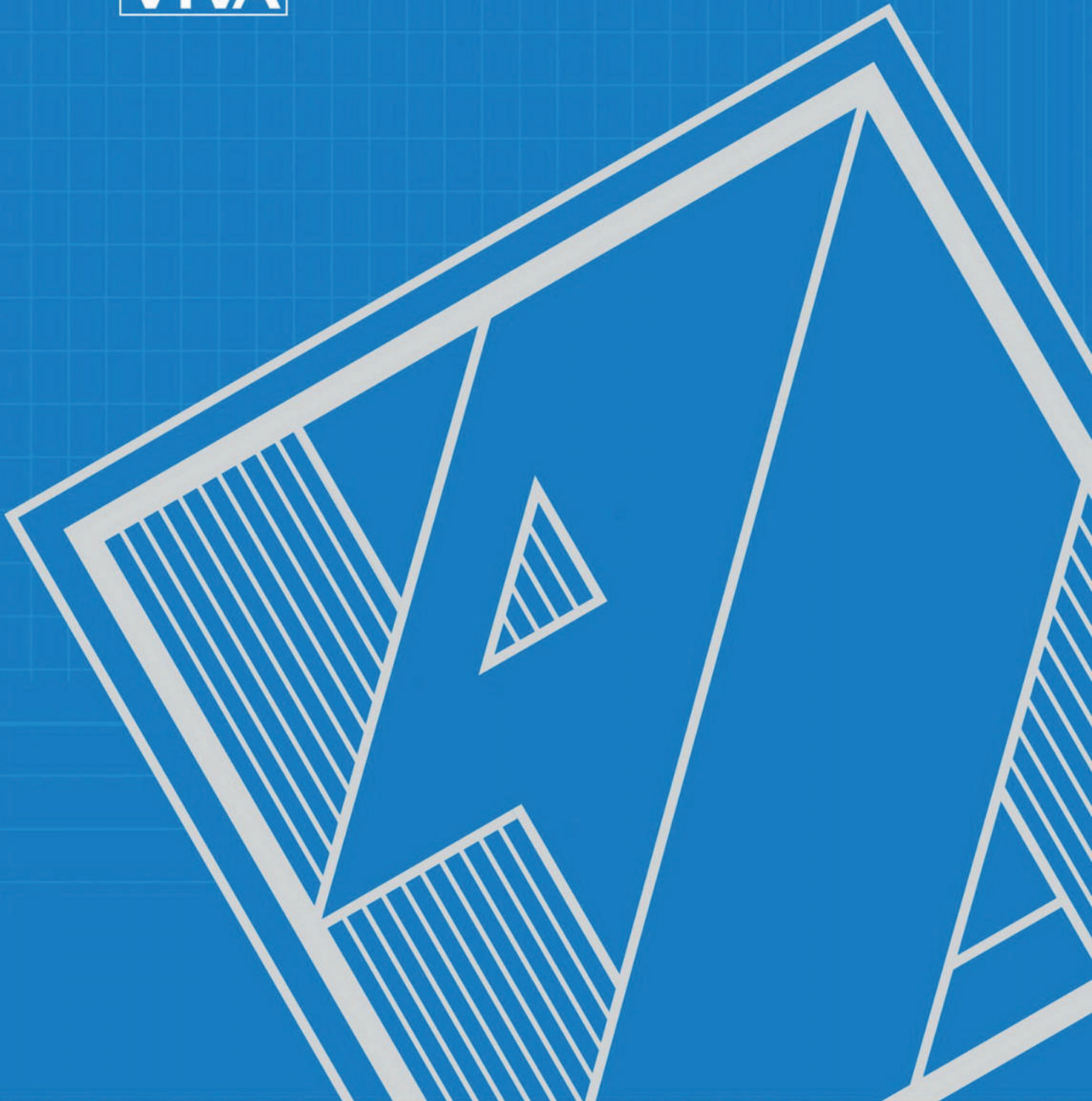




VIVA BOARD

CEMENT BONDED PARTICLE BOARD

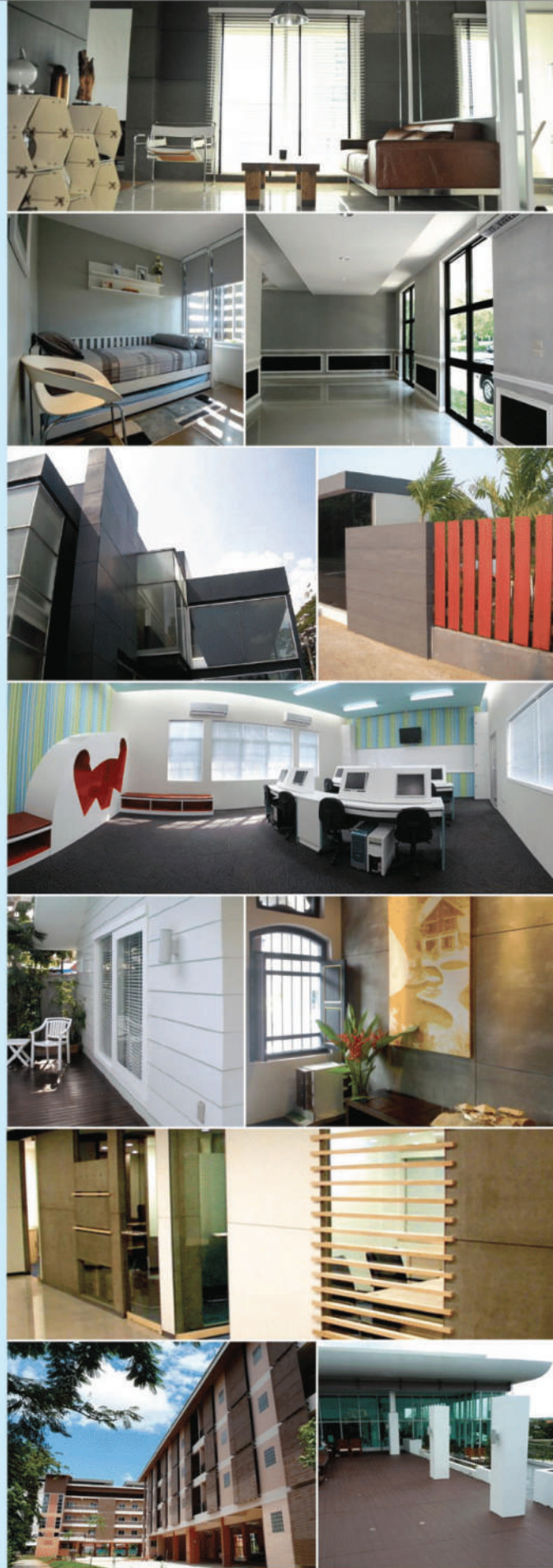


GO GREEN with VIVA BOARD

VIVA Board is a cement bonded particle board. It conforms to the Thai Standard TIS. 878-2537 for cement bonded particle board quality requirements and the European Standard EN 13986:2004 for wood-based panels use in construction.

VIVA Board also complies with Green Material Schemes such as Thai Green Label, Singapore Green Label and Taiwan Green Building. It proves to be both health and environmentally friendly building material.

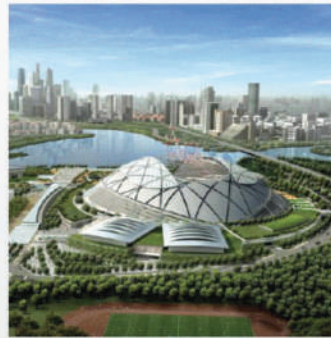
VIVA Board is manufactured by Viva Industries Co., Ltd. The company is certified by the quality management system ISO 9001 and the environmental management system ISO 14001.



World Class Projects

With 30 years of experience, plus constant research and development, VIVA Board has been proven to be a superior cement-bonded particle board, and has been used in many world-class construction projects.

World class projects that entrust VIVA Board



Singapore Sport Hub



The Venetian, Macao



Yas Island, Abudhabi



Ruby hall, Myanmar



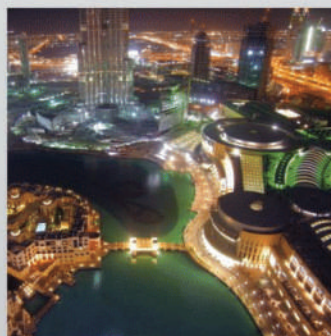
Naypyidaw Airport, Myanmar



Marina Bay Sand, Singapore



Resort World Sentosa, Singapore



Dubai Mall, Dubai



Changi Airport, Singapore



Dubai Festival City, Dubai



VIVA BOARD



VIVA BOARD

THE BEST COMBINATION OF WOOD AND CEMENT

