POWERWOOL™

MINERAL WOOL INSULATION

Installation Guidelines

for Rigiboard™ 80, Rigiboard™ One,
Rigiboard™ Pro, and Rigiboard™ Pro Max

PowerWool™ RIGIBOARD™: Installation Guidelines

General Product Description

PowerWool™ Rigiboard™ is a non-structural rigid mineral wool insulation sheathing board designed to be installed as a continuous exterior insulation to help increase the effective thermal value of the wall and eliminate thermal bridging. The 2'x4' panels are recommended for application on above grade walls and foundation walls. It is intended for exterior use only.

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Basic Wall Assembly Diagram
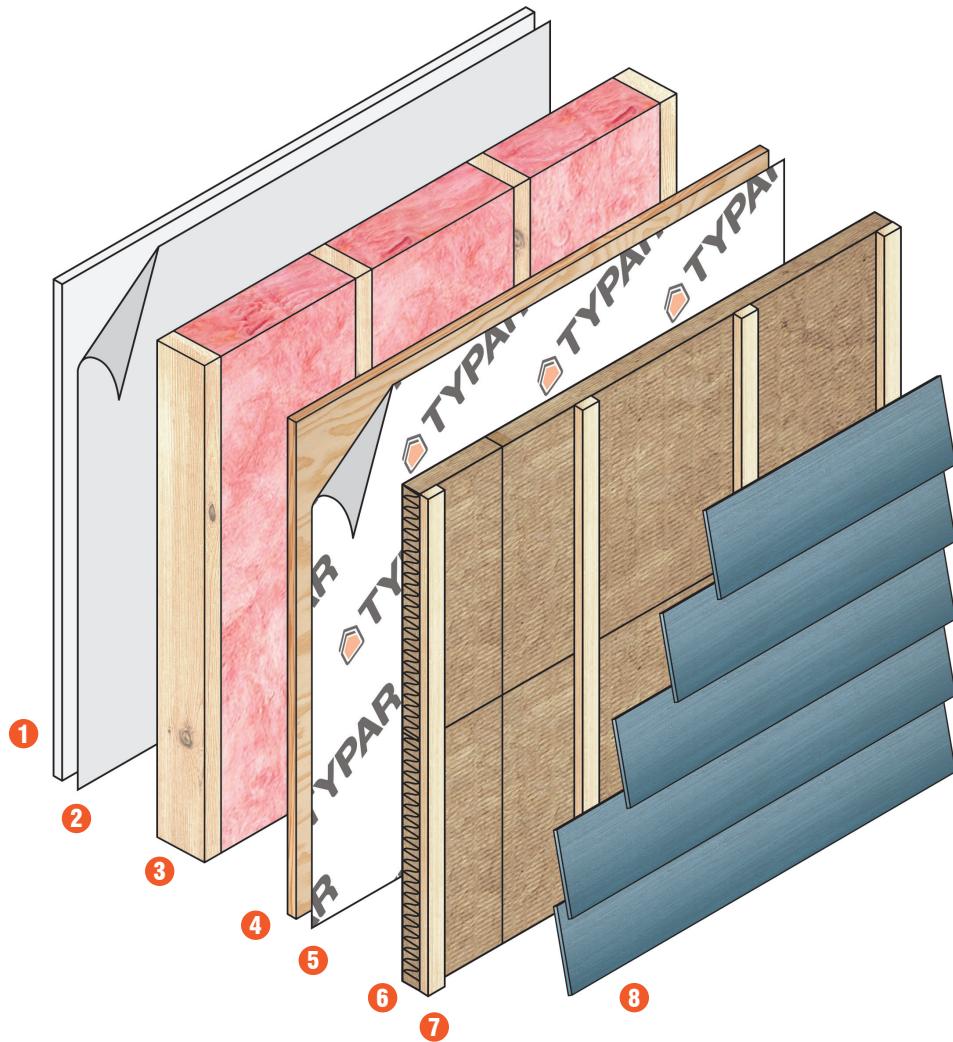
Interior to exterior

