



R-Matte® Plus-3

Insulation for the Building Envelope

ROOF

WALL

SPECIALTY

PRODUCT DESCRIPTION

Rmax R-Matte Plus-3 is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam core bonded to reinforced aluminum foil facers on each side. While one side of the board has a reflective surface, the other side has been coated to have a non-reflective white matte surface. R-Matte Plus-3 utilizes a CFC-, HCFC- and HFC-free blowing agent that has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). This insulation is suitable for use in walls and ceilings in new construction for commercial, residential, agricultural and industrial buildings and in thermal retrofit construction within existing buildings.



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	System R-Value ²	Pcs/Bdl
Inches	°F·ft ² ·hr/Btu	°F·ft ² ·hr/Btu	
0.50	3.2	5.97	96
0.75	5.0	7.77	60
1.00	6.0	8.77	48
1.50	9.6	12.37	32
2.00	13.1	15.87	24
2.50	16.7	19.47	19
3.00	20.3	23.07	16
3.50	23.9	26.67	13
4.00	27.4	30.17	12
4.50	31.0	33.77	10

¹Thermal values are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.
²Includes the ASHRAE assigned 2.77 R-value of a ¾" dead-air space against the reflective foil side of R-Matte Plus-3 in a typical wall assembly.

COMPLIANCES

- ASTM C1289 Type I, Class 1
- International Building Code (IBC) Section 2603, Foam Plastic
- ASHRAE 90.1
- Miami-Dade County Product Control Approved
- California Code of Regulations, Title 24
- Air Barrier Material per ASTM E2178

CONSTRUCTION APPLICATIONS

- Stud walls
- Cavity walls
- Masonry walls
- Exterior stucco
- Re-siding
- Vaulted ceilings
- Attics and crawl spaces

INCENTIVE OPPORTUNITIES

- Reduces energy costs
- Contributes toward LEED® credits
- Offers tax credits, where applicable

Additional thermal R-values can be found on the insert to this document. R-Matte Plus-3 is shipped in bundles that are approximately 48 inches 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
Flame Spread, Core ²	ASTM E84	75 or Less
Smoke Developed, Core ²	ASTM E84	< 450
Water Vapor Transmission	ASTM E96	< 0.3 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability	ASTM D2126, 7 days, 158°F, 98% rh	< 2% Linear Change
Service Temperatures		-40°F to +250°F

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

²Flame spread and smoke numbers are shown for comparison purposes only and are not intended to represent the performance of R-Matte Plus-3 and related components under actual fire conditions.

APPLICATION / INSTALLATION

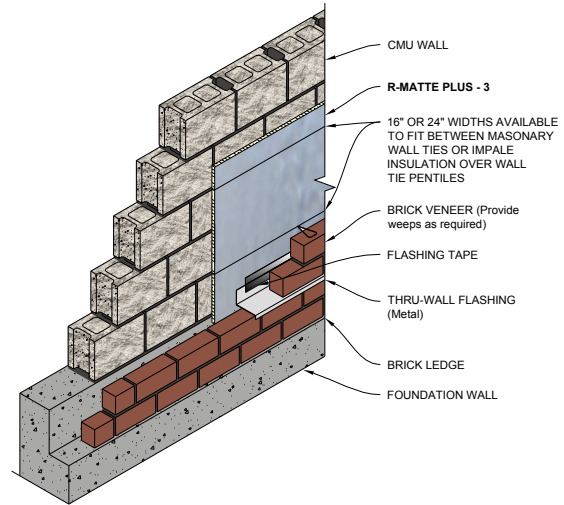
Board Orientation – R-Matte Plus-3 conforms to the physical and thermal properties stated within this data sheet regardless of orientation.

On exterior applications, R-Matte Plus-3 is designed to be covered with siding materials of aluminum, vinyl, fiber cement, wood or wood-based products, as well as brick, stone or stucco veneers. The white matte, non-reflective side of the board is installed facing the exterior when the exterior finish is aluminum, vinyl, fiber cement, and wood or wood-based products. The reflective side of the board is installed facing the exterior when the exterior finish is brick, stone or stucco.

