



PRODUCT DATA SHEET

# Thermasheath®

## INSULATION FOR THE BUILDING ENVELOPE

### PRODUCT DESCRIPTION

Rmax Thermasheath® is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam core bonded to reinforced aluminum facers with clear coating for limited protection against oxidation on each side.

### COMPLIANCES

- ASTM C1289 Type I, Class 1 and 2
- ASHRAE Standard 90.1
- International Energy Conservation Code (IECC)
- International Residential Code (IRC), R316 Foam Plastic
- International Building Code (IBC), 2603 Foam Plastic Insulation
- DRJ Technical Engineering Report (TER) 1309-03
- Miami-Dade County Product Control Approved
- California Code of Regulations, Title 24 (BHFTI License T1523)
- Tested per NFPA 285 to comply with IBC Section 2603.5.5
- Tested per NFPA 286 (ICC-ES AC12 Appendix B)
- Water-Resistive Barrier (WRB) per ICC-ES AC71 (ASTM E331, AATCC Test Method 127)
- 1, 2, 3 or 4 hour Fire Rated Assemblies as shown in the UL Fire Resistance Directory.

**NOTE:** For details, requirements and/or limitations, refer to Third-Party Evaluation Reports

### APPLICATIONS

Exterior walls (Type I-IV): Masonry, steel stud, FRTW stud; wood stud (Type V); concrete foundation; exterior ducting; industrial laminate panel (e.g. tanks); limited roofing applications

### THERMAL PROPERTIES / PRODUCT DATA

\*R" means resistance to heat flow. The higher the R-value, the greater the insulating power.

| NOMINAL THICKNESS | THERMAL R-VALUE <sup>1</sup> |
|-------------------|------------------------------|
| Inches            | °F•ft <sup>2</sup> •hr/Btu   |
| 0.50              | 3.2                          |
| 0.75              | 5.0                          |
| 1.00              | 6.0                          |
| 1.10              | 6.7                          |
| 1.25              | 7.8                          |
| 1.50              | 9.6                          |
| 1.55              | 10.0                         |
| 1.75              | 11.4                         |
| 2.00              | 13.1                         |
| 2.10              | 13.9                         |
| 2.30              | 15.3                         |
| 2.50              | 16.7                         |
| 2.90              | 19.6                         |
| 3.00              | 20.3                         |
| 3.50              | 23.9                         |
| 3.70              | 25.3                         |
| 4.00              | 27.4                         |
| 4.50              | 31.0                         |

<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.

### TYPICAL PHYSICAL PROPERTIES

Physical properties shown are based on data obtained under controlled conditions and are subject to normal manufacturing tolerances.

| PROPERTY                                | TEST METHOD                         | RESULTS                      |
|-----------------------------------------|-------------------------------------|------------------------------|
| Density, Overall, Nominal               | ASTM D1622                          | 2.0 pcf                      |
| Compressive Strength <sup>1</sup>       | ASTM D1621                          | 20 psi                       |
| Flexural Strength                       | ASTM C203                           | 60 psi                       |
| Flame Spread, Core <sup>2</sup>         | ASTM E84                            | 75 or Less                   |
| Smoke Developed, Core <sup>2</sup>      | ASTM E84                            | < 450                        |
| Air Permeance                           | ASTM E2178                          | < 0.02 L/(s•m <sup>2</sup> ) |
| Water Vapor Permeance                   | ASTM E96                            | < 0.1 perm                   |
| Water Absorption                        | ASTM C1763 Procedure B<br>ASTM C272 | < 0.2% Vol.<br>0.3% max      |
| Dimensional Stability, Length and Width | ASTM D2126                          | < 1% Linear Change           |
| Mold Resistance                         | ASTM D3273                          | 10, no defacement            |
| Service Temperatures                    |                                     | 250°F max                    |

<sup>1</sup>Also available in 25 psi upon request. Less than 1" is standard at 16 psi.

<sup>2</sup>Flame spread and smoke numbers are shown for comparison purposes only and are not intended to represent the performance of Thermasheath® and related components under actual fire conditions.

Thermasheath® is shipped in bundles that are approximately 48" high and wrapped in plastic for easy handling. Visit rmax.com for a complete list of thicknesses and packaging information.

