

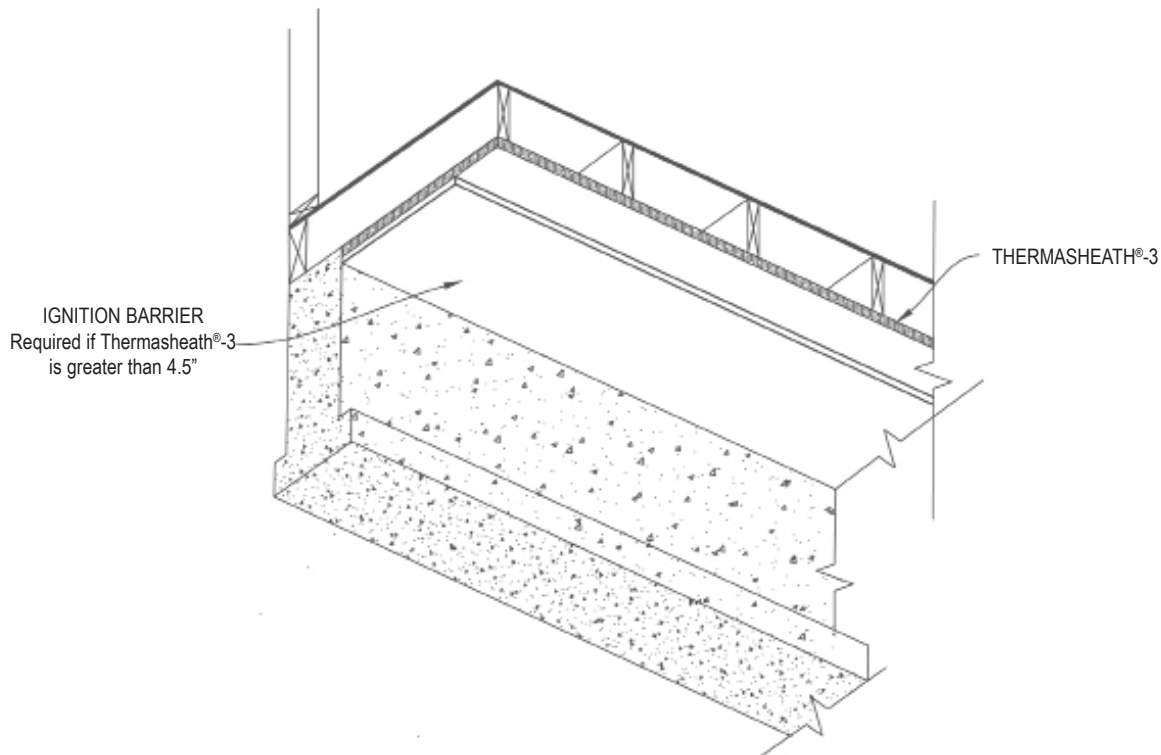
# Thermasheath®-3: Insulation for the Building Envelope

## Attic and Crawl Space Applications

Thermasheath®-3 may be applied to the interior face of stud walls or roof rafters within attics and crawl spaces to provide a layer of continuous insulation (ci). Simply nail the Thermasheath®-3 to the framing members and cover with an approved ignition barrier such as 3/8" gypsum wallboard or 1/4" wood structural panel, particle board or hardboard, as required.

Thermasheath®-3 has been tested to be left exposed in attics and crawl spaces without the code prescribed ignition barrier, provided the space is limited to servicing utilities. The maximum thickness is 1" in walls and ceilings or up to 4.5" in walls only.

**Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.**



Notes:

1. Refer to local building codes for requirements on proper ventilation and bracing.

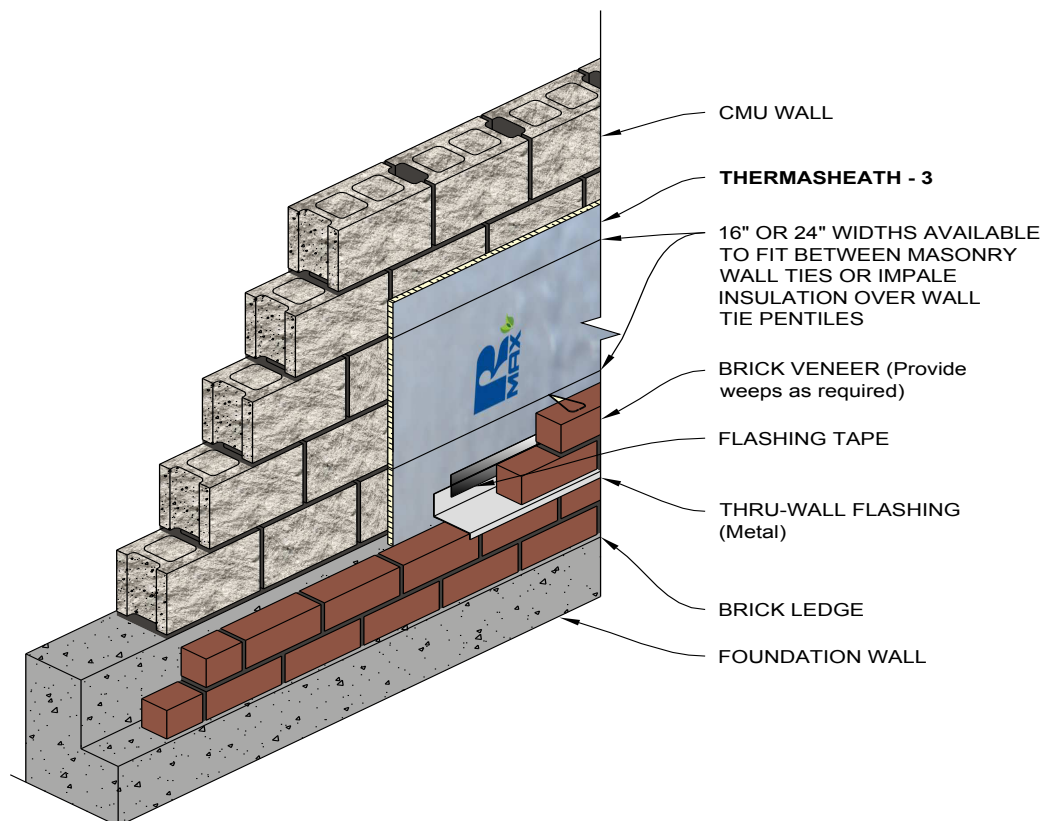
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# Thermasheath®-3: Insulation for the Building Envelope

## Cavity Wall (Brick Veneer) Application

Thermasheath®-3 is an excellent cavity insulation product fitting between the masonry block and finished brick veneer of any residential or commercial project. It may be secured to the dry face of the masonry block wall with a quality grade construction adhesive. Thermasheath®-3 can be cut to fit between masonry joint reinforcements placed to tie the brick veneer to the concrete block back-up and installed horizontally in strips to allow the wall ties to extend beyond the face of the insulation leaving the proper air spaces as required.

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2017-11

# Rainscreen Application

Utilizing Rmax Thermasheath®-3 and Cedar Siding

## Choose the Best Side with Rmax Thermasheath®-3

Cedar siding has been a popular siding choice for years as it offers an attractive yet durable finish - providing a premiere sustainable option. Utilizing Rmax Thermasheath®-3 and R-SEAL Construction Tape provides continuous insulation for a more energy-efficient home, adding a full air barrier to the walls of the structure as well as a drainage plane for rainscreen applications. This allows for a more efficient building process - saving on labor and material.

### GREEN ATTRIBUTES

Rmax Thermasheath®-3 utilizes CFC, HCFC, HFC free blowing agent with virtually no global warming potential and

zero ozone depletion potential. This low environmental impact insulation is cost effective, optimizes energy performance and provides a long service life.



## Why Rmax Thermasheath®-3

### CONTINUOUS INSULATION

Thermasheath®-3, can be installed continuously, meeting the newer, more stringent code requirements. Eliminates thermal bridging improving thermal efficiency, home comfort and reduces energy costs.

### HIGHEST R-VALUE

Thermasheath®-3 is composed of a closed-cell polyisocyanurate (polyiso) foam core with up to 29% higher R-value than XPS. Allows you to meet or exceed energy codes and provides you more insulation value for your dollar – lowering the home's energy consumption, therefore lowering energy bills.

### WATER-RESISTIVE BARRIER

Properly sealed with R-SEAL Construction Tape, Thermasheath®-3 is an approved, tested WRB. Resisting water intrusion and moisture migration, it helps defend against the growth of mold and mildew.

### AIR BARRIER

Properly sealed with R-SEAL Construction Tape, Thermasheath®-3 prevents air infiltration. Keeping homes comfortable while making your HVAC systems run more efficient.

### RADIANT BARRIER

A reflective surface is built into the product providing all the benefits of stand-alone radiant barrier products.

### FIRE PERFORMANCE

Thermasheath®-3 is a thermoset material that will not melt or drip within a fire or even at elevated temperatures. It can be used without a code prescribed interior thermal or ignition barrier within many attics spaces, such as on gable ends – reducing material and labor costs.

### LIGHTWEIGHT

Thermasheath®-3 is lightweight, durable and easy to handle. Making it easier and faster to install which positively affects labor time and your bottom line.

