

TABLE OF CONTENTS

1.0 – APPLICATIONS.....4
 PLACING TERRAFOAM EPS.....5

2.0 - ABOVE-GRADE WALLS - EXTERIOR INSULATION6
 INSTALLATION OVER WOOD SHEATHING.....6
 INSTALLATION OVER FRAMED WALLS WITHOUT WOOD SHEATHING.....6
 INSTALL A WATER-RESISTIVE BARRIER OVER TERRAFOAM EPS7
 INSTALL CLADDING.....8

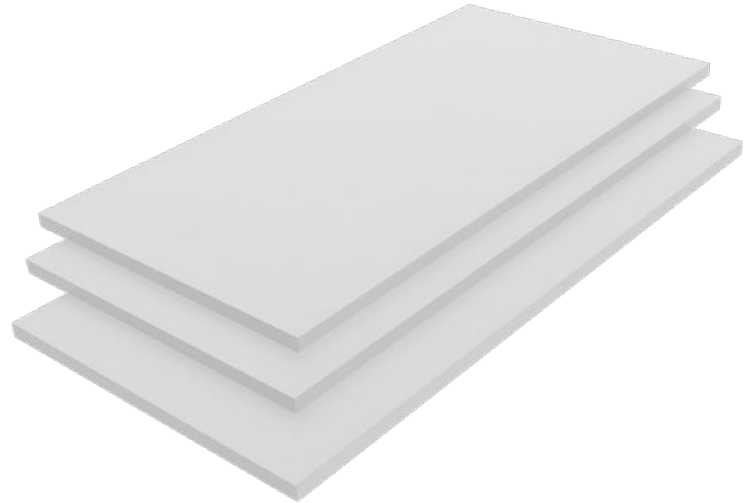
3.0 –INTERIOR INSULATION - CONCRETE/MASONRY WALLS.....9
 INSTALLATION OVER CONCRETE OR MASONRY WALLS9
 SEALING JOINTS9
 STEP 1: PREPARING THE FOUNDATION WALL10
 STEP 2: PLACING TERRAFOAM EPS.....11
 STEP 3: SEALING JOINTS11

4.0 –FASTENER INFORMATION.....12

1.0 – APPLICATIONS

Ideal for use on the exterior side of above-grade, and interior insulation for foundation walls including crawl spaces. Terrafoam EPS offers the following benefits:

- Provides continuous insulation, which reduces thermal breaks.
- Increases the R-value of wall assemblies that cannot be achieved with cavity insulation alone.
- Breathable in low density products.
- Zero loss of R Value over time.



NOTE: When used as exterior insulation, a house wrap is required with Terrafoam EPS. For Terrafoam EPS physical properties see “Terrafoam Material Properties.”

Terrafoam EPS sheathing is recommended to insulate the exterior of above-grade perimeter walls in low density versions, Terrafoam EPS is breathable and can help regulate moisture levels in the wall assembly. However, it is important to note that Terrafoam EPS requires a water-resistive barrier, such as house wrap. A vapor barrier may also be required for the wall assembly, as required by local building codes.

Installation involves 4 basic steps.

1. Fasten Terrafoam EPS against the wall substrate.
2. Measure and cut Terrafoam EPS to suit openings and penetrations.
3. Install a water-resistive barrier which can be placed directly over Terrafoam EPS or between wood sheathing and Terrafoam EPS.
4. Install cladding

NOTE: A water-resistive barrier (wrb) can be installed directly over Terrafoam EPS, per Step 4 above, or between the wood sheathing and Terrafoam EPS. In this case, the wrb would be installed directly over the wood sheathing prior to Step 1.

1.0 – APPLICATIONS CON'T

PLACING TERRAFOAM EPS

Terrafoam EPS sheathing can be fastened directly to the wall substrate, such as wood or steel stud walls, wood sheathing, concrete or masonry walls. Alternatively, Terrafoam EPS can be placed over existing wood sheathing in the case of frame walls in existing buildings.

Measure and cut Terrafoam EPS to suit window/door openings and penetrations. Terrafoam EPS boards can be cut using a utility knife.

Using Terrafoam EPS can add additional thickness to a wall assembly. Jam extensions can be provided by the window or door manufacturer to ensure proper window and door placement.

