

THERMABASE-CI™

STRUCTURAL INSULATION FOR CLADDING ATTACHMENT

PRODUCT DESCRIPTION

Rmax ThermaBase-CI™ is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam insulation layer bonded to a nailing surface. ThermaBase-CI™ can be manufactured with Rmax Thermasheath® or Rmax Durasheath® as the insulation layer. Thermasheath® has reinforced aluminum facers on both sides, and Durasheath® has inorganic polymer coated glass fiber mat facers on both sides. The standard nailing surface for ThermaBase-CI™ is 7/16" OSB (APA rated). Alternate nailing surfaces, such as 5/8" or 3/4" OSB or CDX plywood, are available upon request.

COMPLIANCES

- ASTM C1289 Type V
- ASHRAE 90.1
- International Energy Conservation Code (IECC)
- International Building Code (IBC), Type V Construction
- International Residential Code (IRC)
- DrJ TER 1504-05
- California Code of Regulations, Title 24 (BHFTI License T1523)
- Tested per NFPA 286 (ICC-ES AC12 Appendix B)
- 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

Stud walls; new or retro-fit; creates a surface for cladding attachments

THERMAL PROPERTIES / PRODUCT DATA

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

NOMINAL THICKNESS ¹ (INCHES)	THERMAL VALUE ^{1,2} (°F·FT ² ·HR/BTU)	
	THERMASHEATH®	DURASHEATH®
1.0	3.8	3.6
1.25	5.6	5.1
1.5	6.6	6.6
2.0	10.2	9.6
2.5	13.7	12.7
3.0	17.3	15.9
3.5	20.9	19.1
4.0	24.5	22.3
4.5	28.0	25.6
5.0	31.6	28.9

¹Includes 7/16" OSB

²Thermal values are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.

A wide variety of insulation thicknesses, manufactured on a made to order basis, are available from Rmax to more closely match insulation values (thermal resistances) to project requirements. Visit www.rmax.com for a complete list of thicknesses and packaging information.

TYPICAL PHYSICAL PROPERTIES

Physical properties shown below are for the polyiso insulation layer only. They 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
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.m ²)
Water Vapor Permeance Durasheath® Thermasheath®	ASTM E96	< 1.5 perm
	ASTM E96	< 0.03 perm
Water Absorption Durasheath® Thermasheath®	ASTM C209	< 1% Vol.
	ASTM C209	< 0.2% Vol.
Dimensional Stability Length and Width Durasheath® Thermasheath®	ASTM D2126	< 2% Linear Change
	ASTM D2126	< 1% Linear Change
Service Temperatures		250°F max

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

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



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APPLICATION / INSTALLATION

General - ThermaBase-CI™ is applied to wood framing with the insulation to the interior and wood to the exterior in order to provide a continuous layer of thermal insulation and a suitable substrate for the mechanical attachment of many different kinds of cladding systems available in the market today.

All wood products will expand or shrink with changes in moisture content. If wood panels are tightly butted, there is no room for expansion and buckling can occur. To minimize the potential for buckling, the Engineered Wood Association (APA) recommends a 1/8" space between panel edge and end joints of both plywood and OSB.

To help minimize the thermal bridging created by this APA recommendation, the foam layer used to manufacture ThermaBase-CI™ is made slightly longer and wider than standard insulation products. By design, this allows the foam layer to be tightly butted during install and the overhang creates the recommended APA spacing. See illustration for guidance on orientation of boards. When cutting is necessary, make cuts on flush edges. Before packaging, the bundle is marked down the edge to designate the corner where adjacent sides contain non-flush edges. NOTE: Due to variations in wood dimensions and tolerances, as well as, uncontrollable ambient conditions that can alter wood dimensions at the time of installation, the proper overhang is not always present.

When the APA recommended spacing will not be maintained or created by tightly butting panels, the wood must be routed on site or the panels must be spaced appropriately. Panels spaced in the field can result in gaps which may lead to thermal bridges in the continuous insulation. Excessive gaps (typically, greater than 1/4") can be filled with spray foam or backer rods to minimize the thermal bridging and limit air infiltration.

Protection - ThermaBase-CI™ is not intended to be left exposed to the elements. As is common with any application of wood within the building envelope, avoid exposure to precipitation during shipping, storage and installation. Apply a water-resistive barrier (WRB) over installed ThermaBase-CI™ as soon as practical to avoid direct rain on the panel. Panels that get wet should be allowed to dry before sealing the building envelope or replaced altogether. When the wall design calls for the location of the WRB on the interior side of the ThermaBase-CI™ or when long-term exposure to weather is expected, the order must specify that exterior grade wood be used.

Securement - Rmax Nailboard Fasteners or other approved fasteners can be used to fasten ThermaBase-CI™ to wood studs. The fastening pattern is dependent on the structural requirements, fastener type, stud spacing, cladding weight, wood substrate and composite panel thickness. Refer to DrJ TER 1504-05 for approved fasteners, fastening tables and additional guidelines.

Corners - When installing ThermaBase-CI™ at inside corners, it may be necessary to install an additional stud to provide support where fastening is required beyond existing framing.

For outside corners, it is acceptable to have the insulation of one wall extend beyond the framing so that the edge of the board lines up flush with the exterior surface of the insulation on the adjacent wall. In this case, flashing should be used to wrap the corner and cover the exposed foam prior to installing the WRB. When the design requires that the nailing surface extend completely into the corner, it is common practice to cut the foam layer back to allow the adjacent panels to fit. This can be accomplished by simply cutting the foam of panels on both sides of the corner back to a 45 degree angle. Another method is to cut and remove the full thickness of foam a distance equal to the full thickness of the composite panel on all panels of one side of the corner creating a rabbeted edge with the wood and foam. The panels installed on the adjacent wall should fit snug into the recessed foam.

LIMITATIONS

ThermaBase-CI™ is not recommended, nor warranted, for use as a commercial roof insulation. Consult Rmax Sales for suitable commercial roof insulation products. ThermaBase-CI™ is not intended for use on surfaces subject to continuous or intermittent immersion in water.

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.

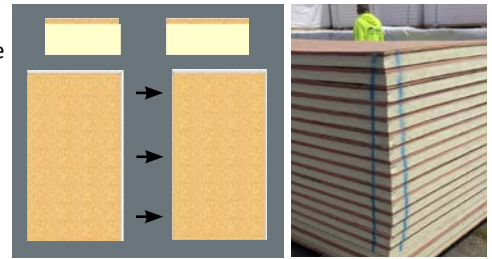
Installations utilizing ThermaBase-CI™ must be fully protected on the inhabited side of the building by a thermal barrier such as a minimum of 1/2" gypsum wallboard. Consult local building codes and insurance authorities regarding special applications or details required when using ThermaBase-CI™ as 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.



RMAX SALES OFFICES / PLANT

Central

13524 Welch Road
Dallas, TX 75244
(P) 972-387-4500
(F) 972-387-4673

East

1649 South Batesville Road
Greer, SC 29650
(P) 864-297-1382
(F) 864-234-7548

West

210 Lyon Drive
Fernley, NV 89408
(P) 775-575-4849
(F) 775-575-5035

rmax@rmax.com / www.rmax.com



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PRODUCT DATA SHEET THERMABASE-CI™

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