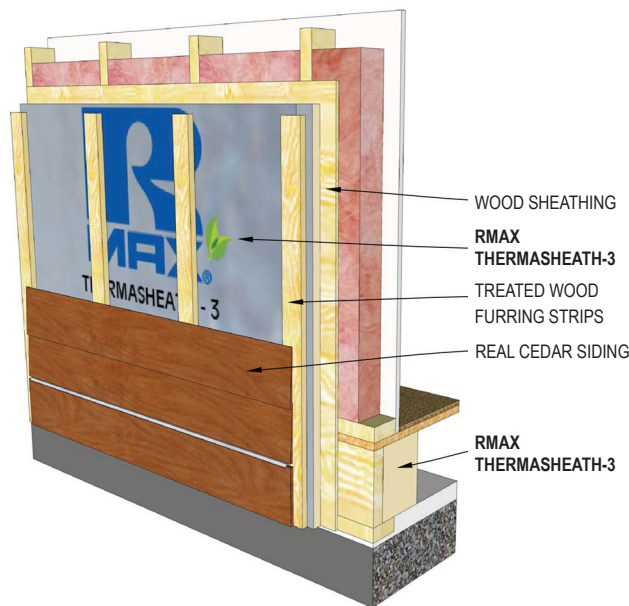
**INSTALLATION:** Step by step construction tips for basic rainscreen construction utilizing Rmax Thermasheath-3 under cedar siding (check with local building codes for specific requirements).

**Before You Begin:** For additional information and good practice on general construction details, reference the following documents from the Foam Sheathing Coalition (FSC) and Western Red Cedar Lumber Association (WRCLA):

- FSC *Guide to Attaching Exterior Wall Coverings Through Foam Sheathing to Wood or Steel Wall Framing*
- FSC TER No. 1205-05 *Construction Details for the Use of Foam Plastic Insulating Sheathing (FPIS) in Light-Frame Construction*
- WRCLA *How to Install Western Red Cedar Siding*

### Step 1: Thermasheath®-3 Continuous Insulation

Install panels vertically with the length dimension parallel to framing. Fasten boards using weather resistant bugle-head screws, galvanized roofing nails or common nails driven through cap washers. When necessary, a circular saw with a fine tooth blade can be used to cut Thermasheath-3 panels.



### Step 2: WRB/Air Barrier

- **Option 1:** Thermasheath-3 as the tested WRB and Air Barrier
  - Tape all joints with 3" R-SEAL Construction Tape.
  - Center the tape over clean, dry joints to cover fasteners and apply. Refer to tape data sheet for additional information.
  - Fasteners in the field of the board do not need to be taped to achieve WRB.
- **Option 2:** Alternate WRB/Air Barrier
  - Install per manufacturer's instructions over continuous insulation. (Taping the insulation joints is not required.)

**NOTE:** The WRB/Air Barrier created in Step 2 shall be maintained with all subsequent work (i.e., sealing through-wall penetrations, repairing damage to exterior surface, etc.).

### Step 3: Furring Strips

Install furring strips vertically ensuring they line up with the stud framing behind. Use fasteners of sufficient length to secure through the insulation and wood sheathing into the structural framing. Keep insects and small critters out of the rain screen cavity with screen material attached across the top/bottom of the furring strips/cavity. Fold the screen material over and staple to the front of the furring strips.

**NOTE:** For additional protection, use a self-sealing butyl based tape behind all furring strips. When used, it can replace the standard joint tape referenced above.

### Step 4: Cedar Siding

- Attach per manufacturer's instructions.

Nominal Thickness	Thermal R-Value <sup>1</sup>
Inches	°F•ft²•hr/Btu
0.5	3.2
0.75	5.0
1.0	6.0
1.5	9.6
1.55	10.0

<sup>1</sup>Thermal values are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.