① Gypsum wallboard

② Polyethylene (may be optional)

③ 2x4 or 2x6 stud wall with insulation

④ Sheathing (plywood or OSB)

⑤ Sheathing membrane (eg Typar®)

⑥ PowerWool™ Rigiboard™

⑦ Strapping

⑧ Cladding

Using Cladding Type:

Fibre Cement Siding
Wood & Composite Siding
Fibre Cement & Wood Shingles
Vinyl Cladding

Use Guidelines

Job Safety

Refer to The Occupational Health and Safety (OHS) Regulation or the Construction Safety Association (Canada) for safety precautions on a jobsite. Personal Protective Equipment is required at all times while installing the membrane.

There are some health risks associated with the use of PowerWool™ Rigiboard™ and its recommended components. Refer to the Material Safety Data Sheet for more information.

Recommended Tools

- ▶ Hammer, automated nailing gun, drill
- ▶ Proprietary insulation fasteners
- ▶ Utility knife for cutting the insulation
- ▶ Caulking gun
- ▶ Chalk line

Recommended Fasteners for the RigiBoard Panels

There are various fastener types available for the fastening of PowerWool™ Rigiboard™. The fastener selections need to account for the substrate and cladding used, the various loads it is subjected to, the exposure, and the location of the building.

Fastener length must be sufficient to accommodate the insulation thickness, and proper penetration into the framing. The recommended minimum fastener embedment for the fastener into the framing is 1.5" (38mm).

Recommended Insulation Fastener Types:

- ▶ Wood screws
- ▶ Concrete screws and nails
- ▶ Metal fasteners
- ▶ Insulation cap nails
- ▶ Proprietary clips
- ▶ Z-girts

- ▶ Mechanically fastened pins
- ▶ Washer and appropriate fasteners - When using a washer with its appropriate fastener to mechanically fasten the insulation panel, a minimum washer size of 1" (25mm) in diameter is recommended.

Refer to the siding manufacturer, relevant industry association, and applicable building code in your area for the recommended fastener and fastening requirements of the cladding.

Fastener selection and attachment should typically be reviewed by a design professional and should succeed any guideline recommendations. Powerhouse Building Solutions Inc. will not bear any responsibility for any fastening failures with PowerWool™ Rigiboard™. It is the end user responsibility to determine the proper fastening design for its associated load.

Installing RigiBoard One

Attaching the Insulation Panels to Sheathing

PowerWool™ Rigiboard™ should be mechanically fastened outboard of the sheathing and weather resistive barrier/housewrap. Each panel should tightly abutt the adjacent board to provide continuity in the system. *(Refer to Figure 1. and Figure 2. below)*

Top view:

2x4 or 2x6 stud wall with insulation

sheathing

sheathing membrane

PowerWool™ RigiBoard™ panel

strapping

fastening aligned with stud

(Figure 1.)

