Storage

- extreme® panels should be stored in a cool, dry environment and should remain in the manufacturer’s packaging bearing the brand name and manufacturer’s logo and Listing Number until ready for use.
- extreme® panels should be stored on the manufacturer’s pallets off the ground and away from standing water. To protect edges from damage, do not store extreme® panels vertically.
- To prevent the risk of injury, do not stack extreme® panels higher than 10 feet high.
- Loose storage of extreme® panels is not recommended.
- Cover extreme® panels with a waterproof material when stored outdoors or on site to protect against weather, direct sunlight, surface contamination, and construction traffic. This will make finishing preparation easier.

Precautions + Safe Handling

- Use work practices that minimize the creation of dust.
- Try to avoid the inhalation of dust wherever possible.
- Wear appropriate personal protective equipment.
- Wash hands after use.
- Observe good industrial hygiene practices.
- Ensure that forklift or similar equipment is rated as capable of lifting and moving loads. Forks should extend completely under the entire load.
- Forks should be extended as wide as practical.
- extreme® panels are heavy, awkward loads and pose the risk of severe back injury. Always use proper lifting techniques.
- A minimum of two persons are required when loading or handling extreme® panels.
- Hold extreme® panels with hands spaced apart to prevent excessive bending/flexing.
- When extreme® panel thickness is less than 1/4 in. thick, it is recommended that one carries two panels at the same time.
- Always consult extreme® SDS.

Cutting

- A fine tooth handsaw or power saw is recommended to cut extreme® panels.
- Support both ends of the board when cutting.
- A utility knife can be used to score and snap extreme® panels, thus reducing dust. Always wear approved safety glasses or goggles when cutting extreme® panels.
- Always wear an approved dust mask or respirator when cutting, cleaning up or disposing of extreme® panels.
- Always use a T-square to mark out cuts.
- Always make rounded or irregular cuts with a hole saw, jigsaw or similar tool. Ensure saws are fitted with the correct blade for the job.
- To perform cut-outs in extreme® panels, for plumbing cut-outs, electrical outlets, light switches, etc., carefully measure and mark the location of the opening on the smooth side of the panel before making a cut. If using a jigsaw, drill a starter hole in the corner of the proposed cut-out and start cut from here. Alternatively, cut-outs can be removed using a hole saw, roto-zip, (or equivalent) hand tool.
Wallboard Installation Overview

extreme green® panels are finished in a very similar fashion to drywall. (See ASTM C840)

Material Selection

- To ensure a smooth start to your project, determine the materials, quantities needed and the installation method to best suit the job. extreme green® building products offers a variety of extreme green® panel and finishing products for different applications.
- extreme green® panels are non-combustible, fire, water, mold and termite resistant. They are people safe and contractor friendly and do not off-gas. They are non-carcinogenic and produce no toxic dust when cut.
- extreme green® panels can be used for all walls and ceilings, internally and externally. extreme green® panels are stronger, lighter and more impact resistant than other sheet building materials.
- extreme green® panels are a ‘one board fits all’ building product and is the only panel you need for your building project.
- extreme green® panels are specially designed for added fire-resistance and are more than twice as fire-resistant as drywall.
- extreme green® panels offer 2-hour plus fire-fire-resistance from single layer assemblies, thus saving valuable time and labor during installation and delivering thinner walls with better acoustical performance.
- Always consult local building codes for fire-resistance requirements.

Application Products

Fasteners

- Use a fiber-cement board, wood, or deck screw, with nibs for improved counter-sinking, to attach extreme green® panels to wood framing.
- Use a self-drilling sheathing-to-CFS screw with nibs for improved counter-sinking to attach extreme green® panels to steel framing.
- Wood and steel bugle head gypsum screws not recommended.
- extreme green® panels can also be nailed to wood framing. Screws, however, provide greater fastening power. Poor nailing practices can also lead to damaged edges and corners.
- Use a metal corner bead on all exposed corners to ensure a perfect 90-degree finish and for added protection. Corner bead can also be used to finish all window and door openings.

Application

- Install extreme green® panels either vertically, (long dimension parallel to studs), or horizontally, (long dimension perpendicular to studs). extreme green® panels are available in 8 ft., 9 ft. and 10 ft. Lengths. The 10 ft. panels reduce seams when installing on the vertical axis and ensures all seams fall on a stud, thus improving the structural and thermal (draft) performance of the building envelope.
- When installing extreme green® panels in fire-resistant assemblies, always ensure both vertical and horizontal seams are staggered for maximum fire-resistance.

Finishing

- We recommend using FibaFuse™ tape on all seams.
- Paper tape is not recommended, as it tends to peel when wet and feeds mold and mildew.
- Use extreme green® Water-Resistant Joint Compound, or equivalent, for all interior seam finishing. joint compound is used for embedding tape, finishing coats and filling coats over metal corner bead, trim and fasteners. Use extreme green® Fire Set™ 60 Setting Compound, or equivalent for all fire-resistant wall assemblies.

Decorating Products

extreme green® Quick Drying Primer is a water-resistant multi-purpose latex stain-blocking primer specifically developed for use on extreme green® panels. It provides an excellent first coat finish and a Level 5 finish can be achieved with as little as one additional finish coat. Not intended as a finish coat. It cleans up easily with soap and water and meets today’s stringent VOC regulations.

