

The following installation recommendations relate to the installation of CI Max Polyisocyanurate Foam Sheathing in an exposed condition on the interior of a building. CI Max foam sheathing is designed to be installed in the applications described below without the addition of a thermal barrier.

### GENERAL

1. CI Max foam sheathing is not a structural material. It must not be used as a nailing base for any other building products.
2. CI Max foam sheathing passed NFPA 286 corner burn test for walls only or ceiling only without joint treatment. Boards need to be tightly butted. Taping the seams is acceptable with tapes that have a flame spread index of 25 or less and a smoke developed index of 450 or less.
3. All framed walls insulated with CI Max foam sheathing must be properly braced for lateral loads according to local building codes.
4. Consult local building codes and authorities regarding special applications or details required when using CI Max foam sheathing as an exposed product.
5. The interior and/or exterior of the building should be protected with a suitable vapor retarder and/or air barrier/weather resistive barrier, based on local building codes and climate zone.
6. Repair any boards damaged during installation. Patch holes less than one inch across with seam tape. Patch holes greater than one inch across with matching board material and then seal with flashing tape that have a flame spread of 25 or less and a smoke development of 450 or less.
7. Special training and/or certification is not required. This product is designed for an easy install for both DIYs and professional contractors.
8. Warning: Polyisocyanurate foam is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity and may contribute to flames spreading. Boards must not be in direct contact with hot objects requiring a certain amount of clearance. Refer to equipment/ fixture rating for guidance.
9. Occupancy time after installation: There are no specific requirements related to re-entry or re-occupancy time after installation of the insulation

### MASONRY WALLS

- CI Max foam sheathing may be installed to the interior of masonry walls, including above-grade masonry and tilt-up walls and below-grade basement and crawl space walls.
- Walls should already have any required air/water/vapor barriers or damp-proofing installed prior to installation of CI Max foam sheathing.
- Below-grade applications may require additional materials to effectively manage water, water vapor and/or radon.
- Some below-grade applications may require a two- to three-inch inspection strip along the top of the foundation wall for termite mitigation. Always adhere to local building code or pest control requirements.

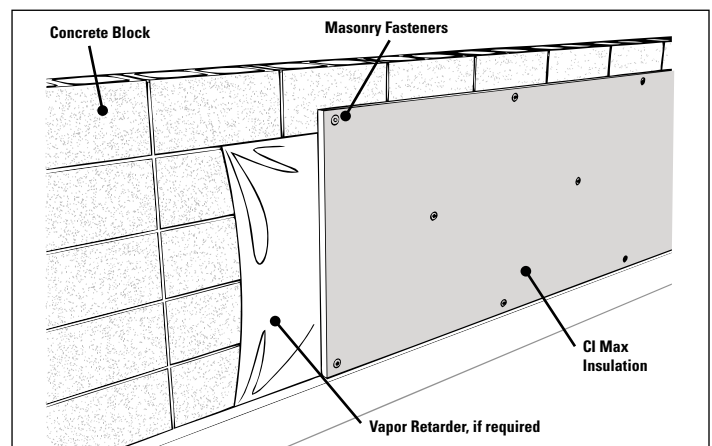


Figure 1. CI Max boards mechanically fastened

### FASTEN CI MAX INSULATION DIRECTLY TO THE WALL

1. Fasten CI Max insulation boards to the interior of the wall using power-driven masonry nails with 1½-inch minimum diameter metal washers or caps, or other suitable masonry fastener. For crawl space wall installation, CI Max insulation should be installed horizontally (as shown in Figure 1). For basement installations, CI Max insulation can be installed either vertically or horizontally.
2. Space fasteners approximately 24 inches on center across the short board dimension and 48 inches on center across the long board dimension.
3. Butt board edges together tightly and carefully fit around penetrations. CI Max foam sheathing may be installed and left exposed without joint treatment. However, tape may be installed to reduce air leakage using aluminum or white foil tape that has a flame spread of 25 or less and a smoke development of 450 or less.

### FASTEN CI MAX INSULATION OVER FURRING STRIPS

1. Install wood or pressure-treated wood furring strips, preferably spaced not more than 24 inches on center. Furring strips may be installed with power-driven masonry nails.
2. Install CI Max board over furring strips. Butt board edges together tightly, align seams over furring strips, and carefully fit around openings and penetrations. CI Max foam sheathing may be installed and left exposed without joint treatment. However, tape may be installed to reduce the air leakage of the wall system using aluminum or white foil tape that must have a flame spread of 25 or less and a smoke developed index of 450 or less.

