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 foil facers with clear coating for limited protection against oxidation on each side.

COMPLIANCES

- ASTM C1289 Type I, Class 1 and 2
- International Building Code (IBC) Section 2603, Foam Plastic
- ASHRAE 90.1
- DrJ TER 1309-03
- ESR-1864, ICC Evaluation Service
- International Energy Conservation Code (IECC)
- Miami-Dade County Product Control Approved
- RR 25322, City of Los Angeles Research Report
- California Code of Regulations, Title 24 (BHFTI License T1523)
- Tested per NFPA 285 to comply with IBC Section 2603.5.5
- Canadian Construction Materials Centre Evaluation #CCMC 13381-L, manufactured to conform to CAN/ULC-S704-03 Type 1, Class 1
- Tested per NFPA 286 (ICC-ES AC12 Appendix B)
- Water-Resistive Barrier (WRB) per ICC-ES AC71 (ASTM E331, AATCC Test Method 127)
- Class A Flame Spread and Smoke Developed Indices per IBC Chapter 8, Interior Finishes (1" min.)
- 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; 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[1]
Inches	°F•ft²•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

[1]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.

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

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	ASTM D1621	20 psi[1]
Flexural Strength	ASTM C203	60 psi
Flame Spread, Core[2]	ASTM E84	≥ 1" 25 or Less < 1" 75 or Less
Smoke Developed, Core[2]	ASTM E84	< 450
Air Permeance	ASTM E2178	< 0.02 L/(s·m²)
Water Vapor Permeance	ASTM E96	< 0.03 perm
Water Absorption	ASTM C209	< 0.2% Vol.
Dimensional Stability, Length and Width	ASTM D2126	< 1% Linear Change
Mold Resistance	ASTM D3273	10, no defacement
Service Temperatures		250°F max

[1]Also available in 25 psi upon request. Less than 1" is standard at 16 psi.
[2]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.

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.) prior to attachment of covering material (cladding, furring, thermal barrier, etc.) or when not being covered. Exact number of fasteners also depends on the type being used and the capacity, consult fastener manufacturer. Fasten to wood framing using washers with roofing nails or bugle head screws, cap nails, or staples. The 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. Rodenhouse fasteners, sold by Rmax, are a great option for fastening Thermasheath® to wood, steel and concrete substrates. Refer to the Rmax/Rodenhouse Fastener List and Installation Guide for more details.

Water-Resistive Barrier – When Thermasheath® is installed over wood or steel studs 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.

LIMITATIONS

Thermasheath® is not recommended, nor warranted, for use as a commercial roof insulation. Consult Rmax Sales for suitable commercial roof insulation products.
Thermasheath® is not a structural panel; stud 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.

Per the IBC, a WRB is required behind the exterior wall veneer. The code also has provisions regarding vapor retarders, type and location, based on the assembly, climate zone and the amount of continuous insulation. It is up to the design professional to specify an assembly that will perform adequately and meet these requirements.

WARRANTY

See Rmax "Sales Policy" 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: All Rmax products must be tarped, placed on skids and kept dry before and throughout construction.**

PIMA POLYISOCYANURATE INSULATION MANUFACTURERS ASSOCIATION

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