Tools

- Appropriate fasteners and/or wallboard nails (ASTM C514) for 1/4 in., 3/8 in. and 1/2 in. thick
- Electrical screw gun with appropriate bit
- Panel Adhesive (ASTM C557 for wood framing)
- Adhesives for installing extreme green® panels to steel framing
- Caulk gun
- 4 ft. T-square
- Utility knife and extra blades
- Tape measure
- Carpenter’s pencil
- Painter’s light and extension cord
- Circular saw and Jigsaw
- Tin snips
- 5 in., 8 in. and 10 in. wide joint finishing knives
- Wallboard hammer
- Sanding block, Sandpaper or sanding sponge
- Joint compound pan & mixer
- Approved dust mask & safety glasses/goggles
- Stepladder and/or scaffolding
- Panel lifter
- Pole/power sander with vacuum
Installing extreme green® Interior Wallboard

General Tips

Estimating Quantities
- Measure the height and length of all walls and ceilings to be covered with extreme green® and multiply these values to determine the square footage.
- Now subtract the square footage of all large openings such as windows and doors.
- Repeat for the ceiling. Add these values to calculate the quantity of extreme green® panels that you will need.

Interior Walls + Ceilings
- Use manufacturer’s recommended adhesive on all studs and apply per stud manufacturer’s recommendations.
- Always follow adhesive manufacturer’s recommendations for framing material type, i.e., wood or metal.
- Ensure that extreme green® panels are flush against the surface to which they are being fastened to.
- Studs should be square and level to guarantee crack free installation. Replace warped or crooked framing.

Screws
- Install fasteners straight and perpendicular to panel and framing.
- 1/4 in. and 1/2 in. and 5/8 in. skinned interior non load bearing walls and ceilings, screws should be spaced a maximum of 12 in. o.c.
- 3/4 in. skinned interior non load bearing wall, screws should be spaced a maximum of 8 in. o.c.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Countersink screws just below the surface of the board.
- Do not overdrive screws.
- Min. 1-5/8 in. fasteners to be used when installing 1/4 in., 1/2 in. and 5/8 in. extreme green® panels.
- Min. 2 in. fasteners to be used when installing 3/4 in. extreme green® panels.

Nails
- Drive nails in straight and perpendicular to panel and framing.
- Seat nails so head is countersunk in a shallow dimple formed by final blow of the hammer.
- Nail center of panel first and perimeter last.
- Nails should be spaced a maximum of 8 in. o.c. on walls.
- Min. 1-3/8 in. wallboard nails to be used when installing 1/4 in. and 1/2 in. thick extreme green® panels.
- Min. 2 in. nails to be used when installing 5/8 in. and 3/4 in. thick extreme green® panels.

Adhesive
- Ensure the proper adhesive is selected for the job.
- Framing must be clean and free from oil, dirt, and contamination.
- Adhesive must be applied in accordance with the manufacturer’s instructions.
- Screws or nails must be used in addition to adhesive.

Framing Spacing for Single Layer Installation

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Application</th>
<th>Installation Method</th>
<th>Max Stud Spacing</th>
<th>Min. Screw Length</th>
<th>Min. Nail Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 in. (6.5mm)</td>
<td>Ceiling</td>
<td>Perpendicular to framing</td>
<td>16 in. o.c.</td>
<td>1-5/8 in.</td>
<td>1-3/8 in.</td>
</tr>
<tr>
<td>1/4 in. (6.5mm)</td>
<td>Wall</td>
<td>Parallel or perpendicular to stud</td>
<td>16 in. o.c.</td>
<td>1-5/8 in.</td>
<td>1-3/8 in.</td>
</tr>
<tr>
<td>1/2 in. (12mm)</td>
<td>Ceiling</td>
<td>Perpendicular to framing</td>
<td>24 in. o.c.</td>
<td>1-5/8 in.</td>
<td>1-3/8 in.</td>
</tr>
<tr>
<td>1/2 in. (12mm)</td>
<td>Wall</td>
<td>Parallel or perpendicular to stud</td>
<td>24 in. o.c.</td>
<td>1-5/8 in.</td>
<td>1-3/8 in.</td>
</tr>
<tr>
<td>5/8 in. (16mm)</td>
<td>Ceiling</td>
<td>Perpendicular to framing</td>
<td>24 in. o.c.</td>
<td>1-5/8 in.</td>
<td>2 in.</td>
</tr>
<tr>
<td>5/8 in. (16mm)</td>
<td>Wall</td>
<td>Parallel or perpendicular to stud</td>
<td>24 in. o.c.</td>
<td>1-5/8 in.</td>
<td>2 in.</td>
</tr>
</tbody>
</table>

* Indicates a capacity based on average peak load testing divided by a safety factor of 2.5.
Deflection limits were not the limiting failure mechanism of these loads in the spans listed above.
Values are for panels installed perpendicular to supporting members. Framing members supporting panels must be min. 1-1/2 in. wide.
Installing Ceilings

- Always install ceilings first.
- extreme® panels are heavy and difficult to maneuver. Always have a helper to assist.
- Push extreme® panels firmly up against the framing.
- Fasten extreme® panels to all joists and perimeter framing.
- Ensure extreme® panels are perpendicular to framing.
- Nails should be spaced a maximum of 6 in. o.c.
- Screws should be spaced a maximum of 12 in. o.c.
- Start in the center of the board and work out towards the perimeter.
- T-braces made from a 1 in. x 4 in. attached to a 2 in. x 4 in. upright will support the board during installation.
- Ensure upright is 1/2 in. longer than the floor to ceiling height.

