

A FIBERGLASS MESH REINFORCED CONCRETE PANEL WALL, SUBFLOOR AND ROOF SYSTEMS

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
- Dimensional stable, factory sealed and T&G on long edges or square edges

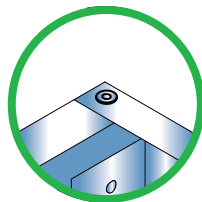
Megaboard are mechanically fastened directly steel or wood framing joists.
Megaboard subfloor floor and roof assemblies are designed to carry gravity and lateral loads.
When megaboard is used as structural subfloor, it shall be covered with vinyl tile, ceramic tiles, hardwood or carpets as finished floor.
Carbide saw blades are used to cut Megaboard with circular saw equipped with dust collection system. Wear safety goggles, gloves and a NIOSH approved dust mask when cutting Megaboard.

Building Code Approval:

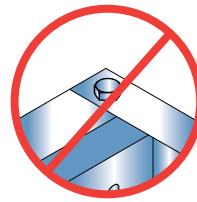
- ICE-ES Certified and listed, non combustible for use in all type of non combustible constructions.
- Over 30 UL/ULC 1 hr, 1.5 hrs and 2 hrs rated assemblies available on line from UL Web.
- State of California Approval (Cal-Fire)
- 2015 International Building Code (IBC) and 2015 International Residential Code (IRC).

Framing System Inspection

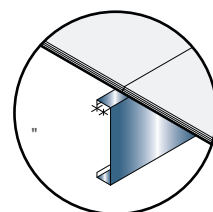
Metal framing must be a minimum of 16 gauge and spaced no greater than 24" (610mm) o.c. when installing a 3/4" thick board. Use low profile fastener on supporting flange, no hex screw on top flange.



Flat head fastener



Hex head fastener



Flange width
min. 2" wide

Steel Joist Framing

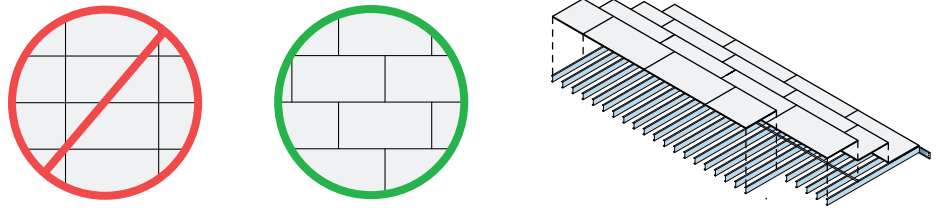
The steel framing must be designed to meet the strength and deflection criteria specified in the contract documents. The panel end must be bearing supporting flange for at least minimum 1" wide. Flange width shall be minimum 2" (50mm).

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.

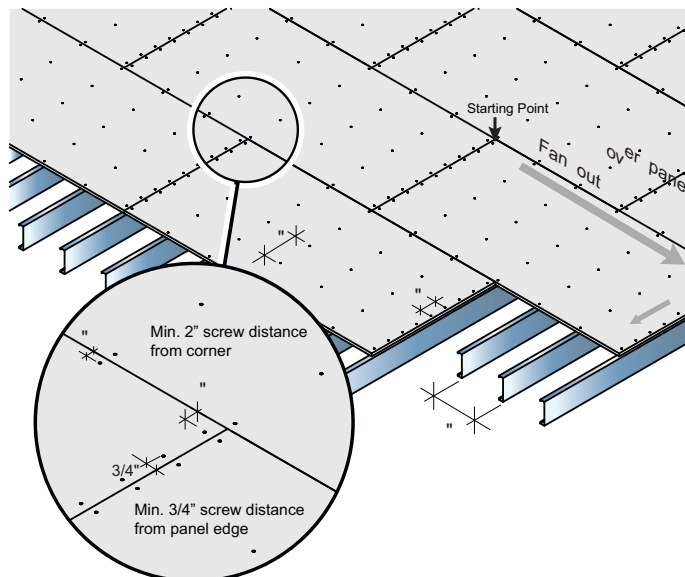
Always install Megaboard panel perpendicular to the joist in running bond pattern so that the end joints fall over the center of the framing members and are staggered.

Panel may be installed with smooth surface against the framing (smooth surface as bottom). Slide panels together so that the tongue of the panel being installed fits into the groove of the installed panel. 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.



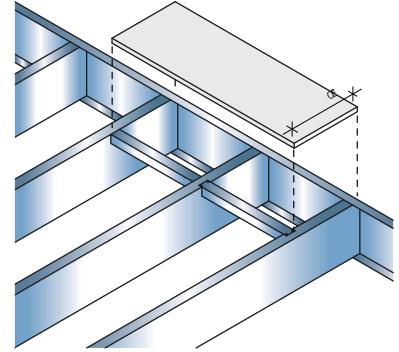
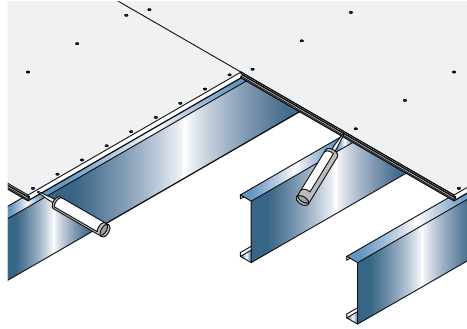
Screw Patterns:

Screws shall fan out over panel, minimum 3/4" from edge minimum 2" screw distance from panel edge.