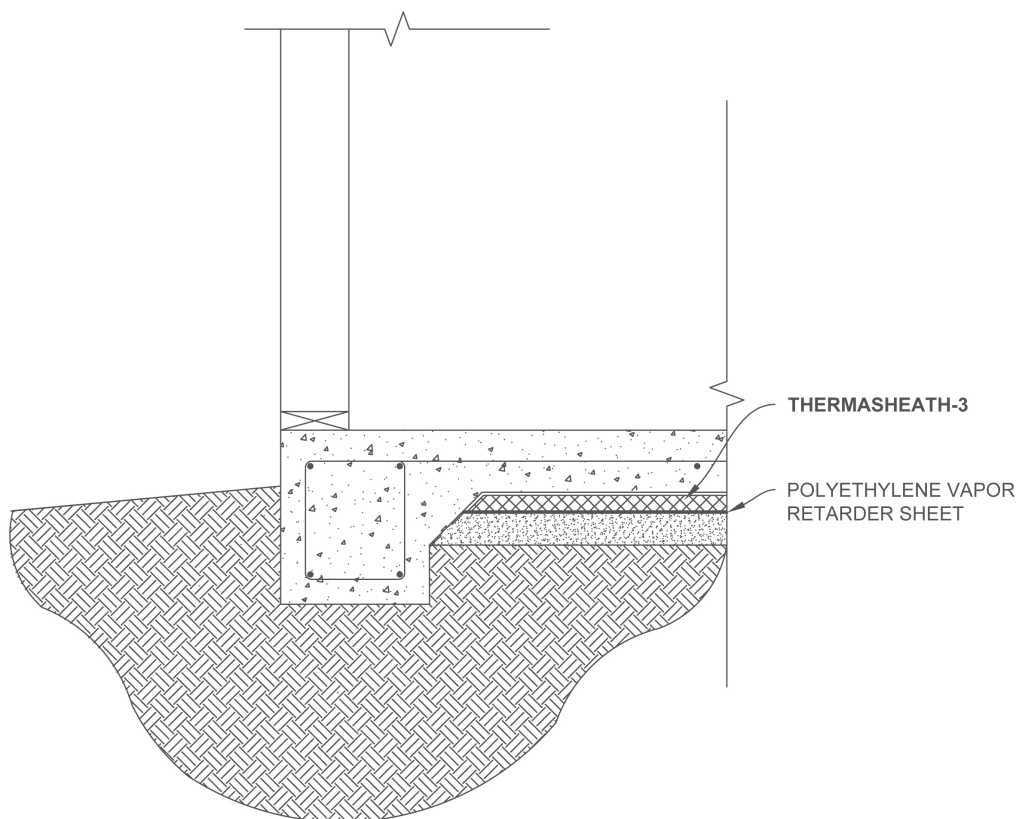
Visit [www.rmax.com](http://www.rmax.com) for a complete list of thicknesses and packaging information.

# Thermasheath®-3: Insulation for the Building Envelope

## Concrete Foundations

Thermasheath®-3 may be installed horizontally under foundations and vertically inside of the footings. A separate vapor retarder sheet should be installed over or under the insulation against the crushed stone base and well tamped backfill or undisturbed earth. Simply lay in the insulation with tightly butted joints. While not required, taping the joints is acceptable using Rmax R-SEAL 3000, Rmax R-SEAL Construction Tape, or equivalent.

**Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.**



**Notes:**

1. Thermasheath®-3 insulation panels are simply laid over the specially prepared base of crushed stone, sand or other materials that is spread for leveling.
2. Exact placement of the polyethylene vapor barrier is up to the building designer and local code requirements.

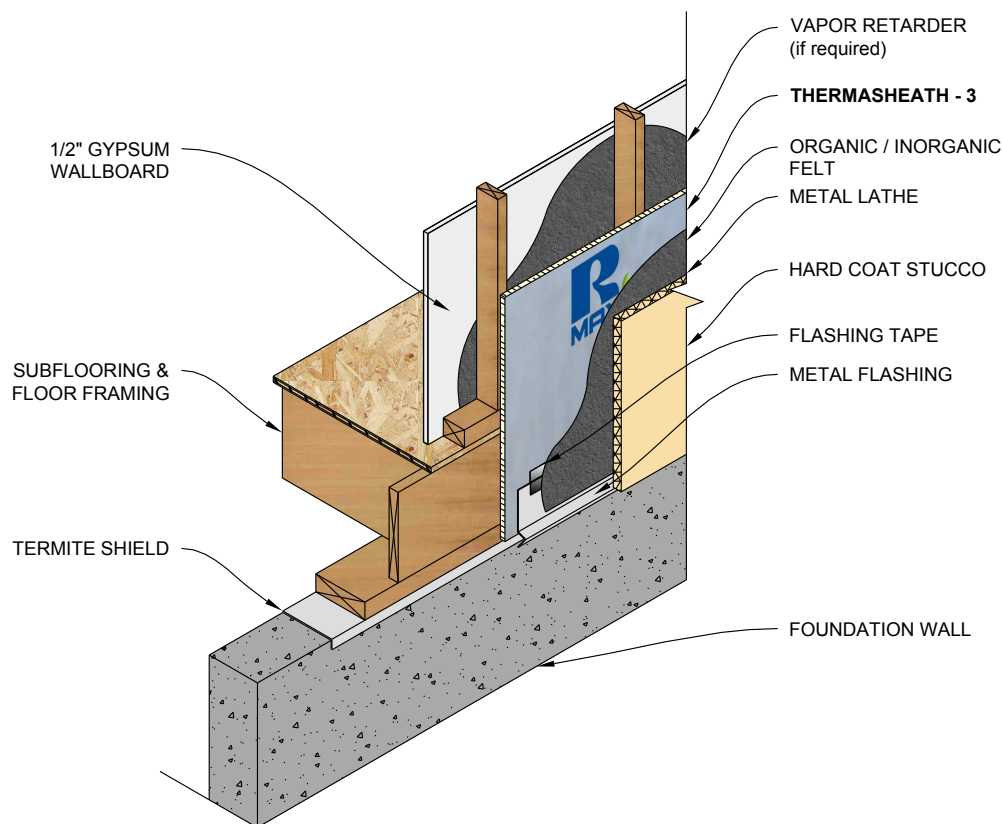
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# Thermasheath®-3: Insulation for the Building Envelope