Installing Walls

- extreme® panels can be installed vertically or horizontally.
- If installing horizontally, start at the top and work down.
- If installing vertically, start at one end of the wall and work across.
- Ensure the top of extreme® panels are positioned firmly against the installed ceiling board and fasten to studs.
- Nails should be spaced a maximum of 8 in. o.c.
- Screws should be spaced a maximum of 12 in. o.c.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Start in the center of the board and work out towards the perimeter.
- Cut extreme® panels accurately and do not force it into place.
- To join panels at an inside corner, butt the second panel against the first and fasten the edge of the second to the stud.
- To join panels at an outside corner, lap the end of the second panel over the end of the first. Panels should be flush with each other to create a perfect 90-degree corner.
- Fasten both panel edges to their common stud.
Installing extreme®green® Interior Wallboard

To Steel Framing

- extreme®green® panels can be installed vertically or horizontally.
- If installing horizontally start at the top and work down.
- If installing vertically start at one end of the wall and work across.
- Ensure extreme®green® panels are positioned firmly against the external face of studs and fasten to studs.
- Screws should be spaced a maximum of 8 in. o.c., or in accordance with engineer’s specifications or per local code requirements.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Start in the center of the panel and work out towards the perimeter.
- Stud cavities should be friction-fitted with appropriate code compliant insulation.
- Ensure insulation is fitted tightly and snugly between the studs.
- Cut extreme®green® panels accurately and do not force them into place.
- To join panels at an outside corner, lap the end of the second panel over the end of the first. Panels should be flush with each other to create a perfect 90-degree corner.
- Fasten both panel edges to their common stud.
- If being used in an exterior application, extreme®green® panels must be waterproofed with a suitable building wrap, or approved waterproofing system per code requirements.

Note: If a 2-hour fire rating is required in an external sheathing application, follow fire-resistant assembly guidelines.

Key:

1. 1/2” Square Edge Extremegreen™
2. Min 2.8 lb Mineral Wool
3. 3-5/8” Wide 25 Gauge Steel Studs Spaced Max. 24” o.c.
4. 1/2” Square Edge Extremegreen™

Acoustical performance: STC 52

ASTM E-119
Installing extremegreen® Interior Wallboard
To Wood Framing

- extremegreen® panels can be installed vertically or horizontally.
- If installing horizontally start at the top and work down.
- If installing vertically start at one end of the wall and work across.
- Ensure extremegreen® panels are positioned firmly against the external face of studs and fasten to studs.
- Wood Framing - Framing nails should be spaced a maximum of 6 in. o.c., or in accordance with engineer's specifications or per local code requirements.
- Screws should be spaced a maximum of 8 in. o.c.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Start in the center of the board and work out towards the perimeter.
- Stud cavities should be friction-fitted with appropriate code compliant insulation.
- Ensure insulation is fitted tightly and snugly between the studs.
- Cut extremegreen® panels accurately and do not force them into place.
- To join panels at an outside corner, lap the end of the second panel over the end of the first. Panels should be flush with each other to create a perfect 90-degree corner.
- Fasten both panel edges to their common stud.
- If being used in an exterior application, extremegreen® panels must be waterproofed with a suitable building wrap, or approved waterproofing system per code requirements.

**Note:** If a 2-hour fire rating is required in an external sheathing application, follow fire-resistant assembly guidelines.

---

**Key:**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5/8&quot; Tapered Edge Extremegreen™</td>
</tr>
<tr>
<td>2</td>
<td>Min 2.8 lb Mineral Wool</td>
</tr>
<tr>
<td>3</td>
<td>2 x 6 KD SYP Dimensional Lumber Spaced 16” o.c.</td>
</tr>
<tr>
<td>4</td>
<td>5/8&quot; Tapered Edge Extremegreen™</td>
</tr>
</tbody>
</table>

Acoustical performance: **STC 37+**
Installing extremegreen® Interior Wallboard

Finishing

Corners

- Apply metal corner bead to all exterior corners of walls, soffits, and window returns.
- Hold corner bead firmly against the corner and nail corner bead through small holes every 9 in. on each flange.
- Do not over bend corner bead as this will make it harder to finish with joint compound.
- Ensure nails penetrate framing members.
- Drive nails below the nose of corner bead and tightly into flange so joint compound will cover smoothly and evenly.
- Screw attachment is not recommended.
- Apply metal trim where extremegreen® panels butt windows or concrete block.
- Nail trim every 9 in. through small holes in the flange.
- Ensure nails penetrate framing members.
- Cut or trim corner bead using tin snips. Wear gloves to prevent cutting hands.
- Using a 4 in. joint finishing knife apply setting compound to extremegreen® panels slightly beyond where the edge of the trim will be.
- Thinning the joint compound slightly with water will produce the best results. Do not over thin.
- For outside corners, feather the joint compound 2 in. from the corner on each side.
- For inside corners, feather the joint compound 1-1/2 in. from the corner on each side.
- Use a 6 in. joint finishing knife for outside corners, (4 in. for inside corners), apply a second coat of joint compound. Ensure this coat is kept as smooth as possible.
- Feather out 5 in. to 6 in. from the nose of the trim on each side for outside corners, (1 in. past previous coat for inside corners).
- Allow to dry. Sand gently if needed.
- Use an 8 in. joint finishing knife for outside corners, (4 in. to 6 in. for inside corners), to apply the finishing coat.
- Feather the joint compound 8 in. from the nose for outside corners, (1 in. past the previous coat for inside corners). Allow to dry. Sand and prime.

First Coat - Butt & Recessed Edge Joints

- Thin joint compound slightly for best results.
- Apply an even coat of joint compound over the entire length of the joint with a 5 in. joint finishing knife.
- Center and lightly press fiberglass mesh tape into the wet joint compound.
- Draw 5 in. joint finishing knife firmly along the entire length of joint to embed tape.
- While embedding tape, remove excess joint compound from the edge and apply as a thin coat over the tape.

First Coat - Inside Corners

- Thin joint compound slightly for best results.
- Use a 5 in. joint finishing knife to apply a thin layer of joint compound to both sides of the corner.
- Extend joint compound slightly beyond the area to be covered by fiberglass mesh tape.
- Fold the tape in the middle and press into the corner with fingers and subsequently with joint finishing knife.
- Tightly embed tape as with other joints.