VIVA Board is a cement bonded particle board. It has unique smooth grey cement surface. It is made from planted Eucalyptus chips, Portland cement, and mineralizing agents. Wood is processed into coarse and fine flake and thoroughly mixed with cement, mineralizing agent, and water in computer-controlled mixer. The required amount of mixed material is laid continuously on carrier plates using unique process which distributes coarse material in the middle and fine material on the two surfaces. The carrier plates with the formed mat are stacked and compressed using very high pressure to convert the formed mat into boards of required thickness with high strength and grey, smooth, cement-like surfaces. Once the boards are cured and conditioned, they are trimmed to the finished size, thoroughly inspected for quality, and packed for dispatch.

Size, Thickness and Weight



| | | | | | | |
|-----------------------------|-----------------------------|------------------|------|------|------|------|
| Standard Size (mm) | 1200 x 2400 and 1220 x 2440 | | | | | |
| | Thickness (mm) | 8 | 10 | 12 | 16 | 20 |
| Weight (kg/m ²) | 10.4 | 13.0 | 15.6 | 20.8 | 26.0 | 31.2 |
| | Special Size (mm) | 1200/1220 x 3000 | | | | |
| Special Thickness (mm) | 6 / 18 / 28 / 30 | | | | | |



VIVA Thickness and Application

| Application / Thickness (mm) | 8 | 10 | 12 | 16 | 20 | 24 |
|---|---|----|----|----|----|----|
| VIVA Clad | | | ● | | | |
| VIVA Build: Residential Building Wall | ● | ● | | | | |
| VIVA Build: Public Building Wall | | ● | ● | | | |
| VIVA Easy Wall | ● | ● | | | | |
| VIVA Covered Wall | | | ● | | | |
| VIVA Deco Wall: Interior Wall in Natural Finish | ● | ● | | | | |
| VIVA Deco Wall: Exterior Wall in Natural Finish | | | | ● | | |
| VIVA Ceiling | ● | | | | | |
| VIVA Sub Roof | | ● | ● | ● | | |
| VIVA Wet Area | | | ● | | | |
| VIVA Sub Floor | ● | ● | | | | |
| VIVA Floor | | | | ● | ● | ● |

