

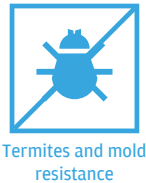
## THE VANTEM PANEL

Vantem Panels simplify construction, reducing costs and time. They are highly structural, capable of supporting high compression, flexural, and shear loads and may be used to build multi-story structures without additional steel or concrete reinforcement.

The panel facings are our proprietary Vantem Board, a structural cementitious board that is resistant to fire, moisture, insects and mold. The panel core is a highly effective insulation layer, making our panels perfect for building energy-efficient Net Zero structures.



### Advantages of Vantem



GENERAL FEATURES			
Width	Lengths	Thickness	Weight per ft2 (average)
4 feet	8-12 feet	3-12 inches according to insulation needs	with 8mm board = 4.7 lb/ft2 with 12mm board = 6.9 lb/ft2
FLEXURAL STRENGTH TESTED AS WALL (TRANSVERSE LOAD) (1)			
Panel Type	Test Span		Maximum Load to Failure
Panel with 12 mm board 48x96x4.5 in	96 in		207 psf
Panel with 12 mm board 48x144x4.5 in	144 in		95 psf
Panel with 12 mm board 48x96x10.25 in	96 in		266 psf
Panel with 12 mm board 48x144x10.25 in	144 in		159 psf
FLEXURAL STRENGTH TESTED AS ROOF (TRANSVERSE LOAD) (2)			
Panel Type	Test Span		Maximum Load to Failure
Panel with 12 mm board 48x96x4.5 in	93 in		186 psf
Panel with 12 mm board 48x144x4.5 in	141 in		77 psf
Panel with 12 mm board 48x96x10.25 in	93 in		246 psf
Panel with 12 mm board 48x144x10.25 in	141 in		163 psf
Panel with 8 mm board 48x96x4.2 in	92 in		151 psf
COMPRESSION STRENGTH (VERTICAL LOAD) (3)			
Panel Type			Maximum Load to Failure
Panel with 12 mm board 48x96x4.5 in			13903 lbf/ft
Panel with 12 mm board 48x144x4.5 in			11911 lbf/ft
Panel with 12 mm board 48x96x10.25 in			24440 lbf/ft
Panel with 12 mm board 48x144x10.25 in			22620 lbf/ft
Panel with 8 mm board 48x96x4.2 in			10081 lbf/ft
RACKING SHEAR (HORIZONTAL LOAD) (4)			
Panel Type			Maximum Load to Failure
Panel with 12 mm board 2440x114 mm			1491 lbf/ft
Panel with 12 mm board 2440x260 mm			1107 lbf/ft
Panel with 8 mm board 2440x106 mm			1008 lbf/ft
FIRE RATING (5)			
Panel Type			Rating
Panel with 12 mm board			63 min
Panel with 8 mm board			41 min
ACOUSTIC RATING (6)			
Panel Type			Sound Reduction Index
Standard panel with 8 mm board			Rw=29 dB
Standard panel with 12 mm board			Rw=36 dB
Acoustic panel with 8 mm board			Rw+C=38 dB
Acoustic panel with 12 mm board			Rw+C=47 dB

(1) Based on standard ASTM E72 "Standard Test Methods of Conducting Strength Tests of Panels for Building Construction" - (2) Based on standard ASTM E72 "Standard Test Methods of Conducting Strength Tests of Panels for Building Construction" and standard NCH 803 "Panel Flexural Test" - (3) Based on standard ASTM E72 "Standard Test Methods of Conducting Strength Tests of Panels for Building Construction" and standard NCH 801 "Panel Compression Test" - (4) Based on standard ASTM E72 "Standard Test Methods for Testing the Strength of Panels for Building Construction" and standard NCH 802 "Panel Horizontal Load Test" - Values in (1), (2), (3) and (4) are for reference only. It is recommended to use a safety factor of 3, a qualified structural engineer must verify the maximum design loads according to the project, laws and legal regulations in force in the country, whether municipal, state or national. - (5) Based on standard NCH935/1 "Fire Resistance Test-Part 1: Building Elements". - (6) Based on standard ISO 140-3 "Acoustics-Measurement of Sound Insulation Part 3: Laboratory Measurements of Airborne Sound Insulation of Building Element" and theoretical calculations based on ISO 10140-1 "Acoustics-Laboratory Measurement of Sound Insulation of Building Elements Part 1: Application Rules for Specific Products" and ISO 717-1 "Acoustics-Rating of Sound Insulation in Building and Building Elements". Part 1: Airborne Sound Insulation.