First Coat - Fasteners

- Thin joint compound slightly for best results.
- Apply joint compound with a 5 in. joint finishing knife over each fastener depression.
- Hold the knife almost flush with the board surface and draw the joint compound across the fastener head.
- Raise the knife to a more upright angle and scrape off excess joint compound with a second pass, at 90° to the first pass. Joint compound should be flush with the panel surface.

First Coat - Outside Corners

- Thin joint compound slightly for best results.
- Apply joint compound to one flange of the corner bead using an 8 in. joint finishing knife.
- Work down entire length of the corner bead in one pass.
- Hold the joint finishing knife at 45° angle and smooth joint compound, with one edge of the knife in contact with the metal and the other on the surface of the panel.
- Joint compound should extend onto the panel a minimum of 4 in.
- Repeat on return flange.
- Use same application method for metal trim.

Second Coat - Flat Joints + Fasteners

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Scrape off imperfections with joint finishing knife, being careful not to damage the surface.
- Apply a 7 in. to 8 in. coat of joint compound either side of butt joints using an 8 in. joint finishing knife.
- Feather joint compound 7 in. to 8 in. away from the butt joint to achieve a minimum total width of 14 in.
- Apply a second coat to fasteners in the same manner as the first coat, leaving a very light mound of joint compound over the fasteners.

Second Coat - Inside Corners

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply joint compound on one side of the corner using a 5 in. joint finishing knife for the length of the corner.
- Scrape off any joint compound that laps onto the return side of the corner.
- Feather out beyond the first coat and allow to dry.
- After the first side is dry, apply joint compound to the return side and feather.

Second Coat - Outside Corners + Metal Trim

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply a second coat with 8 in. joint finishing knife, feathering slightly beyond the first coat.

Second Coat - Flat Joints + Fasteners

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Scrape off imperfections with joint finishing knife, being careful not to damage the surface.
- Apply a 7 in. to 8 in. coat of joint compound either side of butt joints using an 8 in. joint finishing knife.
- Feather joint compound 7 in. to 8 in. away from the butt joint to achieve a minimum total width of 14 in.
- Apply a second coat to fasteners in the same manner as the first coat, leaving a very light mound of joint compound over the fasteners.
Installing extremegreen® Interior Wallboard

Finishing

Second Coat - Inside Corners

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply joint compound on one side of the corner using a 5 in. joint finishing knife for the length of the corner.
- Scrape off any joint compound that laps onto the return side of the corner.
- Feather out beyond the first coat and allow to dry.
- After the first side is dry, apply joint compound to the return side and feather.

Second Coat - Outside Corners + Metal Trim

- Allow first coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply a second coat with 8 in. joint finishing knife, feathering slightly beyond the first coat.

Third Coat - Flat Joints + Fasteners

- A third coat is not typically necessary when using extremegreen® panels, however if required, allow second coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Remove any imperfections with joint finishing knife or sandpaper.
- Apply a thin finishing coat with a 10 in. joint finishing knife to flat joints and 5 in. joint finishing knife to fastener heads.
- Feather edges at least 2 in. beyond the second coat.
- Do not sand unless necessary.
- Use dust collector with HEPA filter if power sanding, otherwise wear an approved dust mask and always sand in a well-ventilated area.

Third Coat - Outside Corners + Metal Trim

- Allow second coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply third coat with a 10 in. joint finishing knife, feathering slightly beyond second coat.

Sanding

- Allow third coat to dry overnight.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Lightly sand imperfections in finished joints, corners and over fastener heads.
- Carefully remove sanding dust with a damp sponge.
- Use dust collector with HEPA filter if power sanding, otherwise wear an approved dust mask and always sand in a well-ventilated area.
- Always use a sanding block when hand sanding.

Priming + Painting

- In order to produce the best possible painted finish, proper surface preparation is essential.
- Before priming and painting, ensure that all panel surfaces are dry, clean sound and free of any dust or dirt left over from sanding or general construction site activities, including oil and grease.
- Exposed metal should be primed with a suitable rust-inhibitive primer.
- For best results, apply extremegreen® Quick Drying Primer, or equivalent as the first prime coat to the panel. Formulated as a quick drying first coat that equalizes surface texture and porosity and provides a superior first (prime) coat when applied over extremegreen® panels.
- Application to walls and ceilings: Apply a full coverage coat. extremegreen® Quick Drying Primer should be dry to the touch within a few minutes. Allow to dry properly before applying a second coat.
- Do not prime or paint if air, product mix or surface temperature are below 13°C (55°F) during application and until surface is dry. Brush, roller, airless or conventional spray guns may be used.
- Brush: Use a high-quality, professional paint brush.
- Roller: If applying primer with a roller, ensure that a high-quality roller is used with 3mm (1/8 in.) to 6mm (1/4 in.) nap or smooth and semi-smooth surfaces. For any surfaces, maximum nap length should not exceed 13mm (1/2 in.).
- Always ensure that the roller is wet during application and do not rework the primer once applied.
- Conventional Spray Gun: Use Graco Ultra 595 or 597 airless, or a conventional spray gun with an output at least 2.8 L per minute; pressure at least (2700 psi); and air pressures and flow rates will vary with hose size and length and paint consistency.
- Airless Spray Gun: Use professional equipment that meets or exceeds the following when spraying through 15 m (50) of 6.4 mm (1/4 in.) i.d. airless spray hose: output at least 2.8 L per minute; pressure at least (2700 psi); and accommodates a spray tip of 0.5 mm (0.021 in.) at (2000 psi). Recommended equipment includes Graco Ultra 1500, 1000 or 750 models with a suitable spray gun that will accommodate a RAC IV 519 (0.019) or RAC IV 521 (0.021) tip, a RAC IV Dripless Guard, and a 30-mesh filter.