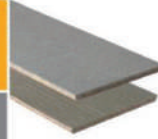
VIVA SOLUTION

VIVA DECOR

VIVA Fence



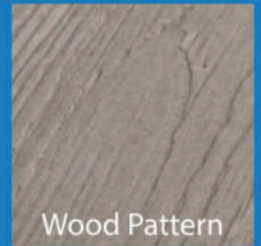
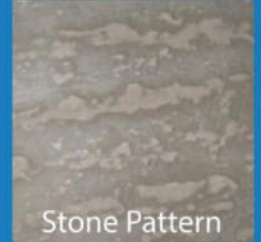
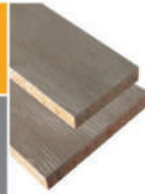
| Pattern | Thickness (mm) | Width (mm) | Length (mm) |
|--------------|----------------|------------|--------------------|
| Classic | 16 | 100 / 150 | 1000 / 1200 / 1500 |
| Wood Pattern | | | |



VIVA Plank



| Pattern | Thickness (mm) | Width (mm) | Length (mm) |
|--------------|----------------|------------|-------------|
| Classic | 30 | 200 / 300 | 2400 |
| Wood Pattern | | | |



Thickness (mm)

8, 10, 12, 16, 20, 24

Size (mm)

Stone Pattern: 1200 x 2400,
1220 x 2440

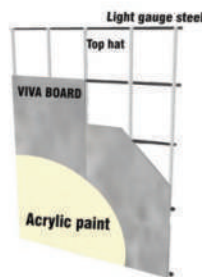
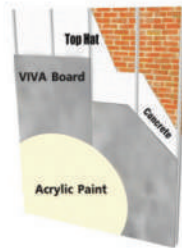
Wood Pattern: 1200 x 2400,
1220 x 2440,
1200 x 3000,
1220 x 3000



VIVA Clad

Exterior Cladding on Metal Structure or Existing Wall

| | |
|---------------------------|--|
| VIVA Board: | 12 mm |
| Installation Type: | Flex |
| Frame: | 0.70 - 1.00 mm galvanized top hat section |
| Frame Spacing: | @ 40-60 cm |
| Fixing: | On top hat section |
| Finishing: | Acrylic paint |
| Instruction: | Fix Top hat section on existing wall or metal structure with spacing 0.60 m. |



VIVA Build

Flex Installation

| Building Type | Height | VIVA Board | | Frame | |
|-----------------|------------|------------|------------|-------------------------|-------|
| | | Interior | Exterior | Size | @ |
| Residential | Below 6 m | 8 mm | 10 - 12 mm | C75, 0.50 mm thick | 40 cm |
| | 6 - 10 m | | 12 mm | C75, 0.75-1.00 mm thick | 60 cm |
| Public Building | Below 10 m | 10 mm | 12 mm | C75, 0.75-1.00 mm thick | 60 cm |
| | 10 - 20 m | | 12 - 16 mm | | 40 cm |

Fixing: On principal studs

Finishing: Acrylic paint



WIND LOAD TABLE

| Wind Load | Building Height: 0 - 10 m | | Building Height: 10 - 20 m | |
|---------------------------|--------------------------------|----|--------------------------------|--|
| | Wind Load (kg/m ²) | | Wind Load (kg/m ²) | |
| VIVA Board Thickness (mm) | 50 | | 80 | |
| | Stud Spacing (cm) | | Stud Spacing (cm) | |
| 10 | 40 | - | | |
| 12 | 60 | 40 | | |
| 16 | 60 | 60 | | |

Remark: For buildings over 20 meters height, please consult manufacturer.

VIVA Easy Wall

Interior Wall or Partition

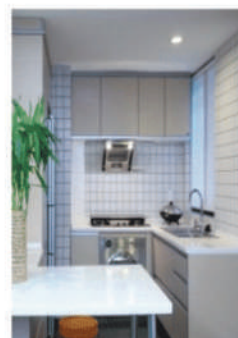
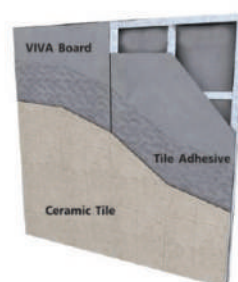
| | |
|---------------------------|---|
| VIVA Board: | 8-10 mm |
| Installation Type: | Flex |
| Frame: | Galvanized steel C and U section, 0.50 mm thick |
| Frame Spacing: | @ 60 x 240 cm |
| Fixing: | On principal studs |
| Finishing: | Acrylic paint |



VIVA Covered Wall

Interior Wall with Covering Material

| | |
|---------------------------|---|
| VIVA Board: | 12 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C section 0.75 mm and U section 0.50 mm thick |
| Frame Spacing: | @ 60 x 60 cm |
| Fixing: | On principal and common studs |
| Control Joint: | At every 4.8-6 m. and corners of the room |
| Finishing: | Wallpaper, Ceramic tile |
| Instruction: | <ul style="list-style-type: none"> • Bond boards together using epoxy glue to minimize movement • Attach covering material on board according to its installation guide • Fill joint of ceramic tile with tile grout except joint over board's joint fill with polyurethane sealant • Tiling over board's joint and control joint are not recommended |