Adhesive (optional)

Use adhesive at both tongue & groove and square edges if required. Use only Pemco 5100 noncombustible polyurethane based adhesive by ALPHA Systems or equal. Ensure panels are tight with adhesive applied prior to screw attaching the panels to the steel framing.



For all panels less than 24" (610 mm) wide, all edges must be supported by blocking. Blocking must be cold-formed from steel complying with AISI-General, with a minimum 54 mils (0.0538 inch or 1.37 mm) base metal thickness (No.16 gauge) and a minimum G60 galvanized coating.

Recommended Fasteners

3/4" MegaBoard: Steel Joist:

(16 ga)

Muro

Grabber

Simpson Strong Tie

RSM547WFL-GY

CGH8158LG

F12C200FDB

Wood Joist:

Muro:

Grabber

Simpson Strong Tie

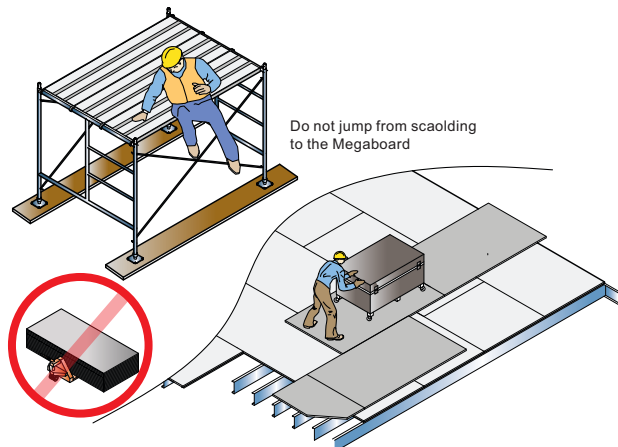
ES8212WMSU-GY

CGHS8238LG

DSVR212R5LB

Jobsite Protection

Place additional plywood or Megaboard panels on high-traffic construction pathways for transporting construction equipment. Place load spreader planks perpendicular to joists for scaffolding.



Published 05/10/2019

TECHNICAL DATA SHEET		
ITEM	TYPICAL VALUES (STANDARD / Tested)	STANDARD / REFERENCE
Bending Strength(Modulus of Rupture) , PSI	1305 PSI per ISO 8335 Test Value Ave: 2523 PSI/17.4 Mpa	ASTM C 1185/ISO 8335
Concentrated load on 3/4" (18 mm) board (Dry and Wet)	0.068"(1.6 mm) deflection@400 lb (1.78 KN) static, 0.033"(0.84 mm) deflection@200 lb (0.89 KN) static	ASTM E 661/AC 318*
Disphragm Test -Caltilever	742 plf (screw Spacing 6" and 12")	ASTM E 455*
Uniform Load on 3/4"(18mm) Board (Dry and Wet)	Average Deflection of 0.021"(dry) and 0.044"(wet) under load of 100 psf, Ultimate load of 330 PSF	ASTM E 330/AC 318*
Fastener Holding (lbf) 3/4"(18 mm) Board	Dry: Lateral/withdrawl(210/20) Test results: (383/294)	ASTM D1761/AC 318*
	Wet: Lateral/withdrawl(160/15) Test results: (375/155)	
Linear Variation With Change In Moisture (from 50% to 90% relative humidity)	1 % (Test result 0.08%)	ASTM C 1185-08 /AC 318*
Saturated Thickness Swelling (24-hour water immersion)	3% (Test result: 0.01%)	ASTM D1037†/AC 318*
Mold Resistance	0/0	ASTM G3273/ASTM G 21
PH Value	10.5-11.5	ISO 8335 Standard*
Density – Oven Dry	≥ 1000 Kg/M ³ /62.4 lbs/ft ³	ASTM C 1186
Moisture Content (at 65% RH)	6% - 12%	ASTM C 1186 Section 10
Frost Resistance	50 cycles, zero damage	ASTM C 1186 Section 12
Formaldehyde Content	Zero	MSDS
Asbestos Content	Zero	MSDS
Rot & Termite Resistance	Resistant to destruction	Resistant / No Food Value
Surface Burning Characteristics	CLASS A (0 Flame / 0 Smoke)	ASTM E84/UL 723/ULC S102
Noncombustibility	Passed ASTM E 136 Section B ASTM E 2652	ASTM E136
UL Listing (over 30 assemblies Listed)	1 hr, 1.5 hrs & 2 hrs UL assembly H509/M524	ASTME 119/UL 723*