Note: Adjust atomizing air pressure and fluid flow rate so that full coverage rate can be achieved by overlapping preceding application with one-quarter to one-half the fan width at a distance of 457 mm (18 in.) from the surface. Air pressures and flow rates will vary with hose size and length and paint consistency.

CGC First Coat contains a high level of select pigments and fillers like conventional latex flat paints. When these paints are used in spray equipment previously used to spray PVA sealers which contain high levels of resin, clogging at the spray gun tip may result. The use of clean or new hoses is recommended to avoid this problem when spraying CGC First Coat.
- Allow primer to dry per manufacturer’s recommendations.
- Drying time will vary depending on temperature, humidity and job site conditions.
- Apply high-quality interior paint.
- Always follow manufacturer’s recommendations.
UL 263 / ASTM E119: 1 Hour Fire-Resistant Assembly
To Steel Framing - Non-Load Bearing

- Steel framing to be constructed using CEMCO 362VS125-20 (0.0205 in.), or equivalent to conventional 25 gauge 3-5/8 in. non-structural galvanized steel studs spaced at maximum 24 in. o.c.
- Steel studs to be installed into 0.0205 in. or equivalent to 25 gauge track top and bottom of wall.
- Fasten #8 x 1/2 in. long lath head self-drilling screws top and bottom, where the studs meet the track to temporarily secure studs.
- Install additional blocking at all horizontal board joints using CEMCO 362VS125-20 (0.0205 in.), or equivalent to conventional 25 gauge 3-5/8 in.
- Attach galvanized steel studs with 16 gauge 2 in. x 2 in. galvanized steel angle at each end with two #8 x 1/2 in. long lath head self-drilling screws.
- 1/2 in. extremegreen® panels to be fastened horizontally with long edge perpendicular to studs on the side of the stud with long lath head self-drilling screws using #8 x 1-5/8 in. Simpson Strong-Tie® self drilling Sheathing-to-CFS screws, or equivalent.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- When one side of the wall assembly has been sheathed, remove long lath head self-drilling screws, so there is no bulging at the top, bottom, and corners of the wall.
- Sheath the other side of the wall when long lath head self-drilling screws have been removed and insulation has been properly installed.
- All vertical and horizontal seams must be staggered.
- Screws should be spaced a maximum of 6 in. o.c. on the perimeter and 8 in. o.c. in the field.
- Stud cavities should be friction-fitted with 3 in. x 24 in. x 48 in. Roxul® mineral wool (min. 2.8 lb density), or equivalent.
- Ensure mineral wool is fitted tightly and snugly between the studs.
- Fill all joints, seams and screw heads with extremegreen® Fire-Set™ 60 fire-resistant joint setting compound, or equivalent, then apply FibaFuse™ tape while compound is still wet, then smear and smooth.
- Allow compound to dry, then gently sand until smooth and flush with the surface of the board.
- Apply a generous layer of compound, and feather out approximately 6 in. from each joint.
- Allow compound to dry, then gently sand until smooth.
- Apply a second generous layer of compound and repeat per first application. Do not over-sand.
- Allow extremegreen® Fire-Set™ 60 fire-resistant joint setting compound to dry completely before applying primer.

**Key:**

1. 1/2” Square Edge Extremegreen™
2. Min 2.8 lb Mineral Wool
3. 3-5/8” Wide 25 Gauge Steel Studs Spaced Max. 24” o.c.
4. 1/2” Square Edge Extremegreen™

Acoustical performance: **STC 52**
UL 263 / ASTM E119: 2 Hour Fire-Resistant Assembly
To Steel Framing - Non-Load Bearing

- Steel framing to be constructed using structural 20 gauge 3-5/8 in. galvanized steel studs spaced at maximum 24 in. o.c.
- Steel studs to be installed into structural 20 gauge track top and bottom.
- Fasten #8 x 1/2 in. long lath head self-drilling screws top and bottom, where the studs meet the track.
- Attach a 2 in. wide strip of 1/2 in. extremegreen® panel to all steel studs and steel track.
- Fasten the 2 in. strips of 1/2 in. extremegreen® panel with #10 x 1-5/8 in. Simpson Strong-Tie® CBSDQ214S self-drilling Sheathing-to-CFS screws, or equivalent.
- Ensure 2 in. extremegreen® panel strips are fastened to studs and tracks with screws spaced 2 in. from each end.
- 1/2 in. extremegreen® panels to be fastened vertically with the long edge parallel to studs using #10 x 1-5/8 in. Simpson Strong-Tie® CBSDQ214S self-drilling Sheathing-to-CFS screws, or equivalent.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- When one side of the wall assembly has been sheathed, remove long lath head self-drilling screws, so there is no bulging at the top, bottom, and corners of the wall.
- Sheath the other side of the wall when long lath head self-drilling screws have been removed and insulation has been properly installed.
- All vertical and horizontal seams must be staggered.
- Screws should be spaced a maximum of 6 in. o.c. on the perimeter and 8 in. o.c. in the field.
- Stud cavities should be friction-fitted with 4 in. x 24 in. x 48 in. Roxul® mineral wool (min. 2.8 lb density), or equivalent.
- Ensure mineral wool is fitted tightly and snugly between the studs.
- Fill all joints, seams and screw heads with extremegreen® Fire-Set™ 60 fire-resistant joint setting compound, or equivalent, then apply FibaFuse™ tape, or equivalent, while compound is still wet, then smear and smooth.
- Apply a generous layer of compound and feather out approximately 6 in. from each joint.
- Allow compound to dry, then gently sand until smooth and flush with the surface of the board.
- Apply a second generous layer of compound and repeat per first application. Do not over-sand.
- Allow extremegreen® Fire-Set™ 60 fire-resistant joint setting compound to dry completely before applying primer or paint.