VIVA Combi Wall

Smooth Finish Interior Wall

(Non-Fire-Rated and 90 Minutes Fire-Rated)

| | |
|---------------------------|--|
| VIVA Board: | 8 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C64 and U66 section 0.50 mm thick for non-fire-rated partition and Galvanized steel C75 and U76 section 0.50 mm thick for 90 minutes fire-rated partition |
| Gypsum Board: | 9 mm Gypsum board for non-fire-rated partition 15 mm fire-rated Gypsum board for 90 minutes fire-rated partition |
| Frame Spacing: | @ 60 x 240 cm |
| Fixing: | On principal and common studs |
| Control Joint: | At every 4.8-6 m. and corners of the room |
| Finishing: | Acrylic paint |
| Instruction: | <ul style="list-style-type: none"> • Fix recommended Gypsum board over both sides of VIVA board in staggered pattern. • Joint of VIVA board and Gypsum board must not overlap. |



VIVA Deco Wall

Interior Wall in Natural Finish

| | |
|---------------------------|-----------------------------------|
| VIVA Board: | 8 - 10 mm |
| Installation Type: | Flex |
| Frame: | Timber frame 1 1/2 "x 3" |
| Frame Spacing: | @ 60 x 60 cm |
| Fixing: | On principal studs |
| Finishing: | Lacquer, gloss/matte polyurethane |



Exterior Wall in Natural Finish on Metal Structure or Existing Wall

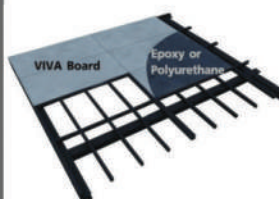
| | |
|---------------------------|--|
| VIVA Board: | 16 mm |
| Installation Type: | Flex |
| Frame: | 0.70 - 1.00 mm galvanized top hat section |
| Frame Spacing: | @ 40-60 x 240 cm |
| Fixing: | On top hat section |
| Finishing: | Gloss/matte polyurethane |
| Instruction: | Fix Top hat section on existing wall or metal structure with spacing 0.60 m. |



VIVA Deco Floor

Interior Floor in Natural Finish

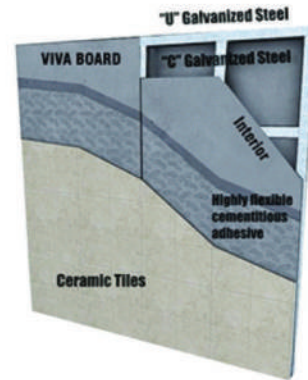
| | |
|---------------------------|---|
| VIVA Board: | 16 - 24 mm |
| Installation Type: | Flex |
| Frame: | Light gauge C section, 2.3-3.2 mm thick |
| Frame Spacing: | @ 40-60 x 120 cm |
| Fixing: | On principal joists |
| Finishing: | Gloss/matte polyurethane or epoxy |



VIVA Wet Area

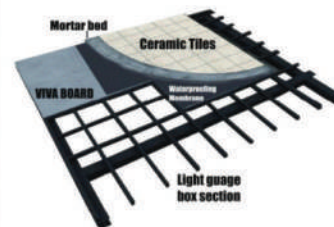
Tiled Wall

| | |
|---------------------------|--|
| VIVA Board: | 12 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C section 0.75 mm and U section 0.50 mm thick @ 60 x 60 cm |
| Frame Spacing: | @ 60 x 60 cm |
| Fixing: | On principal and common studs |
| Control Joint: | At every 4.8-6 m. and corners of the room |
| Finishing: | Ceramic tile |
| Instruction: | <ul style="list-style-type: none"> • Bond boards edges together using epoxy glue • Caulk control joints with polyurethane sealant • Attach ceramic tiles on boards using highly elastic cement based tile adhesive • Fill joints of ceramic tile with tile grout except joint over board's joint fill with polyurethane sealant • Tiling over board's joint and control joint are not recommended |



Tiled Floor

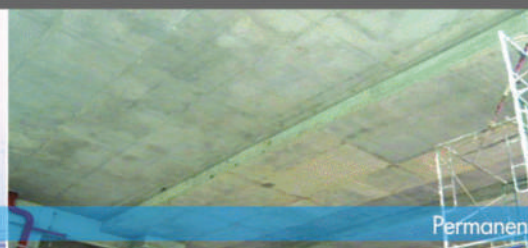
| | |
|---------------------------|--|
| VIVA Board: | 16 - 24 mm |
| Installation Type: | Firm |
| Frame: | Light gauge box section, 2.3-3.2 mm thick @ 40 x 40 cm to 60 x 60 cm depending on required loading capability |
| Frame Spacing: | @ 40 x 40 cm to 60 x 60 cm depending on required loading capability |
| Fixing: | On principal and common joists |
| Control Joint: | At every 4.8-6 m. and corners of the room |
| Finishing: | Ceramic tile |
| Instruction: | <ul style="list-style-type: none"> • Lay boards in staggered pattern • Bond boards edges together using epoxy glue • Caulk control joints with polyurethane sealant • Lay water proofing membrane on VIVA board deck before laying ceramic tile • Attach ceramic tiles on boards using highly elastic cement based tile adhesive • Fill joints of ceramic tile with tile grout except joint over board's joint fill with polyurethane sealant • Tiling over board's joint and control joint are not recommended |



