

**THE NON-COMBUSTIBLE STRUCTURAL BUILDING PANEL
FOR WALLBOARD APPLICATIONS**

GENERAL

Megaboard is a fibre glass mesh reinforced concrete panel for floor, roof and wall sheathing.

- Strong, durable and very easy to work with regular wood working tools
- Dimensionally stable, factory sealed. Square of beveled for wall board edges

Megaboard are mechanically fastened directly to steel or wood framing joists.

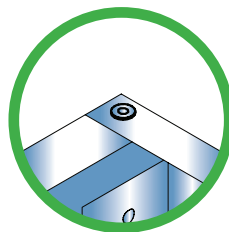
Carbide saw blades are used to cut Megaboard with a circular saw equipped with dust collection system. Wear safety goggles, gloves and a NIOSH approved dust mask when cutting Megaboard.

BUILDING CODE APPROVAL

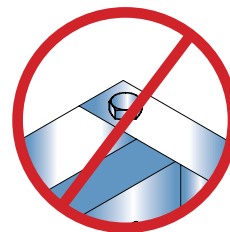
- IAPMO Certified and listed, non-combustible for use in all type of non-combustible construction.
- 2 hrs. rated wall assembly tested with Intertek, certification pending.
- Shear wall certification pending with IAPMO.
- State of California Approval (Cal-Fire).
- 2021,2018, and 2015 International Building Code® (IBC)
- 2021,2018, and 2015 International Residential Code® (IRC)
- 2019 California Building Code® (CBC) and 2019 California Residential Code® (CRC) – Supplement attached.
- 2020 Florida Building Code® (FBC), Building and Florida Building Code® (FBC) Residential – Supplement attached.

FRAMING INSPECTION SYSTEM

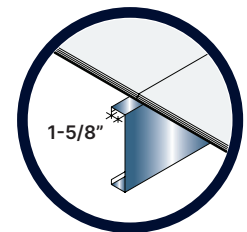
Metal framing must be a minimum of 16 gauge and spaced no greater than 24" (610mm) o.c. when installing a Megaboard. Use low profile fastener on supporting flange, no hex screw on top flange.



Flat head fastener



Hex head fastener



Flange width
min. 1-5/8" wide



STEEL STUD FRAMING

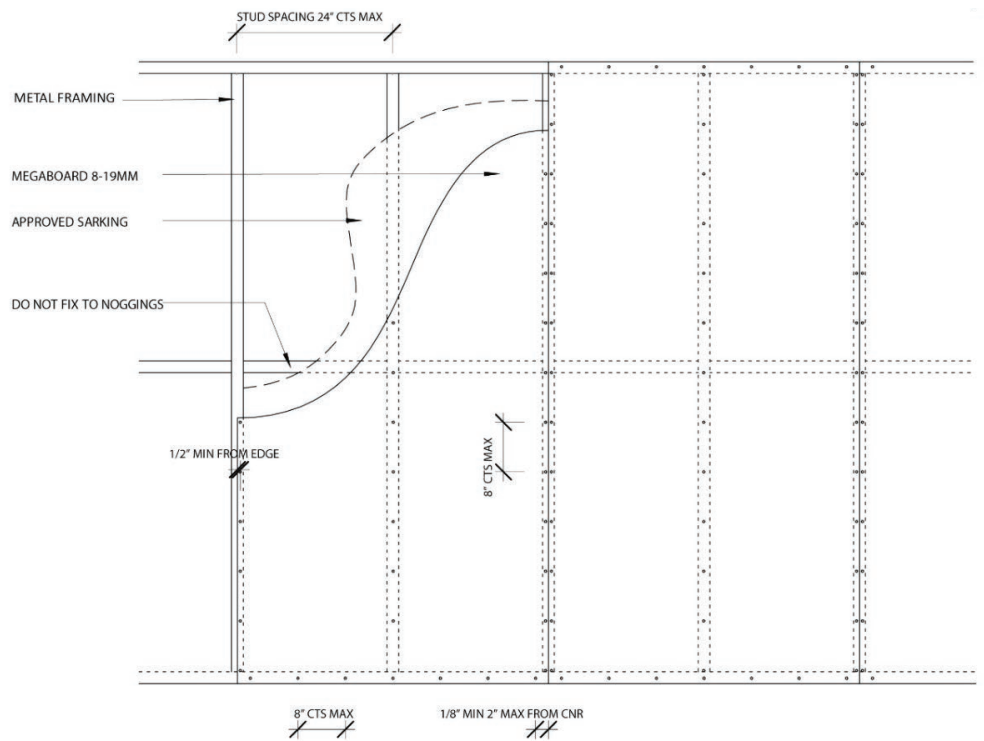
The steel framing must be designed to meet the strength and deflection criteria specified the contract documents.

INSTALLATION

All installations must follow the current Megaboard Installation Specification, using only the listed material and components. For complete and updated copy of Megaboard Installation Specification, contact Ectek or a local distributor.

Always install Megaboard wall panel in a vertical orientation.