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Acoustical performance: STC 52
UL 263 Design No. UL 069: 2 Hour Fire-Resistant Assembly
To Wood Framing - Load Bearing

- Wood framing to be constructed using nominal 2 in x 6 in. #2 KD Southern Yellow Pine, or equivalent, with single bottom-plates, double top-plates and studs spaced at maximum 16 in. o.c.
- Studs, bottom-plates and top-plates to be fastened using minimum 3 in. 8d common nails.
- 5/8 in. extremegreen® panels to be fastened to framing using 12d 3-1/4 in. Ring Shank nails, or equivalent.
- Nails should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Nails should be spaced a maximum of 6 in. o.c. on the perimeter and 8 in. o.c. in the field.
- All vertical and horizontal seams must be staggered.
- Stud cavities should be friction-fitted with 5-1/2 in. x 15-1/4 in. x 47 in. Roxul® mineral wool (min. 2.8lb density), or equivalent.
- Ensure mineral wool is fitted tightly and snugly between the studs.
- 5/8 in. extremegreen® panels should be fastened vertically with the long edge parallel to studs using 12d 3-1/4 in. Ring Shank nails, or equivalent.
- Fill all joints, seams and screw heads with extremegreen® Fire-Set™ 60 fire-resistant joint setting compound, or equivalent, then apply FibaFuse™ tape, or equivalent, while mud is still wet, then smear and smooth.
- Allow compound to dry, then gently sand until smooth and flush with the surface of the board.
- Apply a generous layer of compound and feather out approximately 6 in. from each joint.
- Allow compound to dry, then gently sand until smooth.
- Apply a second generous layer of compound and repeat per first application. Do not over-sand.
- Allow extremegreen® Fire-Set™ 60 fire-resistant joint setting compound to dry completely before applying primer or paint.

**Key:**

1. 5/8" Tapered Edge Extremegreen™
2. Min 2.8 lb Mineral Wool
3. 2 x 6 KD SYP Dimensional Lumber Spaced 16" o.c.
4. 5/8" Tapered Edge Extremegreen™

**Acoustical performance:** STC 37+
UL 263 / ASTM E119: 2 Hour Fire-Resistant Assembly
To Wood Framing - Non-Load Bearing

- Wood framing to be constructed using nominal 2 in. x 6 in. #2 KD Southern Yellow Pine, or equivalent, with single bottom-plates, double top-plates and studs spaced at maximum 16 in. o.c.
- Studs, bottom-plates and top-plates to be fastened using minimum 3 in. 8d common nails.
- Attach a 2 in wide strip of 1/2 in. extremegreen® panel to all studs and blocking and a 3-1/2 in. strip to double top-plate.
- Fasten the 2 in. strips of 1/2 in. extremegreen® panel with #8 x 2-1/2 in. Simpson Strong-Tie® WSNTLG212S yellow zinc coated wood screws, or equivalent.
- Ensure 2 in. extremegreen® panel strips are tacked to studs with screws or nails and spaced 2 in. from each end.
- 1/2 in. extremegreen® panels to be fastened to strips and framing using #8 x 2-1/2 in. Simpson Strong-Tie® WSNTLG212S yellow zinc coated wood screws, or equivalent.
- Fasteners should be spaced 1/2 in. from all edges and no closer than 2 in. from a corner.
- Screws should be spaced a maximum of 6 in. o.c. on the perimeter and 8 in. o.c. in the field.
- All vertical and horizontal seams must be staggered.
- Stud cavities should be friction-fitted with 5-1/2 in. x 15-1/4 in. x 47 in. Roxul® mineral wool (min. 2.8lb density), or equivalent.
- Ensure mineral wool is fitted tightly and snugly between the studs.
- Ensure there is a 1/2 in. air gap between the mineral wool insulation and rear side of the board.
- 1/2 in. extremegreen® panels should be fastened vertically with the long edge parallel to studs using #8 x 2-1/2 in. Simpson Strong-Tie® WSNTLG212S yellow zinc coated wood screws, or equivalent.
- Fill all joints, seams and screw heads with extremegreen® Fire-Set™ 60 fire-resistant joint setting compound, or equivalent, then apply FibaFuse™ tape, or equivalent, while mud is still wet, then smear and smooth.
- Allow compound to dry, then gently sand until smooth and flush with the surface of the board.
- Apply a generous layer of compound and feather out approximately 6 in. from each joint.
- Allow compound to dry, then gently sand until smooth.
- Apply a second generous layer of compound and repeat per first application. Do not over-sand.
- Allow extremegreen® Fire-Set™ 60 fire-resistant joint setting compound to dry completely before applying primer or paint.

**Acoustical performance:** STC 37+

**Key:**

1. 1/2" Tapered or Square Edge Extremegreen™
2. Min 2.8 lb Mineral Wool
3. 1/2" x 2" Extremegreen™ Furring Strips
4. 2 x 6 KD SYP Dimensional Lumber Spaced 16" o.c.
5. 1/2" Tapered or Square Edge Extremegreen™
UL 263 Design No. G601: 2-1/2 & 2 Hour Fire-Resistant Assembly
To Steel C-Channel Joists - Unrestrained

- **Safety** - Ensure the flooring framing system is properly and securely fastened to the supporting walls, beams, girders or other supports and is properly braced against rollover during the floor panel installation. See the joist/ truss manufacturer installation instructions for additional information.