Special Applications



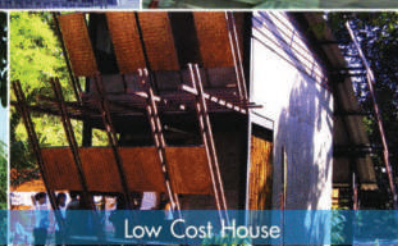
Heat Insulation Wall



Permanent Formwork



Low Cost House



Low Cost House



Flood Protection Wall

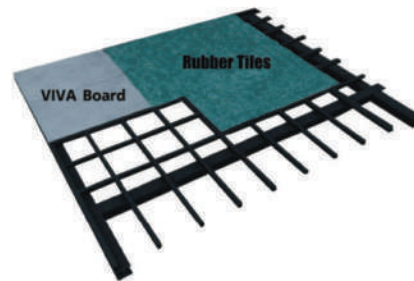
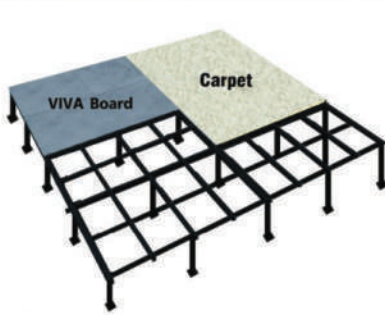


Furniture

VIVA Floor

Elevated Floor & Mezzanine Floor with Covering Material

| | |
|---------------------------|--|
| VIVA Board: | 16 - 24 mm |
| Installation Type: | Firm |
| Frame: | Light gauge box section, 2.3-3.2 mm thick |
| Frame Spacing: | @ 40 x 40 cm to 60 x 60 cm depending on required loading capability |
| Fixing: | On principal and common joists |
| Control Joint: | At every 4.8-6 m. and corners of the room |
| Finishing: | Ceramic tile, PVC tile, Carpet |
| Instruction: | <ul style="list-style-type: none"> • Lay boards in staggered pattern • Bond boards edges together using epoxy glue • Caulk control joints with polyurethane sealant • Fix covering material on board according to its installation guide |



Sub Floor

| | |
|---------------------|---|
| VIVA Board: | 8 - 10 mm |
| Frame: | Existing concrete floor |
| Finishing: | Wood flooring, parquet |
| Instruction: | <ul style="list-style-type: none"> • Spread polyurethane adhesive on back side of boards • Lay boards in staggered pattern • Fix boards to concrete floor with 2" concrete nail at every 20 cm • Lay water or sound proofing membrane on VIVA board deck • Fix wood flooring or parquet on boards in crosswise direction |



MAXIMUM ALLOWABLE UNIFORMLY DISTRIBUTED LOADS

| Board Thickness (mm) | Joist Span (cm x cm) and Loading (kg/m ²) | | | |
|----------------------|---|----------|---------|----------|
| | 40 x 40 | 40 x 120 | 60 x 60 | 60 x 120 |
| 16 | 590 | 340 | 240 | - |
| 20 | 960 | 550 | 410 | 230 |
| 24 | 1400 | 790 | 600 | 340 |

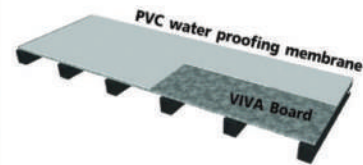
Remark:

- Loading capability is calculated from minimum bending strength of VIVA Board at 9 N/mm² and engineering safety factor.
- Weight load shown in table is uniformly distributed. Point load, vibration, moving load or impact are excluded.
- Frame width must be sufficient to support all edges.
- Using entire boards for flooring to maximize weight load support.

VIVA Roof & Ceiling

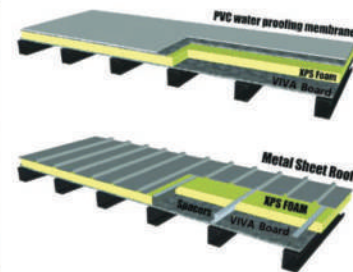
Flat Roof

| | |
|---------------------------|-------------------------------|
| VIVA Board: | 10 - 16 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C purlin |
| Frame Spacing: | @ 40-60 cm |
| Fixing: | On principal and common frame |
| Finishing: | PVC water proofing membrane |



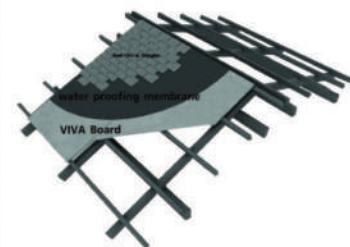
Performance Roof – Heat and Sound Resistance Solution

| | |
|---------------------------|---|
| VIVA Board: | 10 - 16 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C purlin |
| Frame Spacing: | @ 40-60 cm |
| Fixing: | On principal and common frame |
| Finishing: | Metal sheet |
| Instruction: | Lay heat or sound insulations on VIVA board deck before covering with metal sheet |



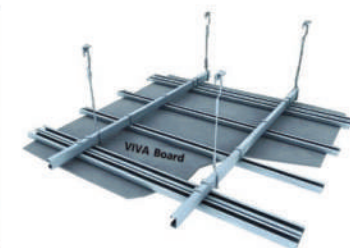
Sub Roof/Roof Decking

| | |
|---------------------------|---|
| VIVA Board: | 10 - 16 mm |
| Installation Type: | Firm |
| Frame: | Galvanized steel C purlin |
| Frame Spacing: | @ 60 cm |
| Fixing: | On principal and common frame |
| Finishing: | Roof tile, shingle |
| Instruction: | Lay water proofing membrane on VIVA board deck before attaching covering material |



