

INSTALLATION GUIDE EPS FOAM

EPS Foam: Multipurpose rigid foam boards can be used for a variety of applications including insulation in walls, roofs, and foundations, for retrofits or new construction.

- **Performance:** R3.6 to 4.2 per inch.
- **Method and form:** Comes in panels 4x8 and other dimensions, with variable thicknesses.
- **Notes:** EPS is the only commercially available foam insulation panel that is at all vapour permeable, which can be an advantage in some applications, as can those that are vapour impermeable.

The common blowing agent for EPS is pentane gas, which is ozone safe but has a global warming potential (GWP) 7 times greater than carbon dioxide. This is significantly lower than other types of foam, so we recommend it as the preferred choice of foam whenever possible.

Excellent for below grade applications, both inside and out. EPS is unharmed by moisture, and allows a certain amount of moisture to pass through it.

BASIC APPLICATION OF EPS BOARDS TO A WALL

Foam wall sheathing is usually attached to studs or OSB sheathing with cap nails. Foam up to 3/4 in. thick can be attached with a pneumatic cap stapler like the Bostitch SB150SLBC.

If the wall will include vertical strapping to create a rainscreen, the foam sheathing can be tacked in place with just a few fasteners, as the strapping

will be screwed into the studs through the foam. For more information on installation techniques, see How to Install Rigid Foam Sheathing.

Foam can be attached to a concrete wall with specialty fasteners like Styro Tapit fasteners or adhesives like PL300 Foamboard Adhesive or Handi-Stick Polystyrene Construction Adhesive.

APPLICATION OF EPS BOARDS TO A CONCRETE WALL

EPS rigid board insulation can be installed by a certified installer or a homeowner that has fully read and understands these instructions.

The instructions herein provide general guidance only and do not cover all aspects related to the installation or use of insulation in a building.

Before starting, ensure that the installation complies with the applicable building code requirements. The building code may have requirements for thickness and R-value of the insulation, vapor retarders, interior thermal barriers and finish materials, exterior weather resistive barriers and claddings, ventilation, insulation in adjacent areas, caulking and sealing, and other items.

As the installer, you are solely responsible for the proper installation of all materials, following product label instructions and for using proper safety precautions during installation to avoid injury. The manufacturer is not responsible for building design and accepts no responsibility for the performance of its products resulting from improper building design, construction faults, or defective installation workmanship.

Tools Needed

- Tape Measure
- Utility Knife
- Straightedge
- Cordless Drill
- Saw
- Hammer
- Nail Gun
- Caulk Gun

Protective Gear

- Work Gloves
- Loose-fitting, long-sleeved shirt
- OSHA-approved safety glasses
- Disposable dust respirator (NIOSH or MSHA approved)
- No requirement for re-entry or re-occupancy times.

APPLICATION OF EPS BOARDS TO A CONCRETE WALL

1. Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.

2. Cut the boards to match the wall height.

Note: Cut the boards as needed to fit tightly around pipes, ducts, vents, openings or similar objects.

Note: EPS Boards must not be installed in contact with hot objects (e.g. chimneys, furnace and water flues, lighting fixtures, etc.). Maintain gaps in accordance with the applicable building code.

3. Install lumber blocking as required by the applicable building code requirements.

4. Using foam board compatible adhesive, apply the adhesive to the wall, or directly to the board, in vertical beads approximately 12" apart.

5. Press/hold the board firmly to the wall.

6. Position wood battens at 16" or 24" on center spacing (vertically or horizontally) over the boards and attach using Foam-Control concrete nails 24" on center through the battens and insulation into the concrete wall.

Note: Please refer to NTA Engineering Evaluation Report AFM032712-20 for allowable loads on battens.

Note: Wood battens must be pressure treated when used below grade or when in direct contact with concrete.

7. Air seal all electrical, water, or gas penetration and any venting that pass to the outside with silicone caulk, acrylic latex caulk, or expanding spray foam.

8. Interior Application:

a. Install vapor retarder, as required by the applicable building code requirements.

b. Install a code compliant thermal barrier, such as 1/2" gypsum board, to the battens.

Exterior Application (above grade):

- a. Install a code compliant weather resistive barrier.
- b. Install a code compliant weather resistive exterior cladding.

Exterior Application (below grade):

Waterproof or dampproof walls with foam board compatible products prior to installation of EPS foam.

APPLICATION OF EPS BOARDS TO A WOOD FRAMED WALL

1 . Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.

Note: The wall to receive the board must be braced or sheathed in compliance with the applicable building code.

2. Cut the boards to match the wall height.

Note: Cut the boards as needed to fit tightly around pipes, ducts, vents, openings or similar objects.

3. Install lumber blocking as required by the applicable building code requirements.

4. Using foam board compatible adhesive, apply adhesive to the wood studs.

5. Press/hold the board firmly to the wall.

Note: All vertical edges of the EPS must be supported by the wood studs.

6. Position wood battens aligned with the location of the underlying wood studs and attach using Foam-Control wood screws 24" on center through the battens and insulation into the wood studs.

Note: Please refer to NTA Engineering Evaluation Report AFM032712-20 for allowable loads on battens.

Note: Foam-Control EPS Boards must not be installed in contact with hot objects (e.g. chimneys, furnace and water flues, lighting fixtures, etc.). Maintain gaps in accordance with the applicable building code.

7. Air seal all electrical, water, or gas penetration and any venting that pass to the outside with silicone caulk, acrylic latex caulk, or expanding spray foam.

8. Interior Application:

a. Install vapor retarder, as required by the applicable building code requirements.

b. Install a code compliant thermal barrier, such as 1/2" gypsum board, to the battens.

Exterior Application (above grade):

- a. Install a code compliant weather resistive barrier.
- b. Install a code compliant weather resistive exterior cladding.

APPLICATION OF EPS FOAM BOARDS TO INTERIOR OF A CONCRETE CRAWL SPACE WALL

1. Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.

2. Cut the boards to match the wall height.

Note: Cut the boards as needed to fit tightly around pipes, ducts, vents, openings or similar objects.

3. Using foam board compatible adhesive, apply the adhesive to the wall, or directly to the board, in vertical beads approximately 12” apart.

4. Press/hold the board firmly to the wall.

5. Attach using Foam concrete screws through the insulation into the concrete wall at the 4 corners and center of each board.

Note: EPS Boards must not be installed in contact with hot objects (e.g. chimneys, furnace and water flues, lighting fixtures, etc.). Maintain gaps in accordance with the applicable building code.

6. Air seal all electrical, water, or gas penetration and any venting that pass to the outside with silicone caulk, acrylic latex caulk, or expanding spray foam.

7. Install vapor retarder, ignition barrier, or thermal barrier (gypsum board), as required by the applicable building code requirements.

Note: In an unvented crawl space, the edges of the vapor retarder covering the floor space shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the EPS Foam.

Note: In areas of “very heavy” termite infestation, the clearance between EPS boards installed above grade and exposed earth shall be at least 6 inches (152 mm) .

Notice: EPS Foam insulation should be considered combustible and should not be exposed to sources of ignition. The product will ignite when exposed to open flame or welding torches.