- **Lifting** - extremegreen® Building Products recommends using the buddy system to lift and carry extremegreen® panels to the installation site. Ensure you have secure footing, bend your knees whilst keeping your head up and back straight and push up with your legs to the lift the panel. Breathe steadily whilst lifting. Lower the load together by bending your knees to lower the panels to the floor.

- **Flooring System** - Nominal 3/4 in. (20mm) thick extremegreen® shiplap edge panels to be installed with long dimension of panels perpendicular to joists with end joints staggered a min of 4 ft. and centered over the joists.

- **Panels** - to be secured to steel joists with min. 2-1/4 in. long self-drilling, self-countersinking, bugle head steel screws and spaced max. 12 in. o.c. in the field and 8 in. o.c. along the end joints and around the perimeter. All screws to be spaced 1/2 in. from each joint edge and no closer than 2 in. from a corner.

- **Structural Steel Members** - should be min. 10 in. deep 16 ga MarinoWare JoistRite, or equivalent steel joists and spaced max. 24 in. o.c.

- **Angle Clips** - 2-1/16 x 4-1/8 x 13/16 x 9-7/8 in., No 16 ga clips used to fasten joists to joist rim track. 4-1/8 in. side of clip placed against outside web of joists and 2-1/16 in. side placed against joist rim track. Each side secured with three #10-3/4 in. TEK screws. 1-1/2 x 4 x 8 in., No. 16 ga clips used to fasten joist bridging with clip located on the web/flange side of the joist. Clip fastened with two #10-3/4 in. TEK screws per leg per clip.

- **Batts and Blankets** - 3-1/2 in. thick glass fiber batt insulation to be draped over the resilient channels or suspension system grid. Any glass fiber batt insulation bearing the UL Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less and a smoke developed index of 50 or less may be used. See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers.

- **Ceiling System** - Nominal 5/8 in. (16mm) thick extremegreen® tapered edge panels to be installed as the ceiling element of the floor system, perpendicular to resilient channels with end joints staggered a minimum of 2 ft. side joints of all panels shall be a minimum of 7 in. From the edge of joists. Ceiling panels to be secured to resilient channels with #6 1-1/4 in. Long coarse thread drywall screws spaced a maximum of 6 in. o.c. in the field with screws located 1 in. from all panel side edges and 3 in. from panel end joints.

- **For 2-hour rating** - As an Alternate, Two layers of nom 5/8 in. thick, 48 in. wide gypsum panels. Base layer installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1-1/4 in. long Type S bugle head screws spaced 12 in. o.c. in both the field and the perimeter, and 1-1/2 in. from side edges of the board. Face layer installed with long dimension perpendicular to resilient channels with side joints offset 24 in. from base layer. Gypsum panels secured to resilient channels with 1-5/8 in. long Type S buglehead screws spaced 8 in. o.c. and 1-1/2 in. from side edges of the board and 3 in. from the end joints. At the butt joint 1-1/2 in. long Type G screws to be installed to attach face layer to base layer. Type G screws spaced 8 in. o.c. and 1-1/2 in. from side edges of the board. Butt joints of face panels staggered a minimum of 12 in. from butt joints of base layer.

- **Resilient Channels** - Min 25 ga galvanized steel resilient channels 1/2 in. deep, spaced max 12 in. o.c. and perpendicular to joists. Channel splices located beneath joists and overlapped 4 ft.

- **Channels** - should be secured to each joist with one 1/2 in. long Type S-12 low profile steel screw. Two channels spaced 6 in. o.c. oriented opposite each extremegreen® ceiling panel end joint. Additional channels shall extend min 6 in. beyond each side edge of board.

- **Setting Compound** - Allow extremegreen® Setting Compound, or equivalent, then apply FibaFuse™ tape, or equivalent, while mud is still wet, then smear and smooth.

- **Building Setting Compound** - Allow extremegreen® Fire-Set 60 Fire-Resistant Setting Compound to dry, then gently sand until smooth and flush with the surface of the board. Allow extremegreen® Fire-Set 60 Fire-Resistant Setting Compound to dry completely before applying primer or paint.
UL 263 Design No. G601: 2-1/2 & 2 Hour Fire-Resistant Assembly
To Steel C-Channel Joists - Unrestrained

2-1/2 Hour Fire-Resistant Assembly

UL 263 Design No. G601

Key:
1 3/4" Shiplap Edge Extremegreen™
2 Min. 10" 16 gauge C-Channel Steel Joist
3 Glass Fiber Batt Insulation or Mineral
4 Open Leg Resilient Channel
5 1/2" Tapered Edge Extremegreen™

2 Hour Fire-Resistant Assembly

UL 263 Design No. G601

Key:
1 3/4" Shiplap Edge Extremegreen™
2 Min. 10" 16 gauge C-Channel Steel Joist
3 Glass Fiber Batt Insulation or Mineral
4 Open Leg Resilient Channel
5 2 Layers of 5/8" Type C Gypsum Board
UL 263 Design No. L601: 1 Hour Fire-Resistant Assembly

To Open Web Wood Trusses - Unrestrained

- **Safety & Lifting** - See instructions in steel assembly.

- **Flooring System** - Nominal 3/4 in. (20mm) thick extreme® shiplap edge panels to be installed with long dimension perpendicular to trusses with end joints staggered a minimum of 4’ on adjacent panel runs and with short dimension of panels centered over the joists. Plan the installation by starting at one corner of the floor framing. Panels should span two or more joists with long dimension perpendicular to the floor framing. All 4’ (short) edges must land on a joist/truss.