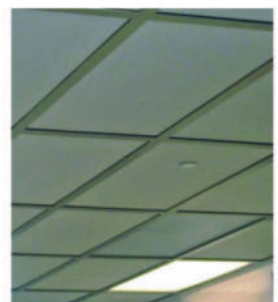
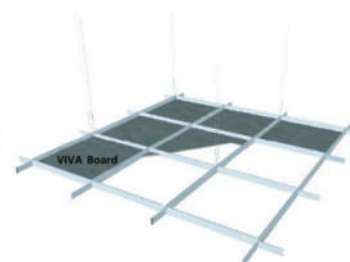
Fixed Ceiling

| | |
|---------------------------|----------------------------------|
| VIVA Board: | 8 mm |
| Installation Type: | Flex |
| Frame: | Galvanized steel ceiling section |
| Frame Spacing: | @ 40 cm |
| Fixing: | On principal frame |
| Finishing: | Acrylic paint |



T-bar Ceiling

| | |
|---------------------------|---|
| VIVA Board: | 8 mm |
| Installation Type: | Flex |
| Frame: | T-bar section |
| Fixing: | On principal frame |
| Finishing: | Acrylic paint |
| Instruction: | <ul style="list-style-type: none"> • Cut boards to size 60 x 60 cm or 60 x 120 cm • Apply primer on both sides of boards to prevent warping • Coat front side with acrylic paint |



VIVA Installation Instruction

FLEX AND FIRM

VIVA Board is a combination of wood and cement. It inherits many properties of the two main components. It is weather resistant like cement. However, like any boards with wood or wood derived component, it has a degree of moisture movement, meaning that it contracts and expands in relation to changes in ambient moisture and temperature. The direction and degree of movement can be predicted and must be taken into account when installing the boards. Board should be fixed by a method that allows linear movement in most situations. This eliminates formal movement such as warping and bowling and prevents damages. Paint and coating reduces degree of movement. When covering material is applied, boards should be fixed firmly to minimize movement. **Following are the two installation methods: Flex and Firm Installation**

FLEX Installation

- Frame is assembled to allow movement when board is exposed to high degree of changes in temperature and moisture.
- Two pieces of steel frame should be used at joint between boards. If timber frame is used, two pieces of frame at joint between boards is not necessary.

For VIVA Easy Wall, VIVA Deco Wall, VIVA Build and VIVA Clad

- Use only vertical frame. Attach frame to supporting structure by fixing it to L-shape bracket or 'U' Track.
- Apply two pieces of frame at joint between boards. Fix frame together by using screws to allow some movement.
- Recommend strengthen the frame by fixing 'U' galvanized steel frame at every 120 cm.
- Top Hat section can substitute two pieces of 'C' section frame by placing Top Hat inversely wing-up. VIVA Boards shall be fixed on different wings.

For VIVA Deco Floor and VIVA Ceiling

- Set principal joist cross-wise from board direction at 30 cm, 40 cm or 60 cm. Set common joist to support the long edges.
- Apply two pieces of frame at joint between boards. Fix joist together by using screws to allow some movement.

Board Fixing

Fix boards along principal studs/joists only

Gap between boards

Interior 3 - 5 mm

Exterior 5 - 10 mm

Caulking Material

Polyurethane Sealant

FIRM Installation

- Frame is rigidly assembled to prevent untoward results due to board movement when a covering material such as ceramic tile or wood flooring is applied.

For VIVA Covered Wall, VIVA Combi Wall, VIVA Wet Area, VIVA Floor and VIVA Roof

- Set frame at 30 cm x 30 cm, 40 cm x 40 cm, or 60 cm x 60 cm depending on required rigidity and load capability.
- Firmly assemble the frame together by welding or screwing
- If a single frame's width is insufficient, two frames at the joint between boards are recommended. Frame must be welded together to ensure no frame's movement.
- Provide control joint (movement joint) at every 4.8 - 6 meters and around the room's perimeter by using flex installation method to allow movement.

Board Fixing

Fix boards on both vertical and horizontal direction along principal and common studs/joists.

Gap between boards

2 - 3 mm

Caulking Material

Epoxy

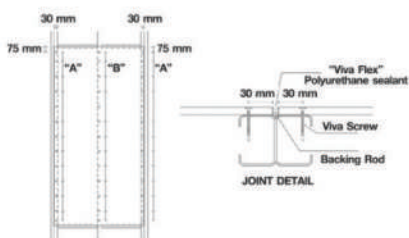
Note: Leave 10 mm gap for control joint and fill gap with Polyurethane Sealant.

Fixing Distance

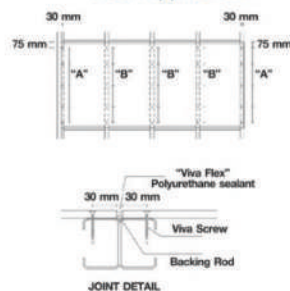
| Fixing distance from edge | Fixing distance from corner | VIVA Board | Distance between edge fixing 'A' | Distance between center fixing 'B' |
|---------------------------|-----------------------------|------------|----------------------------------|------------------------------------|
| Flex Installation: 30 mm | 75 mm | 8 - 16 mm | 150 - 200 mm | 200 - 300 mm |
| Firm Installation: 20 mm | | 20 - 24 mm | 200 - 300 mm | 300 - 400 mm |