(Figure 2.)
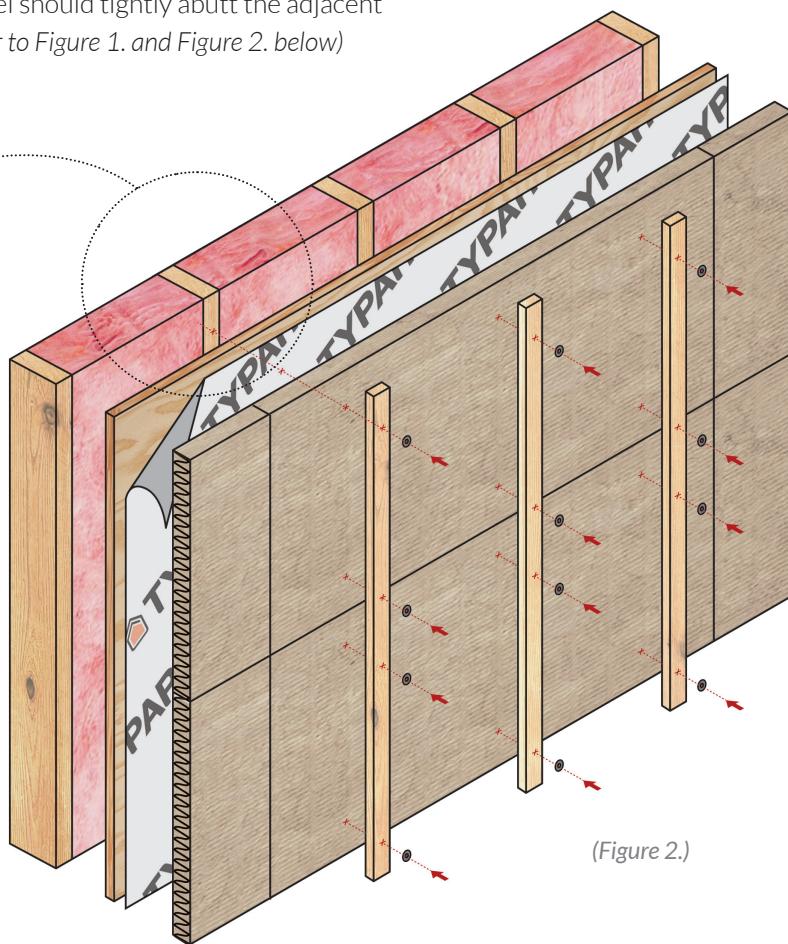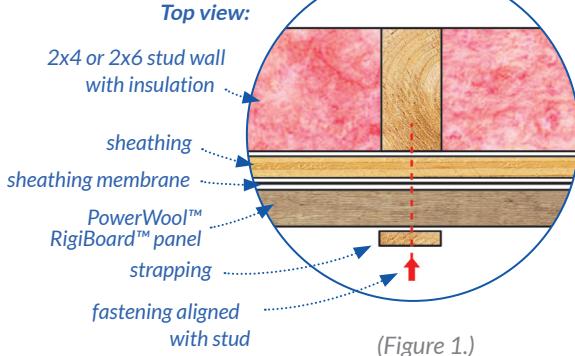
Minimum fastener configuration for one* PowerWool™ RigiBoard™ *panel:

(Figure 3.)
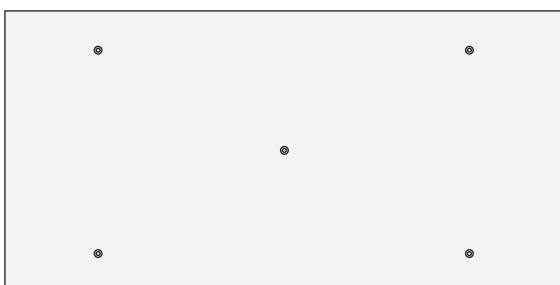
It is recommended to have a minimum of five fasteners per board, allowing for a 3" (76mm) space between the fastener and the edge of the panel. It is up to the design professionals to design the adequate number of fasteners to meet the conditions of the building. The number of fasteners can vary depending on the fastener systems chosen, and the fastener manufacturer recommendations. *(Refer to Figure 3.)*

Attaching the Insulation, continued...

For penetrations, caulk around the penetration with a sealant first. Cut the panel to allow for it to fit around the penetration, or to any interruptions along the insulation plane as tight as possible.