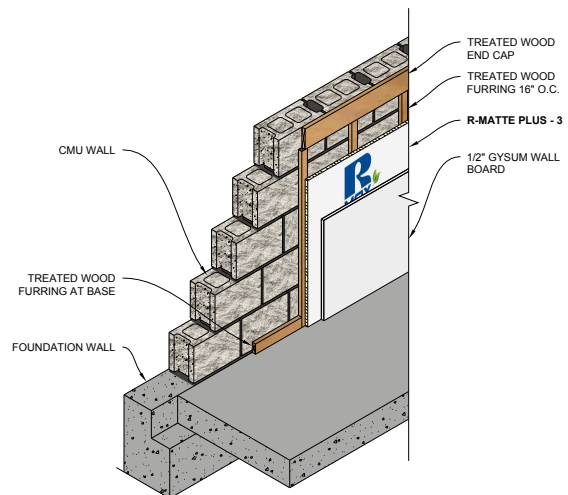
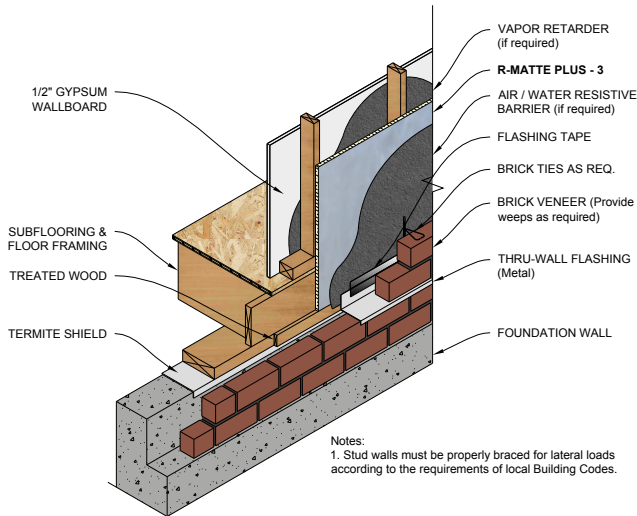
On interior applications, R-Matte Plus-3 may be installed with either side facing the interior. The ASHRAE Handbook of Fundamentals states that a 3/4 inch dead air space in a typical wall assembly has an R-value of 2.77 when a reflective surface is on one side. This value is in addition to the R-value of the polyiso foam. Therefore, when the R-Matte Plus-3 will be against a dead air space, additional r-value is achieved by facing the reflective side of the board towards the air space.

Stud Wall Construction - R-Matte Plus-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 R-Matte Plus-3 on interior applications. Exterior facades may include brick/stone veneer, exterior siding and stucco. R-Matte Plus-3 must be covered on the interior with a minimum 1/2 inch gypsum wallboard interior finish that is mechanically attached.

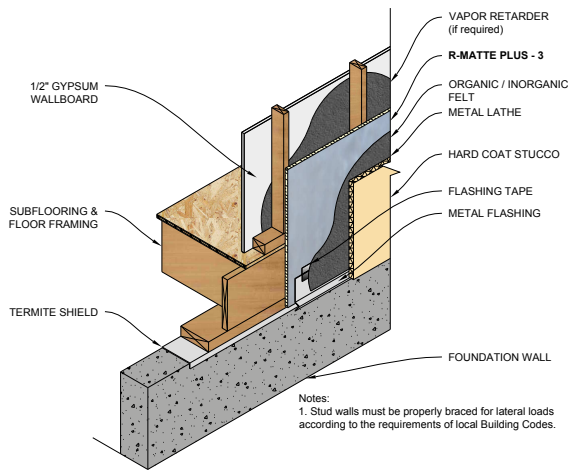
Cavity Wall Construction (Brick Veneer) - R-Matte Plus-3 is an excellent cavity insulation product fitting between the masonry block and finished brick veneer of any residential or commercial project. It may be secured to the dry face of the masonry block wall with a quality grade construction adhesive. R-Matte Plus-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.



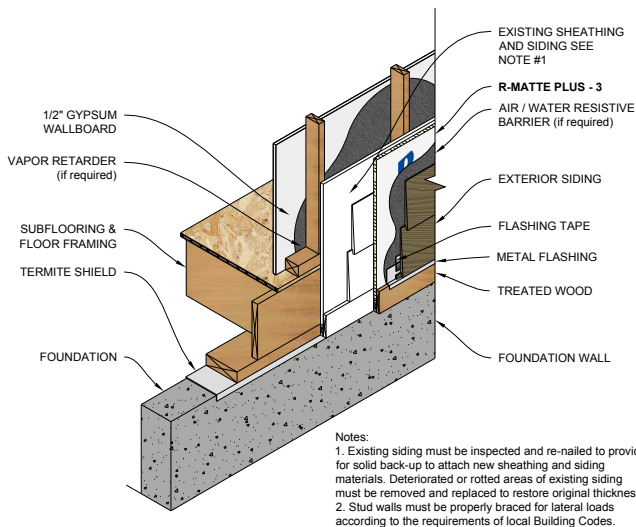
Masonry Wall Construction - R-Matte Plus-3 is applied to either the exterior or interior face of concrete or concrete masonry walls to provide a layer of continuous insulation (ci) over the entire surface. It may be secured to the inside face of a concrete or concrete masonry wall, over or under the furring strips, and covered with a minimum 1/2 inch gypsum wallboard interior finish. Adhesives, screws or nails may be used to hold the R-Matte Plus-3 in place against the wall temporarily, until the furring strips and gypsum wallboard are installed. The furring strips and gypsum wallboard must be secured with suitable screws or nails.