Fixing and Joint Details: FLEX Installation

Wall Application

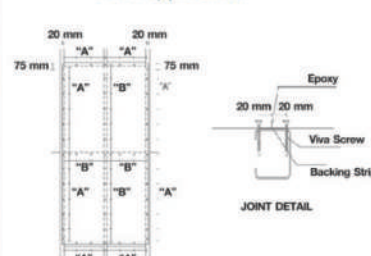


Floor Application

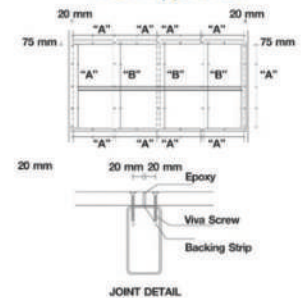


Fixing and Joint Details: FIRM Installation

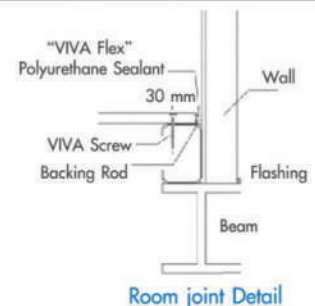
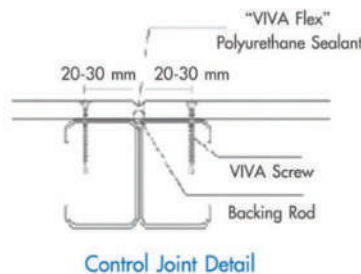
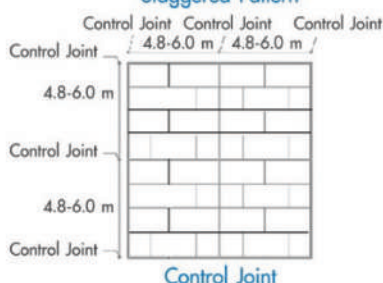
Wall Application



Floor Application



Staggered Pattern



FRAME SELECTION

RECOMMENDED FRAME TYPE

| Frame Type | Size | Thickness | Flexibility | Recommended Applications |
|------------------------------|----------------------|--------------|----------------|--|
| Timber Frame | 1½ x 3" | | High | VIVA Deco Wall, VIVA Easy Wall |
| 'C' and 'U' Galvanized Steel | C75 U76 | 0.5 mm | High | VIVA Easy Wall, VIVA Build (residential building), VIVA Combi Wall |
| Top Hat Section | 65 x 30 mm | 0.7 - 1.0 mm | High | VIVA Clad, VIVA Deco Wall (exterior) |
| 'C' Light Gauge Steel | 75 x 45 x 15 mm | 1.6 mm | Low | VIVA Build (public building), VIVA Covered Wall, VIVA Wet Area |
| | 100-150 x 50 x 20 mm | 2.3 - 3.2 mm | Very Low | VIVA Deco Floor |
| Light Gauge Box Section | 100-150 x 50 mm | 2.3 - 3.2 mm | No Flexibility | VIVA Floor with covering material |

Working with VIVA BOARD

- Cutting:** VIVA Board can be cut with portable circular saw with tungsten carbide tipped blade or jigsaw. Crosscut hand saw can be used for thickness up to 12 mm.
- Milling:** VIVA Board can be milled for half-lap, tongue and groove, tapered and etc. The milling tip should be made of tungsten carbide. Please note that minimal thickness of board should be considered when milling.
- Grinding:** Manual grinding or electric hand-held grinding tools with abrasive paper of 40 - 80 granularity can be used at joint areas of boards when boards' evenness is needed or the board surface should be coarsened.
- Screwing:** VIVA Screw is recommended because it allows drilling and countersinking in one step. When using self-tapping screw, pre-drilling with slightly oversize hole is required.
- Screw Head Covering:** Touch-up the screw heads with acrylic filler, epoxy putty or VIVA epoxy. To match screw head color with VIVA board, use a mixture of Portland cement, adhesive, saw dust and pigment
- Nailing:** VIVA Board up to 10 mm thickness can be manually nailed onto timber frame without pre-drilling.
- Wide Opening:** In cutting a wide opening such as door or window, studs should be placed around the perimeter of the opening to sufficiently reinforce the opening.
- Flashing:** For exterior applications, flashing should be installed for the areas such as window and door frame, adjoining wall, opening, and top corner to prevent water leakage.



SURFACE TREATMENT

| Application | Painting | Coating |
|-------------|--|--|
| Interior | Acrylic paint Epoxy paint | Lacquer Gloss epoxy Gloss/Matte polyurethane Viva Clear Guard |
| Exterior | Exterior acrylic paint Polyurethane paint Wood stain | Siloxane water repellent Gloss/Matte polyurethane Viva Clear Guard |

Remark:

- Alkaline resisting primer should always be applied as base before painting due to alkalinity of VIVA Board's surface.
- The board surface should be clean and dry before paint or coating.
- Oil-based paint is not recommended to use with VIVA Board.
- Applying paint or primer on the back side of the board ensure that the board is better conditioned for use where there are changes in moisture content and temperature of the board or where conditions on two sides of the boards differ substantially e.g. T-Bar ceiling.
- For applications used in high humidity area, moisture resistant coating should be applied to both surfaces before applying covering materials.
- Each paint and coating type has its special properties; please consult the paint manufacturer for more details.
- Exterior floor in natural finish or painting is not recommended.

Storage

- VIVA Board must be stored under a roofed area, in a dry environment and well protected from weather. Floor area should be leveled and solid.
- VIVA Board should be stored in its original packing supplied.
- If taken out from the pallets, board can be stacked with the maximum height of 75 cm. The stack shall be laid on 5 bearing plates with maximum of 60 cm space among plates. The stack shall be covered with waterproof protective plastic sheet.
- Maximum of 4 pallets or stacks shall be laid on top of each other.
- VIVA Board must never be stored on edge or upright. Outdoor storage is not recommended.

