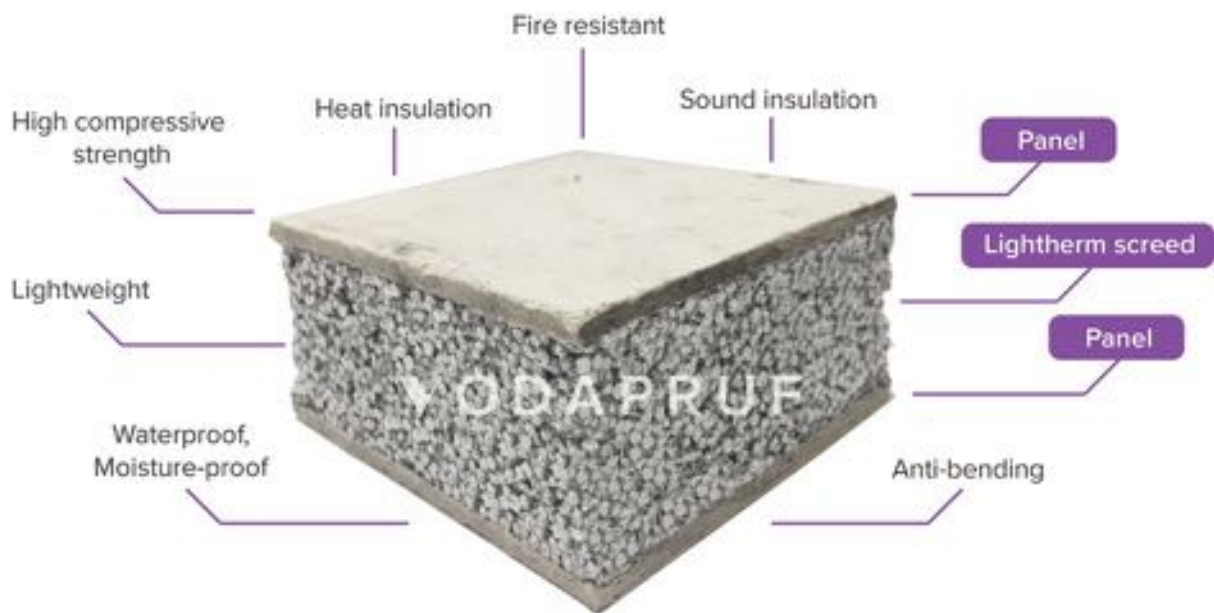


# VODAPRUF

**vPANEL** is an ultra-lightweight precast panel made by VODAPRUF PTE LTD using a combination of fibre cement board and LIGHTERM aggregate.



Non combustible Fire Rated



## TECHNICAL ADVANTAGES

1. Fire rating of minimum 2 hours
2. Acquired COC (Certificate of Conformity)
3. Tested for fire classification and toxicity
4. Increase floor space
5. Strong hanging force
6. Minimum of installation of 25m<sup>2</sup>/day/person
7. Eco-friendly energy saving wall system
8. Strong and durable
9. Termite and rot resistant
10. No special installation tools required
11. Earthquake resistant

Table 1. Comparison wall panel in thermal conductivity

<b>Thermal Conductivity, (W/mK)</b>					
<b>Traditional Concrete</b>	<b>Lightweight Concrete</b>	<b>AAC Brick</b>	<b>Brick Wall</b>	<b>Hollow Core Panel</b>	<b>vPANEL</b>
1.4-1.8	0.1-0.3	0.16	1.31	0.1739	0.125

Table 2. Comparison wall panel in weight

<b>Weight, (kg/m<sup>2</sup>)</b>					
<b>Traditional Concrete Wall (75mm)</b>	<b>Lightweight Concrete Wall (100mm)</b>	<b>AAC Brick (75mm)</b>	<b>Brick Wall (100mm)</b>	<b>Hollow Core Panel</b>	<b>vPANEL (75mm-85mm)</b>
190	150	100	180	130	24.50-47.0

Table 3. Comparison wall in productivity

Productivity, (m <sup>2</sup> /man-day)					
Traditional Concrete Wall (75mm)	Lightweight Concrete Wall (100mm)	AAC Brick (75mm)	Brick Wall (100mm)	Hollow Core Panel	vPANELI (75mm-85mm)
10	16-20	8-16	4-8	16-20	25-30

## AREAS OF APPLICATION

### 1. Internal Partition Wall



### 2. External Wall

vPANELI can be used as external for modular house, low cost building, high rise building, hotel, apartment and villas.



### 3. Roof Slab

vPANEL can be used on the roof as a lightweight roof panel with good thermal insulation properties. Vodapruf able to assist on the u-value calculation for client.



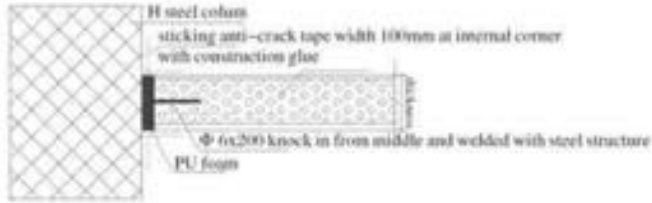
### 4. Floor System

vPANEL can be innovatively used as floor board. This system has high load bearing capacity as it is steel-reinforced.

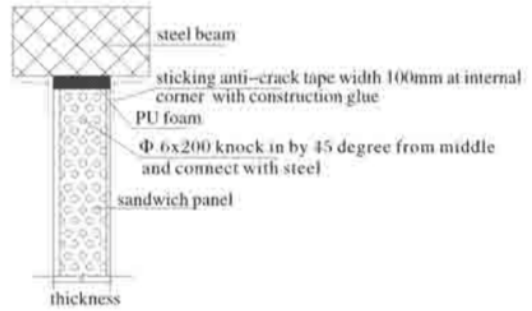


 <p><b>1. Setting the line</b></p>	 <p><b>2. Sawing board</b></p>	 <p><b>3. Sizing</b></p>
<p>Setting the line and carrying the board in position.</p>	<p>Using hand-held electric saw to cut freely.</p>	<p>Sizing cement on tenon side of two boards, then spread polymer mortar on one tenon side casually.</p>
 <p><b>4. Installation</b></p>	 <p><b>5. Planting Bars in Wall and Pillar</b></p>	 <p><b>6. Correcting, fixing</b></p>
<p>Carrying the board prepared to be installed to the installation place.</p>	<p>Drill a hole in the original pillar or wall, and fix the board by a steel bar.</p>	<p>Using a guiding rule to check and leveling correction.</p>
 <p><b>7. Planting Bars in Structure Beam</b></p>	 <p><b>8. Planting Bars in Floor</b></p>	 <p><b>9. Planting Bars Between Wall Boards</b></p>
<p>Drill a hole in structure beam and plant a reversed-7-shaped steel bar to fix with wall board.</p>	<p>Drill a hole in the floor and plant a 7-shaped steel bar to fix with wall board.</p>	<p>Between two boards, plant a 200mm length steel bar in the angle of 45 degree to fix.</p>
 <p><b>10. Installing electrical wires and switches</b></p>	 <p><b>11. Grouting and filling starch</b></p>	 <p><b>12. Sticking anti-cracking cloth, coating</b></p>
<p>Setting lines on the places needing to be set with concealed wire and switch box.</p>	<p>Filling and strickling the corrected wall board with polymer mortare.</p>	<p>After the polymer and wall are all shaped, sticking glass-cloth, brushing coating.</p>

## Detail drawings



① Connect panel with steel structure



② Connect panel with steel beam