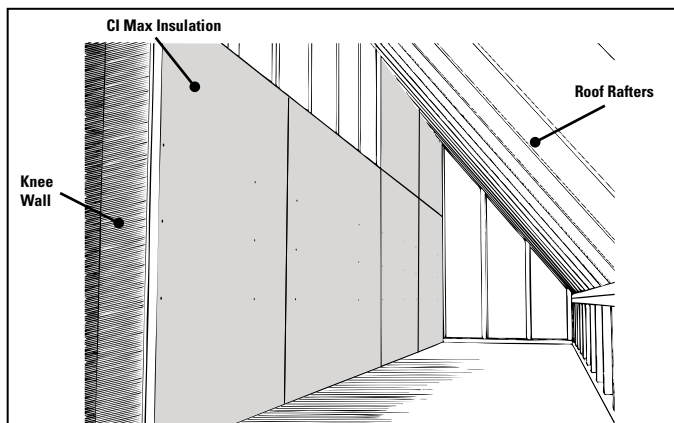
- Fasten insulation boards to the furring strips using screws or roofing nails with a 1½-inch minimum metal washer or top cap. Alternate fasteners may be used, with the type and length as recommended by their manufacturer for securing foam plastic insulating sheathing.

**Table 1**

| Insulation Thickness           | Masonry Screw Length  |
|--------------------------------|-----------------------|
| ½"                             | 1"                    |
| .77"                           | 1½"                   |
| 1"                             | 1½"                   |
| 1½"                            | 2"                    |
| 2"                             | 2½"                   |
| 2½"                            | 3"                    |
| 3"                             | 3½"                   |
| 3½"                            | 4"                    |
| 4"                             | 4½"                   |
| <b>Special Order Thickness</b> | <b>Thickness + ½"</b> |

**FRAMED WALLS**

- Fasten CI Max insulation boards to the interior of the framing using #6 screws or nails with 1½-inch minimum metal washers or caps as described in Table 2. Alternate fasteners may be used, with the type and length as recommended by their manufacturer for securing foam plastic insulating sheathing.
- Space fasteners approximately 16 inches on center around the perimeter and in the field of each board. (16 or 24 inches on center across framing, depending on framing spacing.)
- Use maximum board lengths to minimize number of joints. Locate joints square to framing and center end joints over framing (as shown in Figure 2). Provide additional framing as necessary. It is not necessary to stagger board joints.
- Butt board edges together tightly and carefully fit around openings and penetrations.
- Drive fasteners so the stress plate/washer is tight and flush with the board surface but do not countersink.
- CI Max sheathing may be installed and left exposed without joint treatment. However, tape may be installed to reduce air leakage, using aluminum or white foil tape that must have a flame spread of 25 or less and a smoke developed index of 450 or less.



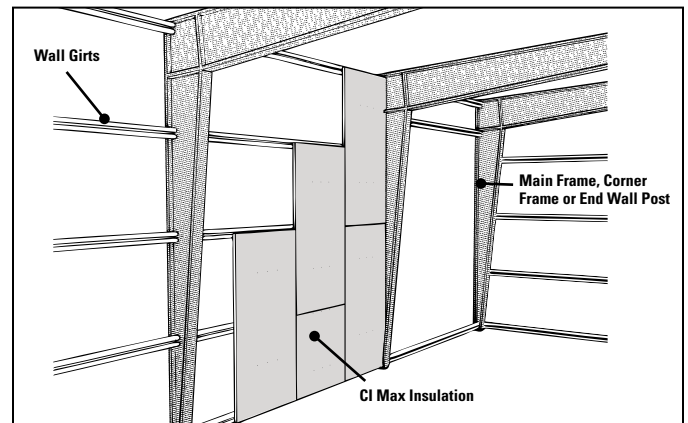
**Figure 2.** Knee wall installation of CI Max boards