For inside and outside corners, bring PowerWool™ Rigiboard™ flush to the corner and then carry the next panel tight to the first making a fully insulated corner. *(Refer to Figure 4.)*
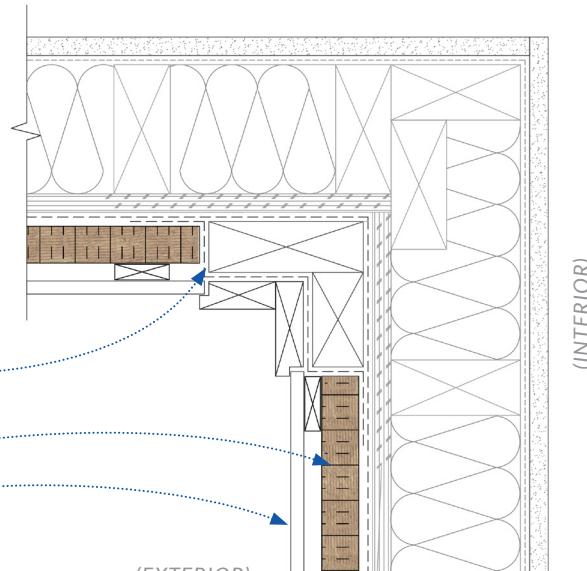
(INTERIOR)

Top view of an inside corner detail:

Exterior moisture barrier behind PowerWool™ RigiBoard™ and around corner blocking

PowerWool™ RigiBoard™ continuous insulation panels

Exterior cladding installed over PowerWool™ RigiBoard™

(EXTERIOR)
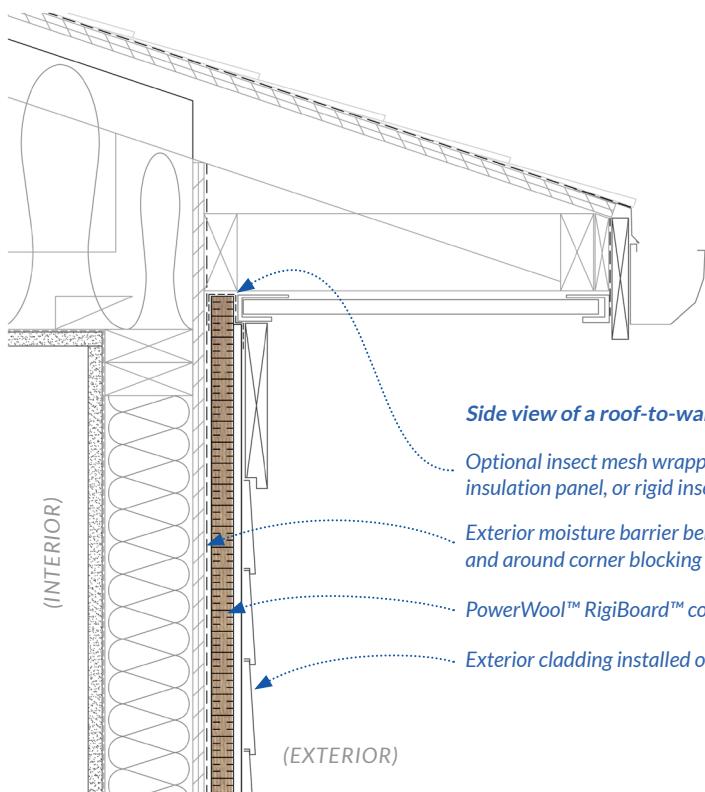
(Figure 4.)

For thermal continuity, carry PowerWool™ Rigiboard™ all the way to the top plates, stopping the strapping at the soffit line. *(Refer to Figure 5.)*

Side view of a roof-to-wall detail:

Optional insect mesh wrapped around top of insulation panel, or rigid insect strip

Exterior moisture barrier behind PowerWool™ RigiBoard™ and around corner blocking

PowerWool™ RigiBoard™ continuous insulation panels

Exterior cladding installed over PowerWool™ RigiBoard™

Install strapping to secure insulation, with bugscreen at the top and bottom of the strapping.

(INTERIOR)

(EXTERIOR)

(Figure 5.)

Strapping Attachment

Strapping is used to provide a capillary break for drainage and ventilation within the wall system, and to hold the insulation in place and withstand loads.

When strapping is used, temporary fastening of the PowerWool™ Rigiboard™ panel to the sheathing may be used. Note that temporary fastening should be sufficient enough to keep the insulation panel from blowing off the wall during unexpected winds. Strapping should be installed immediately following the temporary fastening of the Rigiboard panels.