- **Adhesive** - Always use a polyurethane or solvent-based subfloor adhesive that confirms to industry standard APA, AFG-01 or ASTM D3498 and follow manufacturer’s recommendations when installing extreme® panels. Apply a generous 1/4 in. bead of subfloor adhesive to the top chord of the joists/trusses and to all shiplap edges prior to installing extreme® panels. This will reduce the possibility of deflection and increase the overall strength and stiffness of the floor system. The adhesive fills minor framing irregularities and provides a tight, even bond. Too much adhesive applied to the shiplap edges will cause squeeze-out. Wipe excess glue off the panels with a rag before the adhesive sets.

- **Apply two beads of adhesive to joists where panel ends meet.**

- **Apply only enough adhesive to lay one or two panels at a time to keep the adhesive from curing or skinning. If a ‘skin’ forms on the glue, remove it and reapply.**

- **Do not install extreme® floor panels at temperatures below 20 degrees or above 100 degrees. Adhesive performance could be affected outside of these temperature ranges. Adhesive should come to room temperature before use. Always follow the adhesive manufacturer’s recommended guidelines.**

- **Immediately after applying the adhesive, lower the first extreme® panel into place, making sure the panel is square on the joists/trusses and that the panel is laid smooth side up.**

- **Always use code-approved fasteners that penetrate a minimum of 1 in. into the framing members.** extreme® panels should ideally be fastened to wood trusses with either 2-1/2 in. long self-countersinking deck screws or similar, (yellow zinc or powder coated), and spaced max. 12 in. o.c. in the field and 8 in. o.c. along the end joints and around the perimeter; or,

- **Extreme® panels should be secured to wood trusses with minimum 2 in. x 0.113 in. Ring Shank nails spaced a maximum of 12 in. o.c. in the field and on the perimeter and 8 in. o.c. along the end joints and around the perimeter.**

- **To ensure superior building performance, the manufacturer recommends the use of galvanized nails to reduce the incidence of rust and corrosion during construction site exposure.**

- **The correct and appropriate choice of fastener is key and specific to the application. The manufacturer recommends the use of screws over nails as superior structural performance is achieved. The use if screws however, is not mandatory and this decision rests with the installer and their engineer.**

- **Ensure that all extreme® panels are pressed firmly and tightly to the top chord of the truss prior to nailing or screwing the panel to the truss. This will help to ensure that the panel is securely fastened to the truss and will help to eliminate any possibility of flex mid span between the trusses. This is particularly important when the truss span is greater than 16 in. o.c.**

- **All screws and nails must be spaced minimum 1/2 in. from each joint edge and no closer than 2 in. from a corner.**

- **Trusses** - Should be parallel chord open web wood trusses, spaced a maximum of 24 in. o.c. and fabricated from nominal 2 in. x 4 in. Lumber, with the lumber oriented vertically or horizontally.

- **Minimum truss depth is 16 in., with truss members secured together with minimum 20 gauge galvanized steel plates.**

- **When extreme® panels have been installed, the manufacturer recommends laying a sheet of plywood or OSB over all high traffic areas to protect the subfloor surface during construction. If excessive weights are being carried on point loads, such as ladders, the manufacturer recommends that a sheet of plywood or OSB is load under any point loads.**

- **Resilient Channels** - Formed from minimum 25 MSG galvanized steel, 1/2 in. deep spaced 12 in. o.c. and installed on the underside of and perpendicular to trusses. Resilient Channels should be secured to the underside of each truss with #6 1-1/4 in. long coarse thread drywall screws. Resilient Channels must be overlapped 4 in. At all splices under the trusses. Additional Resilient Channels must be installed 3 in. From all board end joints and secures to adjacent trusses.

- **Batts and Blankets** - Should be minimum 3-1/2 in. thick, minimum 0.62 pdf glass fiber batt insulation to be draped over the resilient channels or suspension system grid. Any glass fiber batt insulation bearing the UL Classification Marking for Surface Burning Characteristics or Fire Resistance may be used. See Batts and Blankets (BKNV or BXJZ) category in the UL Fire Resistance Directory for names of manufacturers.

- **Ceiling System** - Nominal 1/2 in. (12mm) thick extreme® tapered edge panels to be installed as the ceiling element of the floor system, perpendicular to resilient channels with end joints staggered a minimum of 2 ft. side joints of all panels shall be a minimum of 7 in. From the edge of trusses. Ceiling panels to be secured to resilient channels with #6 1-1/4 in. Long coarse thread drywall screws spaced a maximum of 6 in. o.c. in the field with screws located 1 in. From all panel side edges and 3 in. from panel end joints.

- **As an alternate, one layer of nominal 5/8in, thick Type C gypsum board, installed with long dimension perpendicular to resilient channels with end joints staggered a minimum of 2 ft. Side joints of panel shall be a minimum of 7 in. from edge of trusses. Gypsum board to be secured with 1 in. long No. 6 Type S bugle head steel screws spaced 8 in. o.c. and located a minimum of 1 in. from side joints and 3 in. from panel end joints.**

- **Setting Compound & Finishing** - Follow instructions as detailed in steel assembly.
UL 263 Design No. L601: 1 Hour Fire-Resistant Assembly
To Open Web Wood Trusses - Unrestrained

1 Hour Fire-Resistant Assembly

UL 263 Design No. L601

Key:
1 3/4" Shiplap Edge Extremegreen™
2 2 x 4 Open Web Truss
3 Glass Fiber Batt or Mineral Wool Insulation
4 25 Gauge Open Leg Resilient Channel
5 1/2" Tapered Edge Extremegreen™

1 Hour Fire-Resistant Assembly

UL 263 Design No. L601

Key:
1 3/4" Shiplap Edge Extremegreen™
2 2 x 4 Open Web Truss
3 Glass Fiber Batt or Mineral Wool Insulation
4 25 Gauge Open Leg Resilient Channel
5 1 Layer of 5/8" Type C Gypsum Board
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