Transportation

- VIVA Board should be laid flat and be adequately protected during transportation by waterproof covering.
- Lifting the board from its stack should be done one piece at a time by sliding to the side. Never lift VIVA Board from its both ends because it may cause the boards to bend resulting in board breakage. VIVA Board must be carried in a vertical position.

Conditioning

- VIVA Board should be allowed 24 - 48 hours to adapt to the ambient humidity level prior fixing for its most capability working conditions. If the board gets wet, it should be allowed to dry individually prior to installation.



Accessories



VIVA Clear Guard

For Interior Wall, Exterior Wall, Interior Floor & Floor Plank
 100% Acrylic water-based coating,
 UV and water resistant,
 Semi-gloss, non-yellowing film,
 Does not change surface appearance,
 Suitable for Viva Board in natural finish

Net content : 3.785 litres



VIVA Epoxy

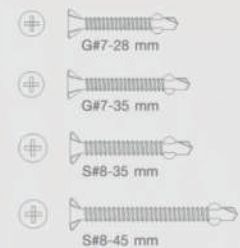
VIVA Epoxy is suitable for screw head covering and attaching covering materials such as ceramic tile and mosaic tile.

Available color: Light grey
Weight: 2 kg/set (part A+B)

VIVA Screw

VIVA Screw is made from steel and coated with rust protective of 25 micron thick in compliance with AS 3566 Class 3. VIVA Screw can drill and countersink onto VIVA Board and frame without pre-drilling. It can be used with an electric drill with speed of over 2,700 rounds per minute.

| VIVA Screw | Length (mm) | Frame Thickness (mm) | Board Thickness (mm) | Application |
|------------|-------------|----------------------|----------------------|--|
| G#7-28 mm | 28 | 0.75-1.00 | 8-10 | Interior wall, Exterior wall and Ceiling |
| G#7-35 mm | 35 | 0.75-1.00 | 12-16 | Exterior wall |
| S#8-35 mm | 35 | 1.20-3.20 | 8-16 | Interior wall and Exterior wall |
| S#8-45 mm | 45 | 1.20-3.20 | 20-24 | Floor |



Remark:

Steel coating class 3 is suitable for using in moderate temperature. For harsh weather conditions, steel coating class 4 is highly recommended.



VIVA Backing Rod

VIVA Backing Rod is functioned to minimize the amount of polyurethane sealant used and to act as a bond breaker between surfaces. VIVA Backing Rod is available in two sizes: 3 mm and 6 mm.

- ⊖ 3 mm for VIVA Board 8 - 10 mm.
 - ⊖ 6 mm for VIVA Board 12 mm. and above.
- Length of VIVA Backing Rod is 50 meters per unit.



Step 1: Insert VIVA Backing Rod into gap



VIVA Flex (Polyurethane Sealant)

VIVA Flex Polyurethane Sealant conforms to SNJF, ASTM C920, ISO 8339 and ASTM D412 standard. Sausage package contains 600 ml and cartridge package contains 310 ml. It is available in two colors: white and light grey.





Step 2: Fill the gap with VIVA Flex.

VIVA BOARD Technical Data

| Specific Properties | Unit | Thai Industrial Standard (TIS 878-2537) | VIVA BOARD (Average Test result) |
|---|---------------------|---|----------------------------------|
| Density | kg/m ³ | 1100 – 1300 | 1300 |
| Moisture Content | % | 9 – 15 | 9 – 15 |
| Bending Strength | N/mm ² | ≥ 9 | 12 |
| Modulus of Elasticity | N/mm ² | ≥ 3000 | 5000 |
| Tensile Strength Perpendicular to Plane | N/mm ² | ≥ 0.5 | 0.7 |
| Thermal Conductivity (K Value) | W/m ² °C | ≤ 0.25 | 0.1 |
| Thickness Swelling (after 24 hours immersed in water) | % | ≤ 2 | 1 |
| Other Properties | | VIVA BOARD (Average Test Result) | |
| Surface Alkalinity | | pH | 12 |
| Length Change (after 24 hours immersed in water) | | % | 0.12 |
| Water Absorption (after 24 hours immersed in water) | | % | 12 |

Fire Resistance Properties

 VIVA Board contains high percentage of cement content permitting it to be highly fire-resistant. VIVA Board passed BS 476 Part 6 and 7 and is classified as virtually non-combustible or class 'O' material and it is also classified as class 'B' according to BS EN 13501-1.


 VIVA Board partition system also passed the 1-hour, 2-hour and 4-hour fire rating test according to BS 476 Part 22, proving its fire prevention capability.

Dimensional Tolerance (mm)

| | |
|------------------------|-------|
| - Diagonal | ± 4.0 |
| - Length/ Width | ± 2.0 |
| - Thickness 8 – 12 mm | ± 1.0 |
| - Thickness 16 – 20 mm | ± 1.5 |
| - Thickness 24 mm | ± 2.0 |

Sound Insulating Properties

| Thickness (mm) | STC Rating |
|----------------|------------|
| 8 | 28 |
| 10 | 29 |
| 12 | 30 |
| 16 | 31 |
| 20 | 32 |

 Due to its high density, VIVA Board contributes significant sound insulating performance than any other types of building boards.

Remark: Please consult the manufacturer for more details of fire resistance and sound insulating solutions.

Features and Benefits