**Table 2**

| Insulation Thickness           | Screw Length          |
|--------------------------------|-----------------------|
| ½"                             | 1½"                   |
| .77"                           | 1½"                   |
| 1"                             | 1¾"                   |
| 1½"                            | 2¼"                   |
| 2"                             | 2¾"                   |
| 2½"                            | 3¼"                   |
| 3"                             | 3¾"                   |
| 3½"                            | 4¼"                   |
| 4"                             | 4¾"                   |
| <b>Special Order Thickness</b> | <b>Thickness + ¾"</b> |

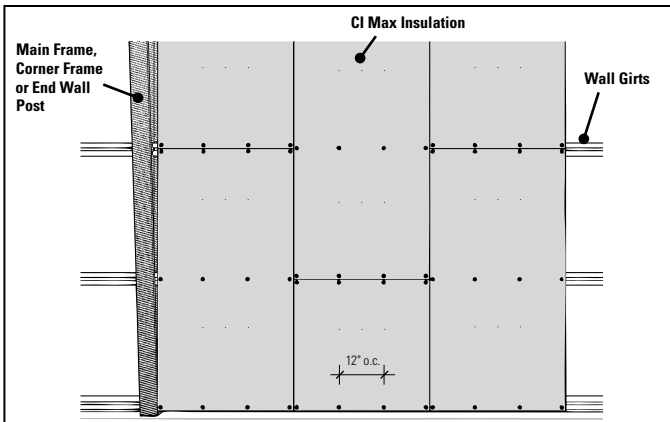
**PRE-ENGINEERED METAL BUILDINGS**

- All exterior wall panels should be installed. To avoid moisture accumulation within the wall, one of the following recommendations should be followed
  - If the joints of CI Max insulation will be sealed to reduce air leakage, any fiber glass metal building insulation blankets should have perforated facings to avoid a double vapor retarder in the wall system.
  - If the joints of CI Max insulation will not be sealed, no change is required to the metal building insulation blankets.
- Install CI Max insulation over the interior face of the wall girts.
- Use maximum board lengths to minimize number of joints. Locate joints square to girts and center end joints over girts. Provide additional framing as necessary. Stagger each course at least one girt. See Figure 3.



**Figure 3.** CI Max boards on interior of pre-engineered metal building

- Butt board edges together tightly and carefully fit around openings and penetrations.
- Fasten the insulation board to the face of the girts using preassembled screw and metal stress plate fasteners as described in Table 2. Alternate fasteners may be used, with the type and length as recommended by their manufacturer for securing foam plastic insulating sheathing.
- Fasteners should be spaced 12 inches, across the face of each girt, as shown in Figure 4. Drive fasteners so the metal stress plate is tight and flush with the board surface but do not countersink.



**Figure 4.** Fastener spacing for CI Max foam sheathing over the interior of pre-engineered metal building girts

### INTERIOR CEILINGS

CI Max foam sheathing may be installed onto interior ceilings, including framed (wood or metal) or masonry constructions.

### MASONRY/CONCRETE CEILINGS

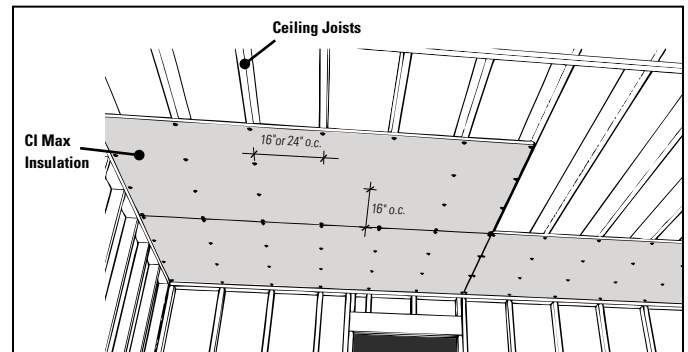
1. Fasten CI Max insulation boards to the interior of the ceiling using power-driven masonry nails with 1½-inch minimum metal washers or caps, or other suitable masonry fastener.
2. Space fasteners approximately 24 inches on center across the short board dimension and 48 inches on center across the long board dimension
3. Butt board edges together tightly and carefully fit around penetrations.