* 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. Panels perpendicular to supports. 3/4" minimum for floors, subject to load table and building code limitations. 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: 3/4"x4'x8' (18mmx1220mmx2440m): Weight 125 lbs/sheet, 3.9 lb/SF, 35 PCs/pallet, 350 pcs/truck

MegaBoard edge finishing: T&G or Shiplap on long edges

www.ectek.org Ectek Internal Inc. 1 416 564 4617

MegaBoard ICC-ES Listings: (Sep. 2018)

ESL - 1151 ASTM E 136 Noncombustibility of Building Material
ESL - 1152 ASTM E 119 2 hrs Rated subfloor/Roof Assembly
ESL - 1153 ASTM E 90 Sound Transmission Class (STC) Rating
ESL - 1154 ASTM E 94 Sound Impact Insulation Class (IIC) Rating
ESL - 1155 ASTM E 330 Uniform Static Load
ESL - 1156 ASTM E 661 Impact Load and Concentrated Load
ESL - 1160 ASTM E 455 Framed Floor or Roof Diaphragm-Cantilever

MegaBoard UL subfloor/Roof Assemblies (Mar /2019)

UL LISTED FLOOR / CEILING ASSEMBLIES:

- UL H509 – (1-1/2, 2 hrs) Megaboard directly over C channel Joist.
- [UL L567](#) - (1 Hour) 3/4" MegaBoard directly over Marino/WARE JoistRite
- [UL L580](#) - (1 Hour) 3/4" MegaBoard directly over Marino/WARE JoistRite
- [UL L564](#) - (1 Hour) 3/4" MegaBoard directly over ClarkDietrich TradeReady
- [UL M511](#) - (1 Hour) 3/4" MegaBoard over metal deck over iSpan
- [UL M515](#) - (1 Hour) 3/4" MegaBoard directly over iSpan
- [UL L551](#) - (1 Hour) 3/4" MegaBoard directly over Steel Trusses (Trussteel)
- [UL L565](#) - (1 Hour) 3/4" MegaBoard directly over Steel Trusses (multiple mfrs)
- [UL L597](#) - (1 Hour) 3/4" MegaBoard directly over Steel Trusses (multiple mfrs)
- [UL M507](#) - (1 Hour) 3/4" MegaBoard directly over Steel Trusses (multiple mfrs)
- [UL M513](#) - (1 Hour) 3/4" MegaBoard directly over Steel Trusses (multiple mfrs)

- [UL L556](#) - (1, 1-1/2, 2 Hour) 3/4" MegaBoard directly over Steel C-Joist or Wood
- [UL L501](#) - (1 Hour) 3/4" MegaBoard directly over Wood Joist
- [UL L502](#) - (1 Hour) 3/4" MegaBoard directly over Wood Joist
- [UL L505](#) - (1, 1-1/2, 2 Hour) 3/4" MegaBoard directly over Wood Joist
- [UL L511](#) - (1, 1-1/2, 2 Hour) 3/4" MegaBoard directly over Wood Joist
- [UL M502](#) - (1 Hour) 3/4" MegaBoard directly over Wood TJI (System 8)
- [UL M506](#) - (1 Hour) 3/4" MegaBoard directly over Wood TJI (System 8)
- [UL L521](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses
- [UL L550](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses
- [UL L563](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses
- [UL M501](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses
- [UL M503](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses
- [UL M508](#) - (1 Hour) 3/4" MegaBoard directly over Wood Trusses

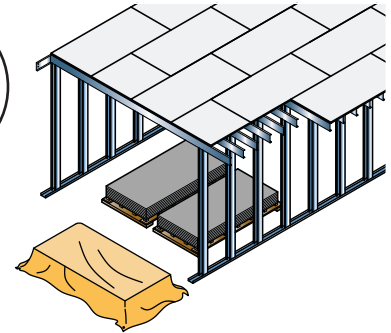
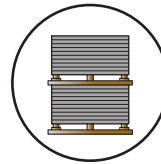
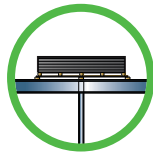
UL Roof Assemblies:

- x [UL P555](#)- (1 Hour) 3/4" MegaBoard roof sheathing over metal trusses (no deck)
- x [UL P523](#)- (1 & 1-1/2 Hour) 3/4" MegaBoard roof sheathing over metal trusses
- x [UL P526](#)- (1 & 1-1/2 Hour) 3/4" MegaBoard roof sheathing over metal trusses
- x [UL P557](#)- (1 Hour) 3/4" MegaBoard roof sheathing over metal trusses

Handling 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.



Floor Finishes:

When Megaboard panels are properly installed and tightened to the steel or wood framing, gypcrete topping maybe applied is achieve better STC rating.

Follow Floor finish manufacturer's recommendations for the application of finished flooring.

Limitation:

When install finished floor like vinyl or ceramic tiles, wood floor and carpet on Megaboard subfloor, a minimum 1/4" thick structural underlayment shall be installed before installing the finished floor.

Submittal Approvals

Project Name :

Contractor :

Date :

www.armoroc.ca Ectek Internal Inc. Tel: 1 416 564 4617