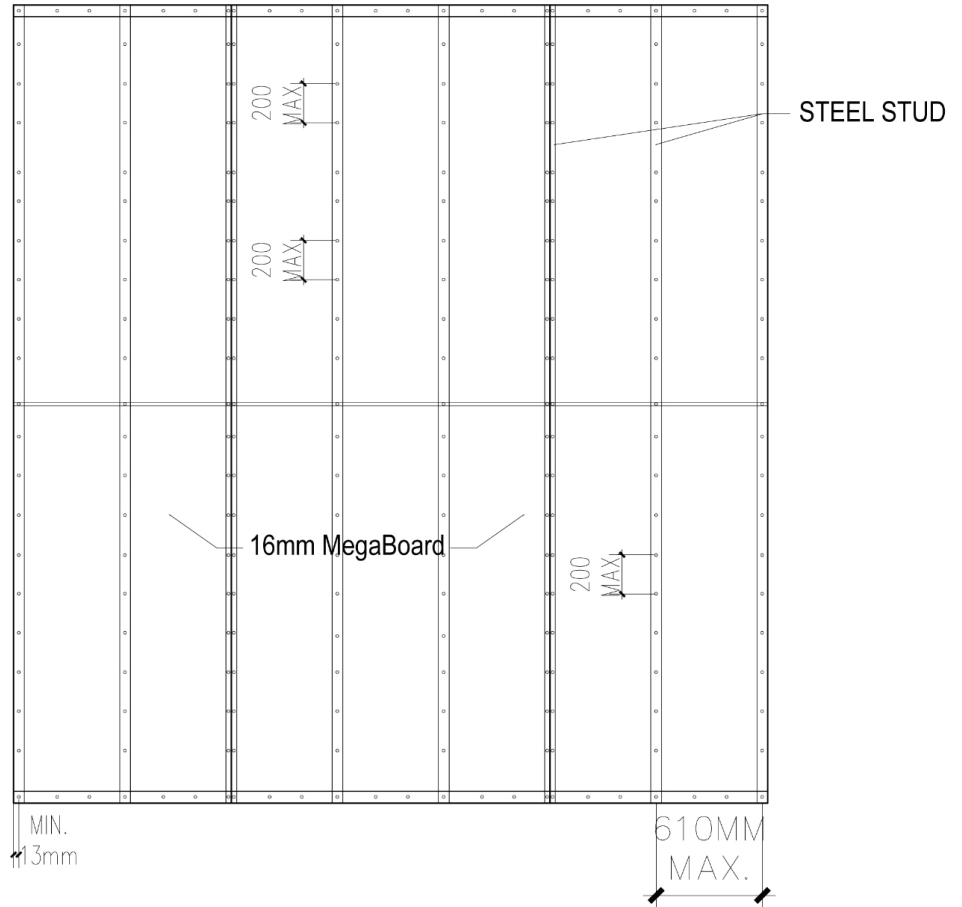
Panel may be installed with smooth surface against the framing (smooth surface as bottom). Slide panels together tightly, no spacing required. Begin fastening at one end of the panel and fan out across the panel. Do not fasten all the corners first. Drive fasteners so the heads are flush with the surface of the board.





SCREW PATTERNS

Minimum 13mm or 1/2" from panel edge and Maximum 200mm or 8" screw distance from each other



RECOMMENDED FASTENERS

5/8" & 1/2" MegaBoard:

Steel Joist:	Muro	RSM547WFL-GY	
	(16 ga)	Grabber Simpson Strong Tie	CGH8158LG F12C200FDB

Wood Joist: 0.113 HDG RING SHANK NAIL

**RECOMMENDED NOMINAL SHEAR STRENGTH****Megaboard Wallboard 5/8"**

The nominal shear strength per unit length was determined following the procedures specified in Section 4.4 of EC-003. Table 6 lists the nominal shear strength for wind load design. Table 7 lists the nominal shear strength for seismic load design. The recommended design factors are the following: For Seismic Design: ASD $\Omega=2.5$, LRFD $\phi=0.60$ For Wind Design: ASD $\Omega=2.0$, LRFD $\phi=0.65$

Recommended Nominal Shear Strength Per Unit Length for Wind Load

Sheathing	Max. Aspect Ratio (h/w)	Framing Materials	Stud Blocking Required	Required Sheathing Screw Size	Screw Spacing Edge/Field	Nominal Shear Strength
5/8" Megaboard, Single Sided	4:1	50 ksi, 54mil	No	No. 8	2"/12"	3561 plf
	4:1	50 ksi, 54mil	No	No. 8	6"/12"	1540 plf

Recommended Nominal Shear Strength Per Unit Length for Seismic Load

Sheathing	Max. Aspect Ratio (h/w)	Framing Materials	Stud Blocking Required	Required Sheathing Screw Size	Screw Spacing Edge/Field	Nominal Shear Strength
5/8" Megaboard, Single Sided	4:1	50 ksi, 54mil	No	No. 8	2"/12"	3711 plf
	4:1	50 ksi, 54mil	No	No. 8	6"/12"	1605 plf

Megaboard Wallboard 1/2"

The nominal shear strength per unit length was determined following the procedures specified in Section 4.4 of EC-003. Table 13 lists the nominal shear strength for wind load design which were obtained from the monotonic shear wall tests. Table 15 lists the nominal shear strength for seismic load design which were obtained from cyclic shear wall tests.