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## APPLICATION / INSTALLATION

**NOTE:** For use as a code prescribed Water-Resistive Barrier over wood or steel studs, refer to the Water-Resistive Barrier section for specific installation and securement details.

**General** – Thermasheath® shall be installed vertically or horizontally with all edges tightly butted. Vertical joints must be backed by framing or structural sheathing. Taping the joints is acceptable, although not required. Rmax recommends using a pressure sensitive tape such as R-SEAL Construction Tape, R-SEAL 3000, or equivalent.

**Securement** – Rmax® recommends a minimum of eight fasteners per 4'x8' board. Additional fasteners may be required in locations expected to experience additional loading (heavy wind drafts/gusts, accelerated wear and tear, etc.). The appropriate number of fasteners also depends on the type of fastener and its capacity; consult fastener manufacturer.

Fasten to wood framing using cap nails, washers with roofing nails, or washers with bugle head screws. When used in conjunction with Thermasheath®-SI, staples at 12" o.c. pattern may be used to fasten Thermasheath®. With staples, Rmax® recommends taping the joints as soon as possible. All fasteners shall be long enough to penetrate wood framing a minimum of 1". Fasten to metal framing using self-taping screws and plastic washers. The fasteners shall be long enough to penetrate metal framing a minimum of four threads. Secure to concrete surfaces using plastic masonry fasteners with washer or a quality grade construction adhesive. TRUFAST Walls fasteners, sold by Rmax®, are a great option for fastening Thermasheath® to wood, steel and concrete substrates. Refer to the Rmax®/TRUFAST Walls Fastener List and Installation Guide for more details.

**Water-Resistive Barrier** – When Thermasheath® is installed over wood or with the joints sealed, it serves as a code prescribed Water-Resistive Barrier (WRB). For use as a WRB, Thermasheath® shall be installed with vertical board joints placed directly over wood framing spaced a maximum of 24" o.c. Use a minimum 3/4" cap nail spaced 12:16 o.c. or 1 3/8" staples spaced 12" o.c. at all vertical framing. All insulation board joints must be covered by R-SEAL Construction Tape or R-SEAL 3000. All transitions and throughwall penetrations must be flashed to comply with applicable code.

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### LIMITATIONS

Thermasheath® is not recommended, nor warranted, for use as a commercial roof insulation directly under membrane systems. Consult Rmax® Sales for suitable commercial roof insulation products. Thermasheath® is not a structural panel; walls insulated with Thermasheath® must be properly braced for lateral loads according to the requirements of local Building Codes.

### WARNING

Polyiso is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity and may contribute to flames spreading. Installations utilizing Thermasheath® must be fully protected on the inhabited side of the building by a thermal barrier such as a minimum of 1/2" gypsum wallboard. Consult local building codes and insurance authorities regarding special applications or details required when using Thermasheath® as an exposed product in uninhabited spaces.

### WARRANTY

See Rmax® Sales Policy and limited warranties for terms and conditions. Rmax® does not assume any responsibility or liability for the performance of any products other than those manufactured by Rmax. **NOTE: Factory packaging should not be relied upon as protection at job sites or other outdoor storage locations. When short-term outdoor storage is necessary, take the following precautions: Store flat above ground on raised pallets, place bundles on finished surfaces, cover with a breathable tarpaulin and secure cover to prevent wind displacement.**

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For complete details on warranties, limitations, and conditions, please refer to the Rmax® Sales Policy and applicable warranties available at [rmax.com](http://rmax.com).

For sales inquiries, customer support, or technical assistance, visit [rmax.com](http://rmax.com) to connect with our team.



### Rmax®, A Business Unit of Sika Corporation

2075 Midway Rd. - Lewisville - TX - 75056  
[rmax.com](http://rmax.com) - [us.sika.com](http://us.sika.com)

### Manufacturing Plant Locations

|                                                     |                                                           |                                                   |
|-----------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| 13524 Welch Rd.<br>Dallas, TX 75244<br>972-387-4500 | 1649 S. Batesville Rd.<br>Greer, SC 29650<br>864-297-1382 | 210 Lyon Dr.<br>Fernley, NV 89408<br>775-575-4849 |
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