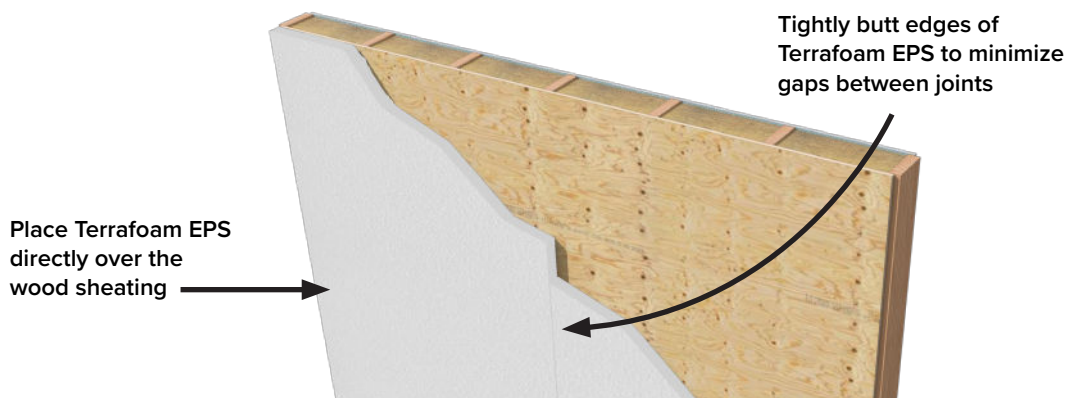
Place Terrafoam EPS against the wall substrate either vertically or horizontally. For tall walls installing vertically is preferable.

2.0 - ABOVE-GRADE WALLS - EXTERIOR INSULATION

INSTALLATION OVER WOOD SHEATHING

Place Terrafoam EPS directly over the wood sheathing. Tightly butt edges of Terrafoam EPS to minimize gaps between joints. For existing framed wall buildings remove the cladding material and house wrap to expose the wood sheathing. Terrafoam EPS can then be placed directly over the wood sheathing, or over newly installed house wrap that provides the water-resistive barrier. Tape or sealing joints between Terrafoam EPS sheets is not required, but gaps should be foam sealed to maintain the continuity of the insulation.

- Foam fill joints and gaps smaller than 1/4 inch.
- Cut and place Terrafoam EPS to fill larger gaps, and foam fill as needed.



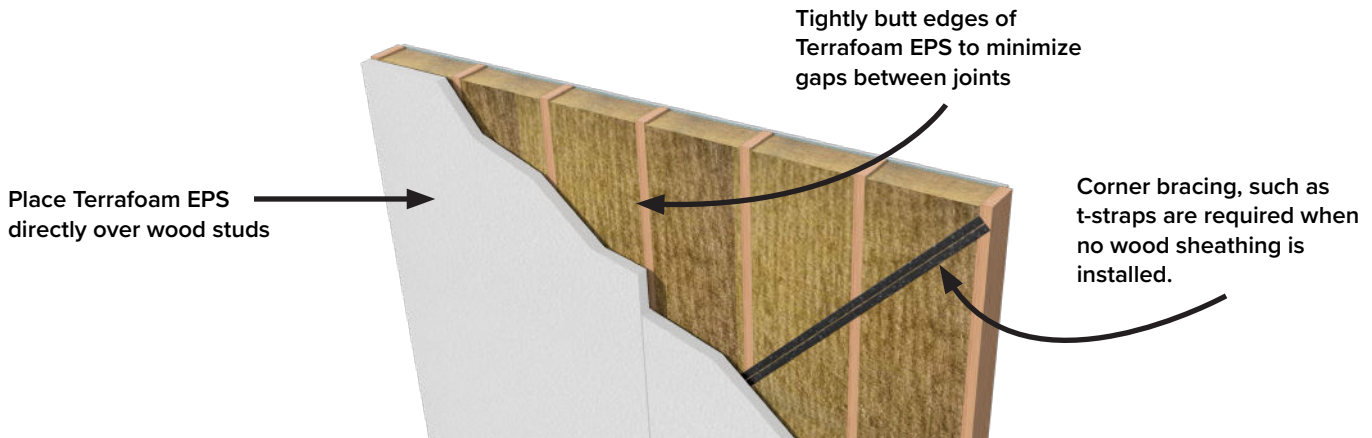
INSTALLATION OVER FRAMED WALLS WITHOUT WOOD SHEATHING

Terrafoam EPS can be installed directly over wall studs. Place Terrafoam EPS directly over wood studs and tightly butt edges of Terrafoam EPS to minimize gaps between joints. Since Terrafoam EPS is not structural sheathing the walls may require bracing, per local building codes.