### MASONRY/CONCRETE CEILINGS OVER FURRING STRIPS

1. Install wood or pressure-treated wood furring strips, preferably spaced not more than 24 inches on center. Furring strips may be installed with power-driven masonry nails.
2. Install CI Max board over furring strips. Butt board edges together tightly, align seams over furring strips, and carefully fit around openings and penetrations. CI Max foam sheathing may be installed and left exposed without joint treatment. However, tape may be installed to reduce the air leakage of the wall system using aluminum or white foil tape that must have a flame spread of 25 or less and a smoke developed index of 450 or less.
3. Fasten insulation boards to the furring strips using screws or roofing nails with a 1½-inch minimum metal washer as described in Table 1 above. Alternate fasteners may be used, with the type and length as recommended by their manufacturer for securing foam plastic insulating sheathing.
4. Fasteners should be spaced 24 inches on center across the short board dimension and 48 inches on center across the long board dimension along each furring strip. Drive fasteners so the plate or washer is tight and flush with the board surface but do not countersink.

### FRAMED CEILINGS

1. Fasten CI Max insulation boards to the interior of the ceiling framing using #6 screws or nails with 1½-inch minimum metal washers or caps as described in Table II. Alternate fasteners may be used, with the type and length as recommended by their manufacturer for securing foam plastic insulating sheathing.
2. Space fasteners approximately 16 inches on center around the perimeter and in the field of each board. (16 or 24 inches on center across framing, depending on framing spacing.)
3. Use maximum board lengths to minimize number of joints. Locate joints square to framing and center end joints over framing. Provide additional framing as necessary. It is not necessary to stagger board joints. See Figure 5.
4. Butt board edges together tightly and carefully fit around openings and penetrations.
5. Drive fasteners so the stress plate is tight and flush with the board surface but do not countersink.
6. CI Max sheathing may be installed and left exposed without joint treatment. However, tape may be installed to reduce air leakage using aluminum or white foil tape that must have a flame spread of 25 or less and a smoke developed index of 450 or less.



**Figure 5.** CI Max insulation installed over framed ceiling

### CI Max Insulation for Exposed Interior Use

| ICC (2012)         | Flame Spread*                 | Smoke Development*             |
|--------------------|-------------------------------|--------------------------------|
| IBC Section 2603.5 | 4" thick (102 mm), 25 or less | 4" thick (102 mm), 450 or less |
| IBC Section 2603   |                               |                                |
| IBC Section R316   |                               |                                |

\* Per ASTM E84.

### VICTORY BEAR CLIP INSTALLATION

The Victory Bear accessories are aesthetic and require approved mechanical fastening as described in the Masonry Walls, Framed Walls, Pre-engineered Metal Buildings and Ceiling sections above.

#### Victory Bear Flex-Tite Installation

- 1) Choose the appropriate clip size depending on the insulation thickness
- 2) Do not span framing with interlocking clips.
- 3) Align the Flex-Tite J-Channel horizontally to the desired height and check for level. Nail or staple into place.
- 4) Align the Flex-Tite Female clip vertically at desired spacing and check for plumb. Use a ¾" to 1" nail to fix clip into place.
- 5) Install the CI Max boards in place with approved mechanical fasteners and fastening pattern. Clip the Flex-Tite Male into the Female.

**Victory Bear Quick Clip Installation**

- 1) Choose the appropriate clip size depending on the insulation thickness
- 2) Do not span framing with interlocking clips.
- 3) Align the Victory Bear J-Channel to the desired height and check for level. Nail or staple into place.
- 4) Align the Quick Clip vertically at desired spacing and check for plumb. Use a ¾" to 1" nail to affix nail into place via the nail fin.
- 5) Install the CI Max boards in place with approved mechanical fasteners and fastening pattern. Board should be tucked under the Quick Clip "T" section for a tight seal.

**PERSONAL PROTECTIVE EQUIPMENT****Personal Protective Equipment: Eyes/Face**

Safety glasses with side shields are recommended to keep dust out of the eyes.

**Personal Protective Equipment: Skin**

Leather or cotton gloves should be worn to prevent skin contact and irritation.

**Personal Protective Equipment: Respiratory**

A NIOSH-certified respirator should be used if ventilation is unavailable, or is inadequate for keeping dust levels below the applicable exposure limits.

**Ventilation**

In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting to remove airborne dust. General dilution ventilation should be provided as necessary to keep airborne dust below the applicable exposure limits and guidelines. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

**Personal Protective Equipment: General**

Loose-fitting, long-sleeved clothing should be worn to protect skin from irritation. Work clothing should be washed separately from other clothes, and the washer should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chances of dust being transferred to other clothing.