Strapping fastener type, size and spacing design is determined based on the furring material used (wood or metal), framing member spacing, substrate, thickness of insulation panel and the building loads and exposure. The use of an appropriate fastening pattern is required to withstand fastener pull-out and building loads.

## Window Preparation and Install

The air and/or water resistive barrier (WRB/housewrap) should be located at the sheathing interface behind the PowerWool™ Rigiboard™ panel, and there should be continuity of these critical barriers to the window assembly.
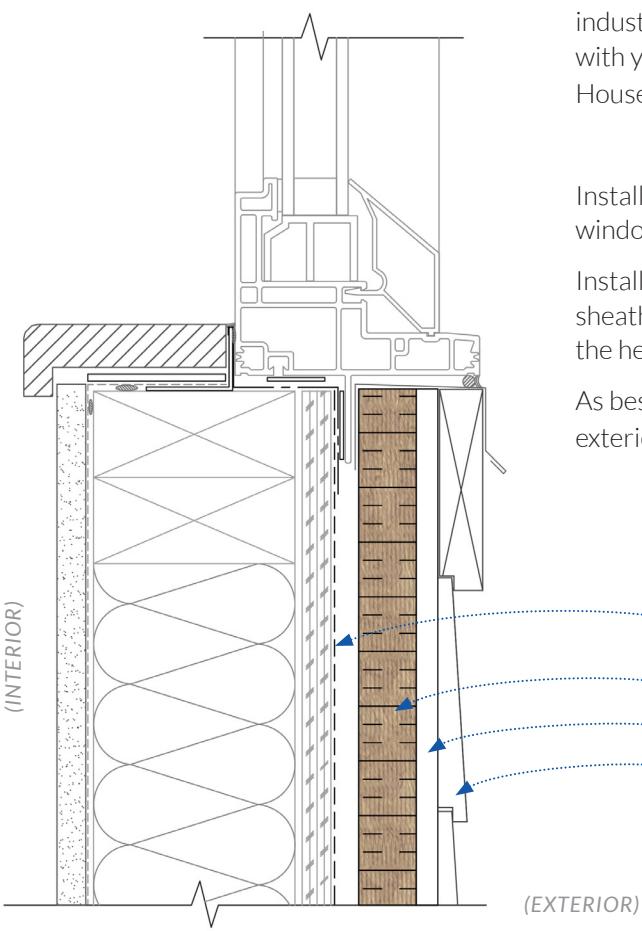
Install the window sub-sill membrane in conformance to standard industry installation practices, making sure that it is integrated with your weather resistive barrier under the sill (ie: Typar HouseWrap). *(Refer to Figure 6.)*

Install the weather resistive barrier at the jambs and head of the window rough opening, allowing for positive shingling.

Install the metal head flashing and seal the leading edges with sheathing tape. Always ensure that the weather resistive barrier at the head positively shingles over the metal head flashing.

As best practice, the sill flashing should direct any water to the exterior surface of PowerWool™ Rigiboard™.

(INTERIOR)

(EXTERIOR)

(Figure 6.)

Side view of a window sill detail:

Exterior moisture barrier behind PowerWool™ RigiBoard™ and around corner blocking

PowerWool™ RigiBoard™ continuous insulation panels

Strapping

Exterior cladding installed over PowerWool™ RigiBoard™

Window Preparation and Install, contunued...

Install and structurally attach the window as per the manufacturer's specifications. The PowerWool™ Rigiboard™ insulation panel is installed tight to the window assembly.

Note: Refer to the window manufacturer's installation guidelines, construction details and shop drawings if applicable.

Always ensure that there's continuity of the critical barrier system (WRB, air barrier, vapour barrier, thermal barrier, and water shedding surface) using mock-ups for typical conditions.

Conditions of Use

PowerWool™ Rigiboard™ should be covered with cladding as soon as possible to protect the panel from prolonged exposure to the site, weather, and UV rays.

PowerWool™ Rigiboard™ is for EXTERIOR USE ONLY. Not for interior walls.