Some examples of typical bracing include metal T-straps, or 1x4 wood let-in. Sections of wood sheathing at the corners, such as OSB or plywood, can also act as corner bracing. When Terrafoam EPS is placed over wood sheathing used for corner bracing, furring out the remaining framing members along the wall may be necessary to ensure Terrafoam EPS sheathing boards are flush with the Terrafoam EPS sheathing at corners.

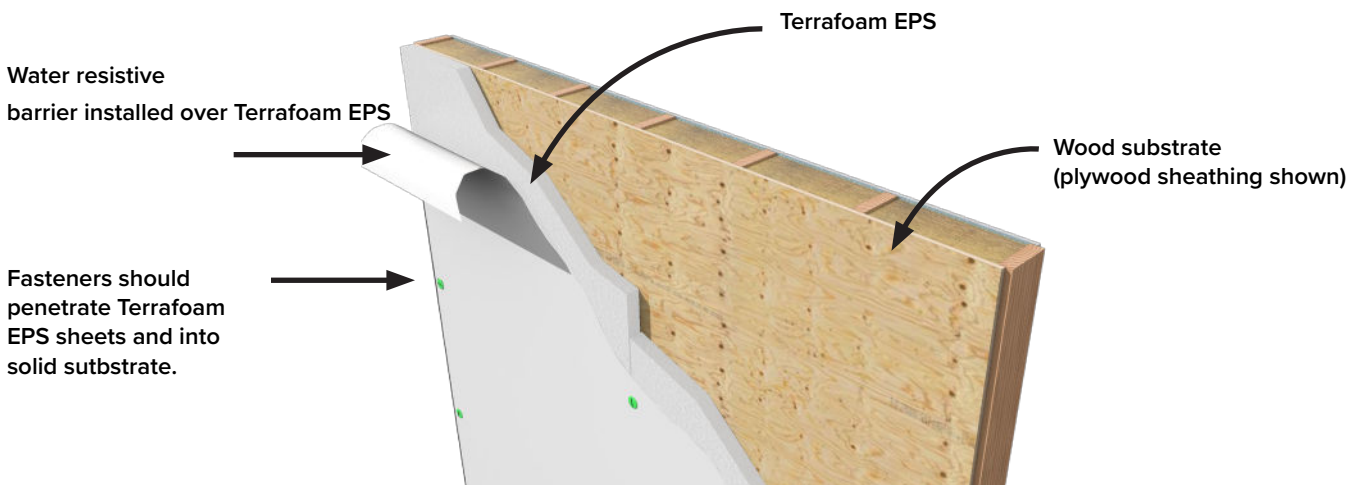
When Terrafoam EPS is installed directly over framed walls without wood sheathing, the water-resistive barrier is installed over Terrafoam.

2.0 - ABOVE-GRADE WALLS - EXTERIOR INSULATION CON'T



INSTALL A WATER-RESISTIVE BARRIER

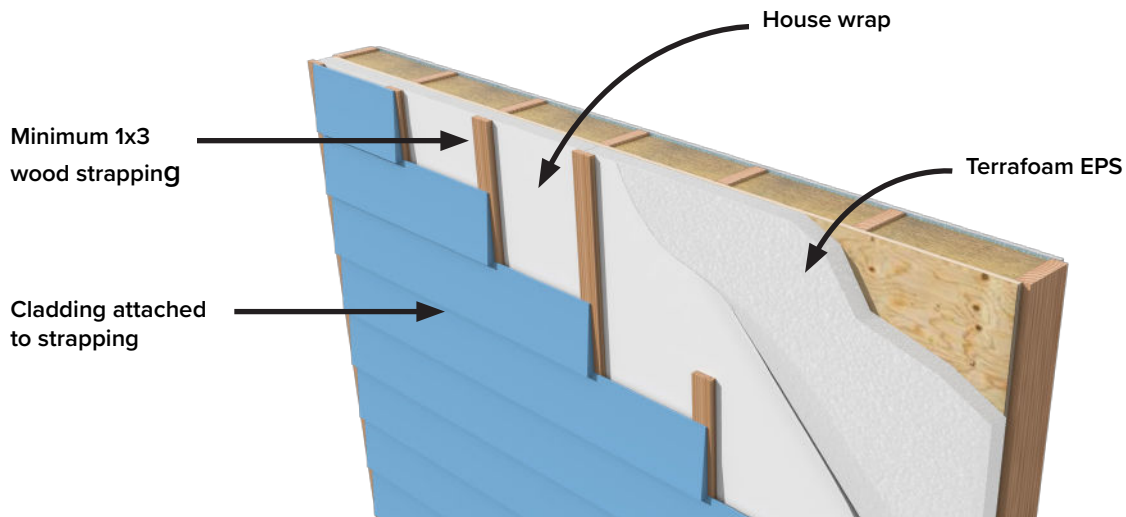
A water-resistive barrier, such as approved house wraps, should be installed either over Terrafoam EPS or between Terrafoam EPS and the wood sheathing. This will provide the air and water resistive barrier required for the building envelope. Fasteners used to install house wrap must be long enough to penetrate through into the underlying substrate. Follow the house wrap manufacturer's recommended installation instructions including sealing penetrations and flashing details.