## Exterior Stucco Application

Thermasheath®-3 may be used as the insulated sheathing under hard coat stucco finishes. It may be secured to the studs with bugle-head screws, galvanized roofing nails or common-nails driven through cap washers. Cover the Thermasheath®-3 with a suitable separation layer such as an organic or inorganic felt. Then, attach conventional metal wire lath and expansion joints with appropriate fasteners as dictated by the local Building Code. Rmax does not recommend the direct attachment of stucco, such as Portland cement or polymer-modified types, directly to the face of the insulation product. Consult stucco manufacturers for details.

**Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.**



**Notes:**

1. Stud walls must be properly braced for lateral loads according to the requirements of local Building Codes.

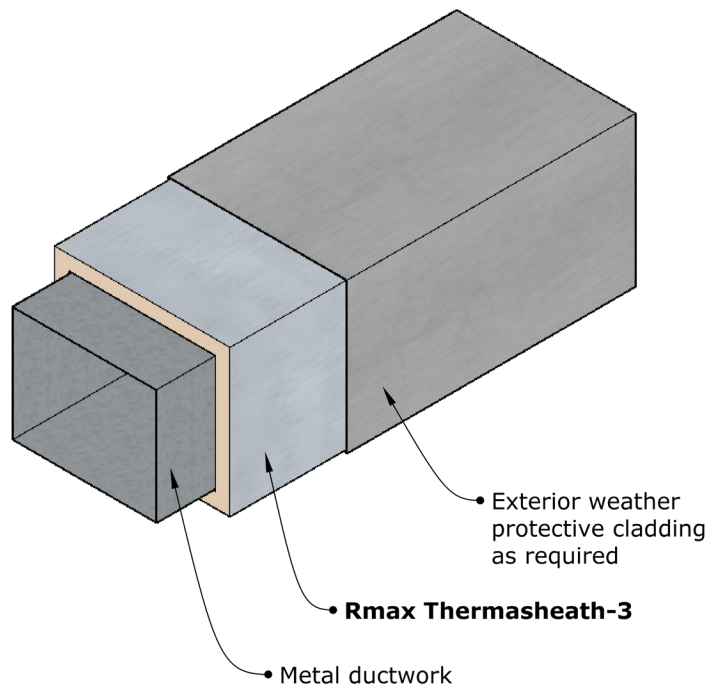
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# Thermasheath®-3: Insulation for the Building Envelope

## Exterior Ductwork Application

Rmax Thermasheath®-3 is suitable for use on the exterior side of existing ductwork. When the ductwork is solely on the exterior of the building, the insulation need only be protected from the outside weather conditions. As an example, this can be done with a waterproofing membrane installed per the manufacturer's recommendations.

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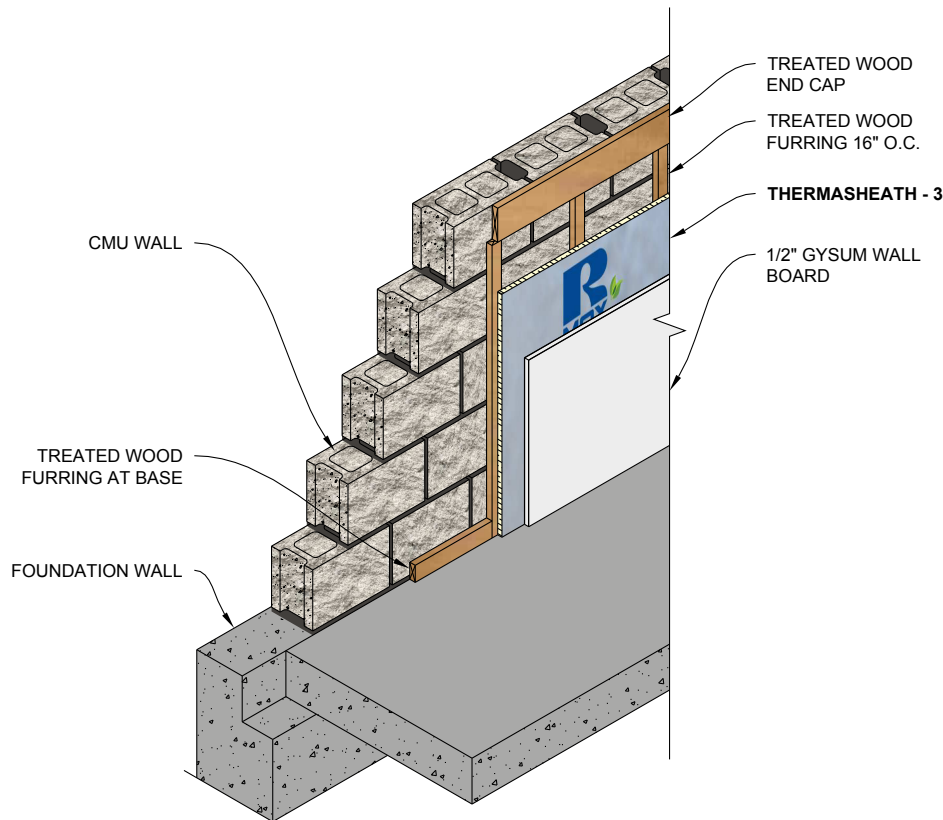
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# Thermasheath®-3: Insulation for the Building Envelope

## Masonry Wall Application

Thermasheath®-3 is applied to the interior face of concrete or concrete masonry walls to provide a layer of continuous insulation (ci) over the entire surface. It may be secured over or under furring strips, followed by a minimum 1/2" gypsum wallboard interior finish. Adhesive or fasteners may be used to hold the Thermasheath®-3 in place temporarily until the furring strips and/or gypsum wallboard are mechanically fastened through the insulation back to the concrete substrate and/or furring strips.

Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.



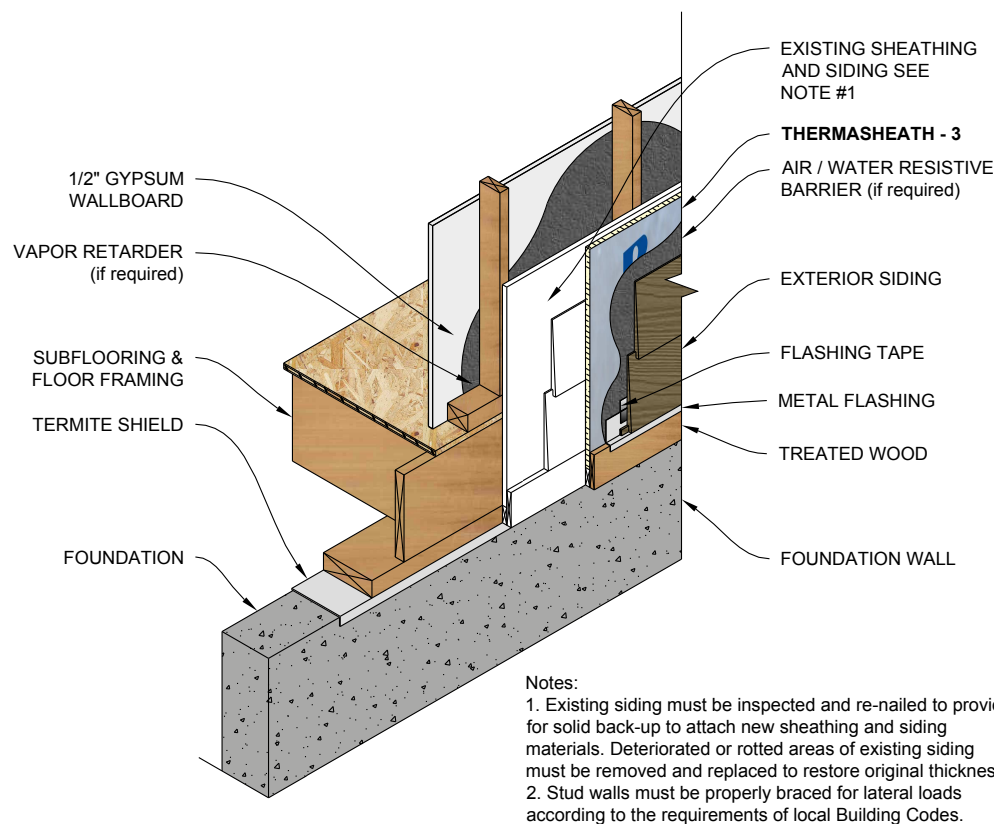
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# Thermasheath®-3: Insulation for the Building Envelope

## Re-Siding Application

Thermasheath®-3 may be used in retrofit construction provided the existing siding is sound and solidly attached. It is secured with galvanized nails of sufficient length to penetrate the old sidings, sheathings below and at least one inch into the existing wall studs. Then, cover the Thermasheath®-3 with a suitable new siding of aluminum, vinyl, fiber cement, wood or wood fiber based products.

Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.



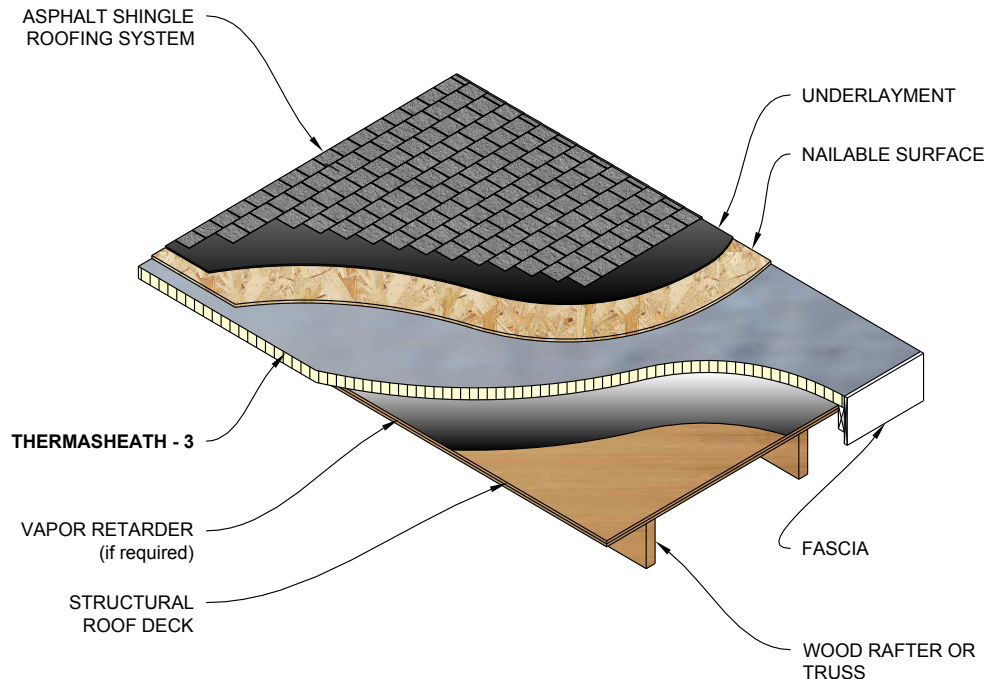
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# Thermasheath®-3: Insulation for the Building Envelope

## Roofing Application

Thermasheath®-3 is laid over a suitable roof deck such as tongue-and-groove timber, plywood or metal deck and covered with a suitable layer of plywood, wafer board or OSB. Asphalt or wood shingles, concrete or clay tiles or a standing seam metal roof may be installed over the insulated roof deck according to the roofing system instructions. NOTE: It may not be necessary to cover the insulation with a nailable surface when used under a standing seam metal roof assembly, consult manufacturer for details.

**Refer to Thermasheath®-3 data sheet for additional application/installation, compliances, thermal and physical properties, limitations and warnings.**



**Notes:**

1. Consult shingle manufacturer for above deck roofing ventilation requirements.
2. Refer to local code for requirement of thermal barrier.

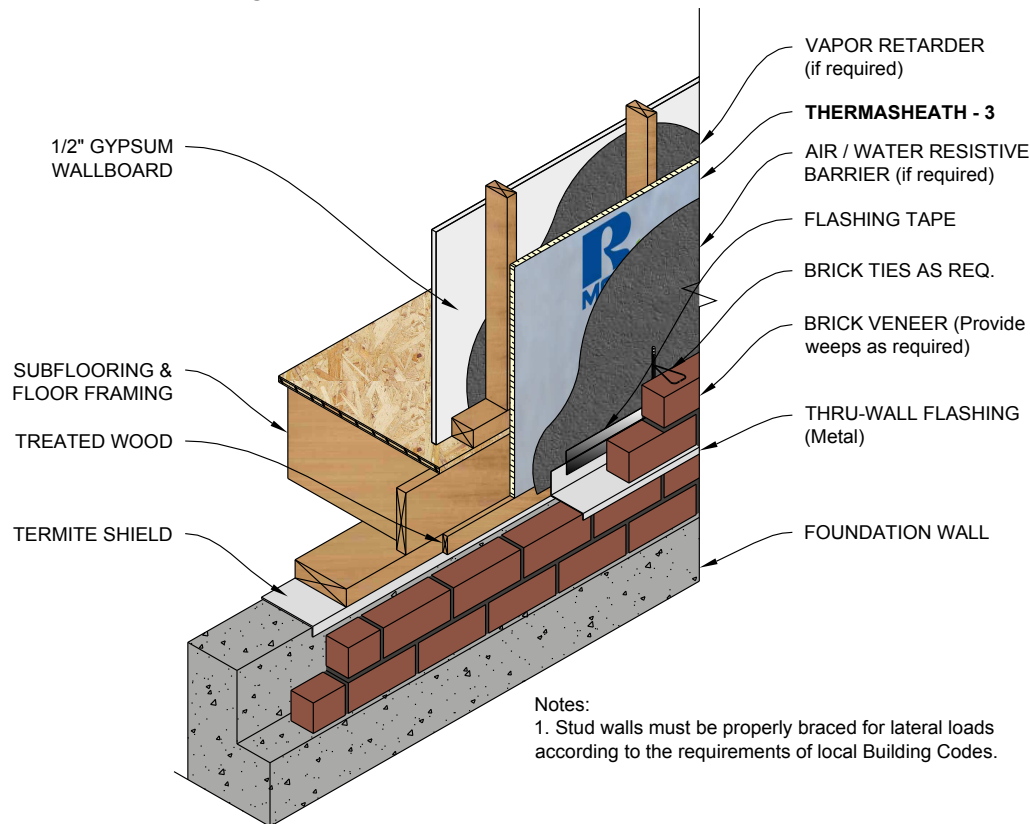
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# Thermasheath®-3: Insulation for the Building Envelope

## Stud Wall Application

Thermasheath®-3 applied to the exterior or interior face of studs, to cover all studs, sills, plates and header constructions, provides a layer of continuous insulation (ci) over details not normally covered by insulation products. It may be secured to the framing or structural sheathing with bugle-head screws, galvanized roofing nails or common nails driven through cap washers. Quality-grade construction adhesives may also be used to secure the Thermasheath®-3 on interior applications. Exterior facades may include brick/stone veneer, exterior siding and stucco. Thermasheath®-3 must be separated from the interior with a minimum 1/2" gypsum wallboard or equivalent thermal barrier. When insulation extends into the attic or crawl space, Thermasheath®-3 has been tested to be left exposed without the code prescribed ignition barrier, provided the space is limited to servicing utilities. The maximum thickness is 1" in walls and ceilings or up to 4.5" in walls only.

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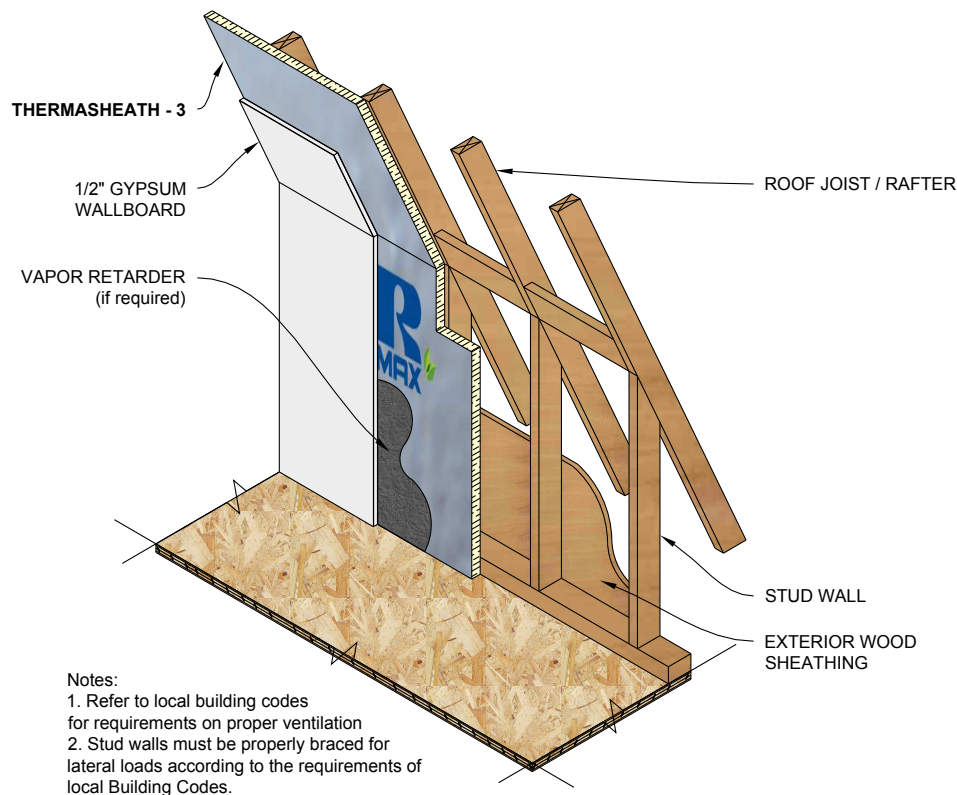
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## Vaulted Ceiling Application

Thermasheath®-3 may be applied to the inside face of the roof rafters in vaulted ceiling construction to provide a layer of continuous insulation (ci) and increase the R-value of the roof. Simply nail the Thermasheath®-3 to the face of the rafter, cover with a minimum 1/2" gypsum wallboard and finish.

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