Exterior Stucco Construction - R-Matte Plus-3 may be used as the insulative 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 R-Matte Plus-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.

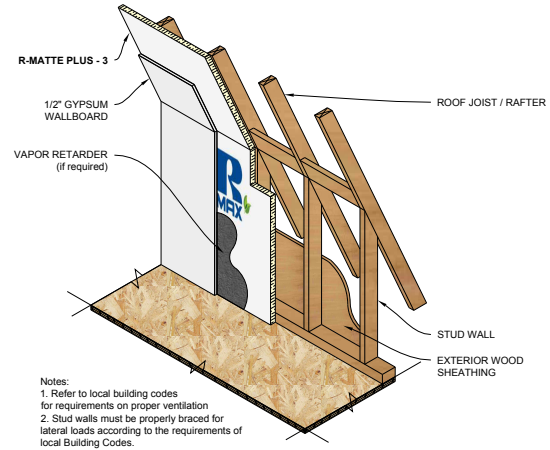


Re-Siding Construction - R-Matte Plus-3 may be used in retrofit construction provided the existing siding is sound and solidly attached. It is secured with galvanized nails of sufficient length to penetrate the old sidings, sheathings below and at least one inch into the existing wall studs. Then, cover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



Attics and Crawl Spaces - R-Matte Plus-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 R-Matte Plus-3 to the framing members and cover with an approved ignition barrier such as 3/8 inch gypsum wallboard or 1/4 inch wood structural panel, particle board or hardboard.

Vaulted Ceiling Construction - R-Matte Plus-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 R-Matte Plus-3 to the face of the rafter, cover with a minimum 1/2 inch gypsum wallboard and finish.



LIMITATIONS

R-Matte Plus-3 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.

R-Matte Plus-3 is not a structural panel. It must not be used as a nailing base for any other building products. Furthermore, stud walls insulated with R-Matte Plus-3 must be properly braced for lateral loads according to the requirements of local Building Codes.

WARNING

DO NOT leave R-Matte Plus-3 exposed. Polyiso foam 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 R-Matte Plus-3 must be fully protected on the interior side of the building by a thermal barrier such as a minimum of 1/2 inch gypsum wallboard. Masonry or concrete that is a minimum of one inch thick, plywood that is a minimum of 1/2 inch thick and wood that is a minimum of one inch nominal thickness may also be recognized as suitable thermal barriers. Consult your local Building Official for specific governing codes and requirements.

The interior and/or exterior of the building should be protected with a suitable vapor retarder and/or a water resistive barrier, if required, based on local Building Codes and climate zone.

WARRANTY

See Rmax "Sales Policy" for warranty 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.**



Doing one thing well in so many ways...

Rmax is a U.S. owned company that only manufactures polyiso insulation. R-Matte Plus-3 is manufactured in the U.S. and is offered through an extensive distribution network. It is available in standard four foot wide panels, with standard panel lengths of eight or nine feet. Custom lengths are available for special orders. Contact Rmax Sales at your regional Customer Service Center for product availability, pricing information, and your nearest distribution center.

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R-Matte Plus-3

ADDITIONAL THERMAL R-VALUES

“R” means resistance to heat flow. The higher the R-value, the greater the insulating power. According to the ASHRAE Handbook of Fundamentals, the reflective foil facing of R-Matte Plus-3 contributes additional R-value to the overall assembly when installed against a dead air space. For example, ASHRAE assigns a 2.77 R-value to a 3/4 inch dead-air space against a reflective foil in a typical wall assembly. This value is in addition to the R-value of the polyiso foam - see System R-Value below.

Nominal Thickness	Thermal R-Value ¹	System R-Value	Pcs/Bdl
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2.25	14.9	17.67	21
2.30	15.3	18.07	20
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Improving Your Design.

For warranties, limitations and conditions refer to Rmax Sales Policy and applicable warranties. All documents are located at www.rmax.com. For technical and sales support, email rmax@rmax.com or call (800) 527-0890.

Proudly Made and Engineered in the U.S.A.



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