2.0 - ABOVE-GRADE WALLS - EXTERIOR INSULATION CON'T

INSTALL CLADDING

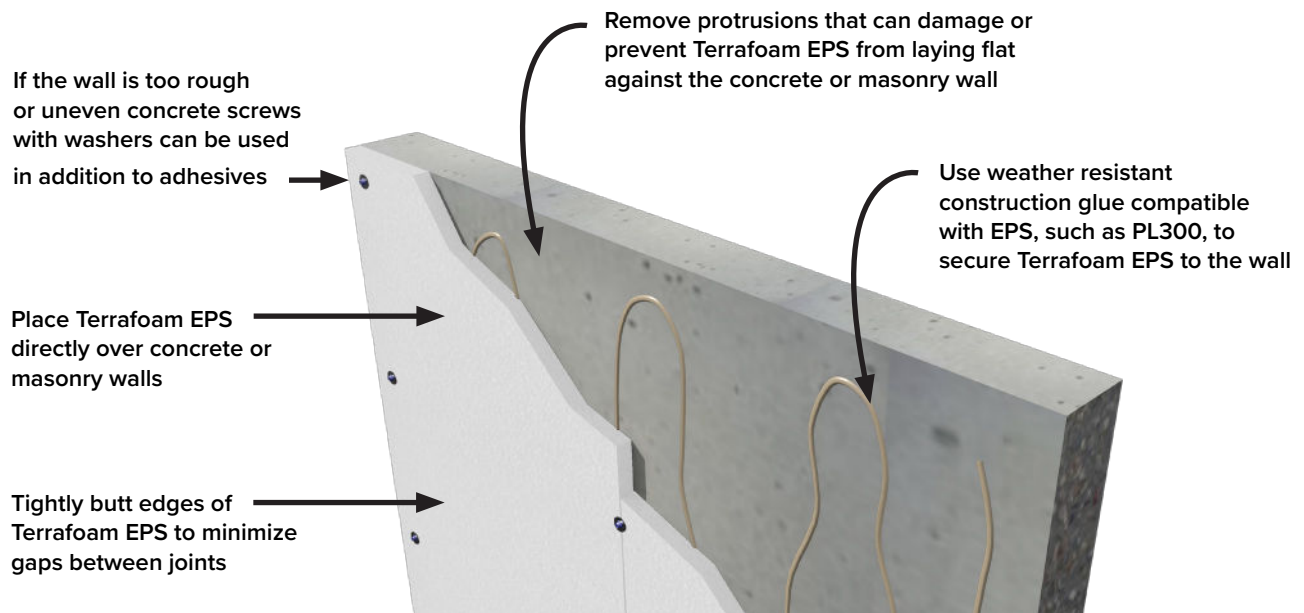
Once house wrap and Terrafoam EPS is installed, cladding or wood strapping (if required) can be installed with fasteners. A minimum 1x3 strapping is recommended. Cladding products must be installed according to the Manufacturers recommendations and local Building Code requirements. Fasteners must be sized to extend through the cladding material, the thickness of the Terrafoam EPS and penetrate the structure or blocking by at least $\frac{3}{4}$ ".



3.0 - INTERIOR INSULATION - CONCRETE/MASONRY WALLS

INSTALLATION OVER CONCRETE OR MASONRY WALLS

Place Terrafoam EPS directly over concrete or masonry walls. Tightly butt edges of Terrafoam EPS to minimize gaps between joints. Remove protrusions that can damage or prevent Terrafoam EPS from laying flat against the concrete or masonry wall. Use weather resistant construction glue compatible with EPS, such as PL300, to secure Terrafoam EPS to the wall. If the wall is too rough or uneven, concrete screws with washers can be used in addition to adhesives.



SEALING JOINTS

Tape sealing joints between Terrafoam EPS sheets is not required, but gaps should be foam sealed to maintain the continuity of the insulation.

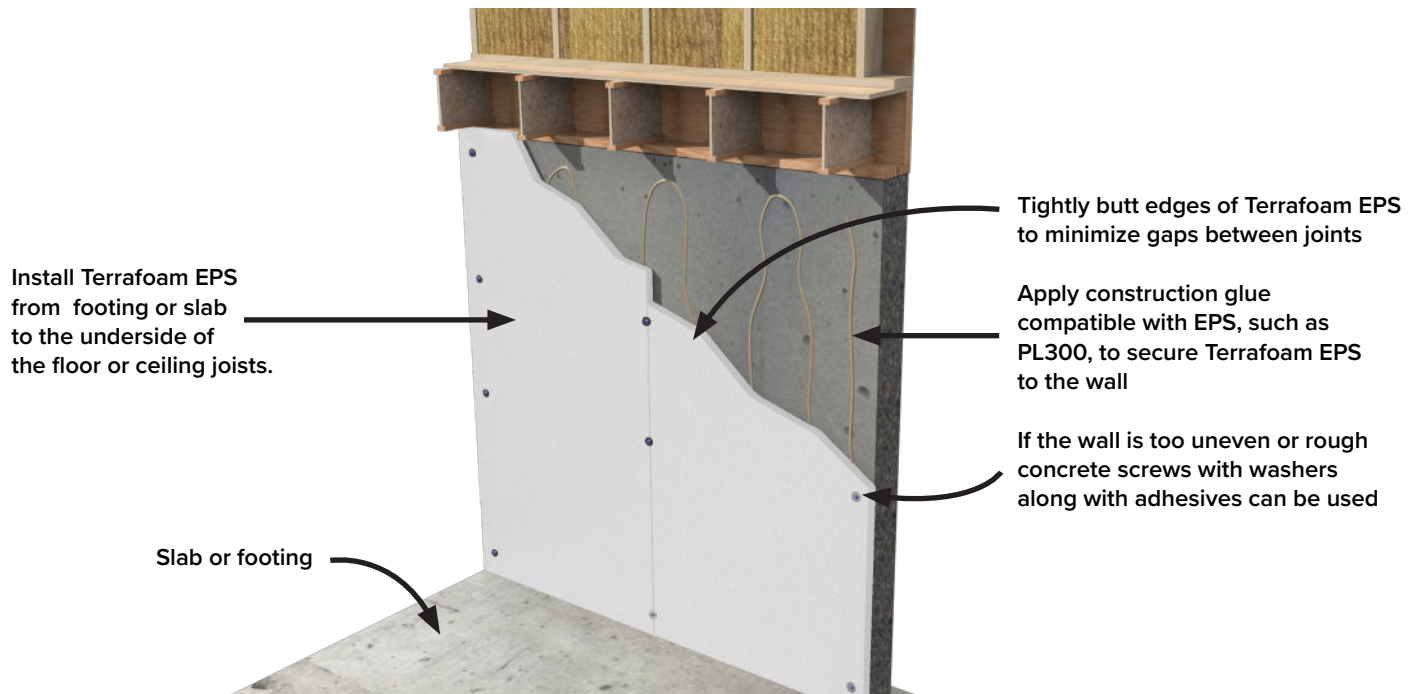
- Foam fill joints and gaps smaller than 1/4 inch.
- Cut and place Terrafoam EPS to fill larger gaps, and foam fill as needed.

3.0 - INTERIOR INSULATION - CONCRETE/MASONRY WALLS CON'T

Terrafoam EPS can be used to insulate the interior of foundation walls including crawl spaces. Installing Terrafoam EPS below-grade involves 3 basic steps.

1. Prep the interior side of the foundation wall.
2. Place Terrafoam EPS against the interior side of the foundation wall.
3. Seal and tape all joints.

INSTALLATION GUIDE



STEP 1: PREPARING THE FOUNDATION WALL

Prior to placing Terrafoam EPS, prepare the foundation to accept the Terrafoam EPS sheathing.