The recommended design factors are the following: For Seismic Design: ASD $\Omega=2.5$, LRFD $\phi=0.60$ For Wind Design: ASD $\Omega=2.0$, LRFD $\phi=0.65$

Recommended Nominal Shear Strength Per Unit Length for Wind Load

Sheathing	Max. Aspect Ratio (h/w)	Framing Materials	Stud Blocking Required	Required Sheathing Fastener Size	Fastener Spacing Edge/Field	Nominal Shear Strength
1/2" (12 mm) Megaboard Mgo Panel, Single Sided	4:1	Wood 2x4	No	8d	2"/12"	585 plf
	4:1		No	8d	6"/12"	343 plf
	4:1	50 ksi 54 milcold-formed steel	No	No. 8	2"/12"	1194 plf
	4:1		No	No. 8	6"/12"	747 plf

Recommended Nominal Shear Strength Per Unit Length for Seismic Load

Sheathing	Max. Aspect Ratio (h/w)	Framing Materials	Stud Blocking Required	Required Sheathing Fastener Size	Fastener Spacing Edge/Field	Nominal Shear Strength
1/2" (12 mm) Megaboard Mgo Panel, Single Sided	4:1	Wood 2x4	No	8d	2"/12"	650 plf
	4:1		No	8d	6"/12"	493 plf
	4:1	50 ksi 54 milcold-formed steel	No	No. 8	2"/12"	1501 plf
	4:1		No	No. 8	6"/12"	1157 plf



TECHNICAL DATA SHEET

ITEM	TYPICAL VALUES (STANDARD / Tested)	STANDARD / REFERENCE
Bending Strength(Modulus of Rupture), psi	≥ 1305 PSI / 9 Mpa Standard Value*, Test Value Ave: 2610 PSI/18 Mpa	ASTM C 1185/ISO 8335
Fastener holding (lbf) 1/4" Board	≥157 lbs	ASTM C 1185
Linear Variation With Change In Moisture (from 50% to 90% relative humidity)	≤0.3 % (Test result 0.2%)	ASTM C 1185-08 /AC 318*
Impact Resistant	Standard 0.96 lb-ft/in2 Tested: 4.32 lb-ft/in2	ASTM D3499
Saturated Thickness Swelling (24-hour water immersion)	≤3% (Test result: 0.01%)	ASTM D1037+/AC 318*
Density – Oven Dry	≥ 1000 Kg/M3 /62.4 lbs/ft3	ASTM C 1186
Moisture Content (at 65% RH)	6% - 12%	ASTM C 1186 Section 10
Asbestos Content	Zero	MSDS
Surface Burning Characteristics	CLASS A (0 Flame / 0 Smoke)	UL 723/ULC S102
Rot & Termite Resistance	Resistant to destruction	Resistant / No Food Value
Mold Resistant	0/0	ASTM G3273/STM G21
Noncombustibility	Passed ASTM E 136 Section B ASTM E 2652	ASTM E136
Fire Rated Assemblies (5/8" thick board each side of 3-5/8" steel stud)	2 hrs	ASTM E 119 Intertek Report #200527009SHF-002
Shear Strength (Through Thickness)	713 psi	ASTM E2718/ASTM D2719
Shear Strength (Planner)	351 psi	ASTM E2718/ASTM D2719
Shear Strength (Shear Wall)	3561 plf	ASTM E2126/ASTM E564

* These values are the minimum allowable performance requirements of ASTM C 1186/ISO 8335 standard/AC 318 Criteria)

* Test values are from Certified Test labs.

NOTES:

1) All MEGABOARD installations must be designed and reviewed by a qualified architect or engineer. Refer to installation specifications for additional information on proper use and installation of Megaboard.

2) This technical data sheet replaces all previously published technical data sheets or physical & mechanical property sheets

MegaBoard Packaging Info:

5/8"x4'x8' (12mmx1220mmx2440m): Weight 110 lbs/sheet, 3.45 lb/SF, 38 PCs/pallet or 46 pcs/pallet

MegaBoard Packaging Info:

5/8"x4'x10' (16mmx1220mmx3050m): Weight 135 lbs/sheet, 3.45 lb/SF, 38 PCs/pallet



HANDING AND STORAGE

Care must be taken when placing pallets of Megaboard. Pallets must be placed over a structural support beneath the joists (load-bearing wall or beam) when loading pallets or panels on open framing or completed assemblies. Stack full pallets no more than 4 units high.

Avoid keeping unit in freezing temperatures. Freezing may result in panels sticking together. Allow panels to thaw naturally if frozen, brought the unit to a place where temperature above 32°F (0°C) to allow the ice to melt naturally. Salt or de-icing agents should not be used at any time. Covering the units completely with tarps or similar coverings is an easy way to avoid panels from freezing together.

SUBMITTAL APPROVALS

Project Name:

Contractor:

Date:
