Thermasheath-SI Structural Insulation for Exterior Walls APPLICATION GUIDE

Rev. 201

SOLUTIONS MAXimum Control in Efficient Design

4-in-1 Approach: One Building Product to Complete the Envelope



Structural Bracing

- Install continuously across the wall to simplify design
- Install as a braced wall panel with Thermasheath-3 to optimize design costs
- Eliminates the need for heavy OSB sheathing
- Decrease time and costs associated with materials and

Continuous Insulation (c.i.)

- Polyiso has the highest R/inch of any foam plastic insulation
- Eliminates thermal bridging
- Allows you to meet or exceed energy code requirements
- Lowers energy consumption and energy bills

Air Barrier

- Prevent air infiltration
- Keeps the home comfortable
- Makes your HVAC systems run more efficient

Water Barrier

- Eliminates the need for house wrap or felt
- Resists water intrusion and moisture migration
- Defends against the growth of mold and mildew

Surround Your Building. Support Your Design.

Thermal Properties

Nominal Foam Thickness	Thermal ¹ R-Value	Bundle Data ² (48" x 96")		Truckload Data (48" x 96")	
Inches	°F∙sqft∙hr/ Btu	Pieces	Sq. Ft.	Pieces	Sq. Ft.
0.5	3.2	80	2,560	1,920	61,440
0.75	5.0	52	1,664	1,248	39,936
1.0	6.0	42	1,344	1,008	32,256

¹Thermal values are for the Polyiso foam portion only and are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.

²Thermasheath-SI is shipped in bundles that are approximately 48 inches high and wrapped in plastic for easy handling.

The structural component is made up of 97% recycled content

Now lets talk about...

Storage, Handling and Installation

Materials Checklist

- Thermasheath-SI
- Thermasheath-3 (optional)
- 3" R-SEAL Construction Tape
- Work surface (sawhorse)
- Circular saw (with a fine tooth blade)
- Straight edge/chalk line
- Safety glasses/goggles and gloves
- Measuring tape
- Marker/chalk
- Approved fasteners (staples)
- Pneumatic staple gun

Approvals

- Wind load design
- Seismic load design
- Portal Frame (CS-PF)
- Exposure rated*

*According to alternate criteria in ICC-ES AC12 Appendix B

Recommended Zones

Wind Zones:

- Use prescriptively in wind zones ≤110 mph
- Use in higher wind zones requires an engineered design

Seismic Zones:

- Use prescriptively in seismic design categories/regions
 - A, B and C
 - $D_{o,} D_1$ and D_2

Wind Loading

Seismic Loading

NOTE: With ½" gypsum applied to interior. Adjustment factor needed when there is no interior gypsum. Refer to TER 1207-01 for full details.

Storage and Protection

- Insulation is shipped in polyethylene wrapped bundles
- Bundle wrapping material is not adequate weather protection at job sites
- Cover bundles with suitable "breathable" protection while on jobsite
- Bundles shall be stored on pallets or other dunnage, approximately 4" above ground level
- Dunnage supplied by Rmax is not adequate for use in storage of the materials
- Normal care should be taken to avoid potential saturation and edge wicking

Recommended Usage

- Residential applications with numerous veneers: brick, stone, stucco, siding (wood, vinyl, aluminum), cement board, etc.
- Exterior wood frame walls
- Use as intermittent bracing with Thermasheath-3
- Use as continuous structural insulated sheathing
- With taped joints and other standard construction practices for sealing, achieve air barrier and water-resistive barrier (WRB)

Installation - Step 1: Measuring and Cutting

- Do NOT install panels unless temperature is above 20°F
- Wear eye protection when using power cutting tools
- Safety mask may be necessary while cutting this product due to nuisance dust
- Measure and mark panels for cutting using:
 - Chalk line
 - Straight edge and marker
- Cut boards on a level, durable surface, using a circular saw
- Notes for cutting:
 - Do not shave, rasp or carve facers off any panels
 - Rmax does not recommend scoring or cutting the back side of a panel allowing the board to conform to framing regulations
 - Rmax does not recommend the cutting or trimming of panels with the "score and snap" method
 - Polyiso will not break cleanly or evenly recommend using a sharp, fine-toothed saw

Installation - Step 2: Installing Panels

- The Rmax logo must face the exterior of house
- Install panels vertically with the length dimension of the panels parallel to the framing behind
- Install directly over studs, refer to TER No. 1207-01 for framing requirements

Note: All perimeter edges must be backed and fastened to a framing member.

Installation - Step 2: Installing Panels (continued)

- Use Thermasheath-SI continuously
 OR
- Use Thermasheath-SI in areas where bracing is required per code
- Integrate remaining wall with Rmax
 Thermasheath-3 insulation

Installation - Step 3: Fastening

- Fasten boards using approved staples every 3" along perimeter and every 6" in the fields of the boards
- Fasteners must be placed not less than 3/8" (9.5 mm) from sheathing edges
- Staples shall be a minimum 16 gauge, 1/2" or 1" crown, at least 1 1/4" leg and penetrate a minimum of 1" into the stud
- Sheathing joints must be butted at framing members and a single row of fasteners must be applied to each panel edge into the stud behind

Note: Maintain a minimum 1" penetration into wood studs, fasteners may be countersunk.

NOTE: Do not tack sheathing products to framing, but fasten each panel completely once fastening begins.

Installation - Step 4: Taping

• To achieve a WRB:

- Tape all joints with 3" R-SEAL
 Construction Tape
- Center the tape over the joints to cover fastener penetrations
- Tape must be installed in temperatures between -25°F to 135°F
- Apply in shingle like fashion starting from bottom up

NOTE: Fasteners in the field of the board do not need to be taped to achieve WRB.

Whole Home Solution

Solution consists of four Rmax products:

Thermasheath-3

Designed to work seamlessly with Thermasheath-SI to provide exterior sheathing and continuous insulation – preventing air leakage.

Thermasheath-SI

Provides a continuous structural insulation for exterior walls to optimize design. It is the most effective way to insulate your home.

Thermasheath-XP

Insulation for use in exposed interior applications, such as basements, attics and crawl spaces.

R-SEAL Construction Tape

Provides a strong bond for weather-tight seals.

Contact Information

For Additional Information Contact or Email us at <u>rmax@rmax.com</u> For Technical Questions Contact: 1-800-527-0890 Also visit: <u>www.rmax.com</u>

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NOTE: For warranty information refer to the Rmax Sales Policy.