- Make sure the foundation wall is dry, and free of dirt and debris.
- Remove any protrusions that could damage the Terrafoam EPS sheets or prevent Terrafoam EPS from being placed flush against the foundation wall.

3.0 - INTERIOR INSULATION - CONCRETE/MASONRY WALLS CON'T

STEP 2: PLACING TERRAFOAM EPS

Terrafoam EPS sheets can be attached directly to the concrete or masonry foundation wall. Place the sheets with the longest edge either vertically or horizontally. For tall walls installing vertically is preferable.

- Tightly butt edges of Terrafoam EPS to minimize gaps between joints.
- Place Terrafoam EPS so that the bottom edge of Terrafoam EPS is sitting on top of the basement slab or footing for crawl spaces.
- Use construction glue compatible with expanded polystyrene, such as PL 300, to secure Terrafoam EPS to the wall. If the wall is too rough or uneven concrete screws with Terrafoam EPS washers can be used along with adhesives.
- Measure and cut Terrafoam EPS to suit any openings or penetrations.
- Continue placing Terrafoam EPS from the top of the slab, or footing, to the underside of the floor or ceiling joists.

STEP 3: SEALING JOINTS

Joints between Terrafoam EPS should be foam filled to maintain the continuity of the insulation.

- Foam fill joints and gaps smaller than 1/4 inch.
- Cut and place Terrafoam EPS to fill larger gaps, and foam fill as needed.
- Seal around window/door and penetrations with sheathing or flashing tape.
- Foam fill, seal or tape, as appropriate to fill gaps, and service penetrations.
- Ensure proper air space is provided around heated fittings such as recessed lights, can light covers, and heater flues.

4.0 - FASTENER INFORMATION

This section provides fastening guidelines for cladding or wood strapping over Terrafoam EPS, including fastening Terrafoam EPS to wall assemblies. Terrafoam EPS is not structural so a minimal number of fasteners are required to tack Terrafoam EPS sheets in place – subsequent attachment of cladding, strapping (if required) will fully secure sheets.

House Wrap or cladding products must be installed according to the Manufacturers recommendations and local Building Code requirements. Fasteners must be sized to extend through the cladding material, the thickness of the Terrafoam EPS and penetrate the structure or blocking by at least $\frac{3}{4}$ ".

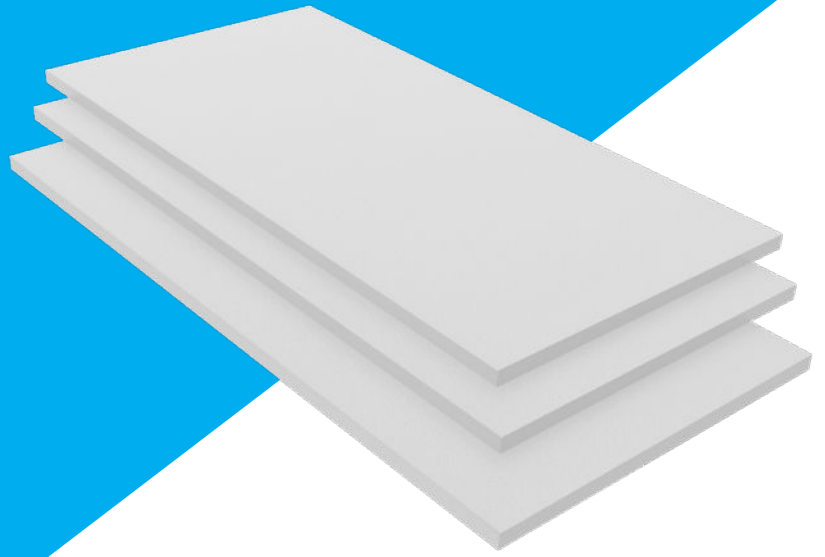
Wood strapping (if required) should be attached over the WRB and Terrafoam EPS with 1x3 strapping (recommended) with fasteners sized to penetrate through the strapping, Terrafoam EPS and penetrate the structure or blocking by at least $\frac{3}{4}$ ".

Typical Fastener Types

Typical fastener types include, but not limited to:

- Plastic cap nails,
- roofing nails with at least $\frac{1}{2}$ " diameter washers,
- cap staples,
- or wood screws with metal roof washers.

When fastening to metal studs use screws with at least 1" diameter metal washers.



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