ECOMAXCI® PLY

MANUFACTURED WITH ENHANCED CLASS A POLYISO REPLACING ECOBASECI™

INSULATION FOR CLADDING ATTACHMENT

PRODUCT DESCRIPTION

Rmax ECOMAXci® Ply is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam insulation with inorganic, polymer coated glass fiber mat facers bonded to 5/8" or 3/4" fire retardant treated plywood (FRTP).

COMPLIANCES

- ASTM C1289 Type V
- ASHRAE 90.1
- International Energy Conservation Code (IECC)
- International Building Code (IBC) Section 2603, Foam Plastic
- DrJ TER 1504-04
- California Code of Regulations, Title 24 (BHFTI License T1523)
- Tested per NFPA 285 to comply with IBC Section 2603.5.5
- 1, 2, 3 or 4 hour Fire Rated Assemblies as shown in the UL Fire Resistance Directory
- Class A FRT Plywood for Flame Spread and Smoke Developed Indicies

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

APPLICATIONS

Exterior walls (Type I-IV): Masonry, steel stud and FRTW stud

THERMAL PROPERTIES / PRODUCT DATA

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

NOMINAL FOAM THICKNESS (INCHES)	5/8" FRTP[1]		3/4" FRTP[1]	
	NOMINAL THICKNESS (INCHES)	THERMAL VALUE[2] (°F•FT²•HR/BTU)	NOMINAL THICKNESS (INCHES)	THERMAL VALUE[2] (°F•FT²•HR/BTU)
0.75	1.375	5.2	1.5	5.4
1.00	1.625	6.7	1.75	6.9
1.25	1.875	8.2	2.00	8.4
1.50	2.125	9.7	2.25	9.9
2.00	2.625	12.8	2.75	13.0
2.50	3.125	16.0	3.25	16.2
3.00	3.625	19.2	3.75	19.4
3.50	4.125	22.4	4.25	22.6
4.00	4.625	25.7	4.75	25.9
4.50	5.125	29.0	5.25	29.2

[1]Includes Fire Retardant Treated Plywood
[2]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.

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.

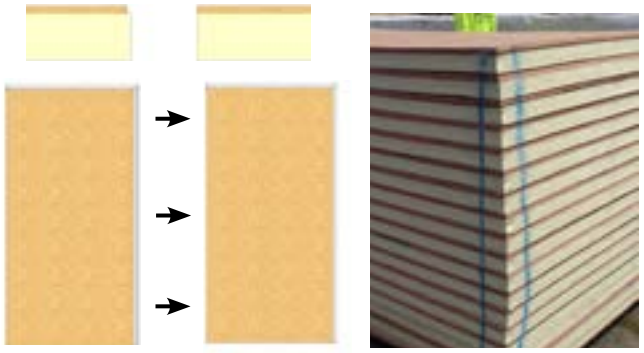
PROPERTY	TEST METHOD	RESULTS
Density, Overall, Nominal	ASTM D1622	2.0 pcf
Compressive Strength	ASTM D1621	20 psi[1]
Flame Spread, Core[2]	ASTM E84	≥ 1" 25 or Less < 1" 75 or Less
Smoke Developed, Core[2]	ASTM E84	< 450
Air Permeance	ASTM E2178	< 0.02 L/(s·m²)
Water Vapor Permeance	ASTM E96	< 1.5 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability Length and Width	ASTM D2126	< 2% Linear Change
Reflectance Emittance	ASTM E408	0.96 0.04
Service Temperatures		250°F max

[1]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 ECOMAXci® Ply and related components under actual fire conditions.

APPLICATION / INSTALLATION

General - ECOMAXci® Ply is applied to wood or metal framing with the 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.

ECOMAXci® Ply is engineered to allow for normal expansion of the plywood without gapping the insulation layer. The polyiso layer is manufactured to be slightly longer and wider than the plywood so that the polyiso extends 1/16" to 3/16" beyond the plywood on two adjacent sides. See illustration for proper orientation between boards. When cutting is necessary, make cuts on flush edges to maintain expansion allowance and ensure installation of cut boards is consistent with orientation shown here. Before packaging, the bundle is marked down the edge to designate the corner where adjacent sides contain non-flush edges. See image for reference.



Protection - ECOMAXci® Ply 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 ECOMAXci® Ply 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 ECOMAXci® Ply or when long-term exposure to weather is expected, the order must specify that exterior grade wood be used.

Securement - The fastening pattern is dependent on the fastener type, stud type and spacing, cladding weight, wood substrate and composite panel thickness. Refer to DrJ TER 1504-04 for fastening tables and additional guidelines.

For steel framing, the use of wing tip screws is recommended when the insulation layer is 3.5" or less to prevent the wood from walking up the screw and forcing the screw into the stud before it has drilled through. As an alternative, use a screw with a thread length that is less than the thickness of the insulation layer.

Corners - When installing ECOMAXci® Ply 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

ECOMAXci® Ply is not recommended, nor warranted, for use as a commercial roof insulation. Consult Rmax Sales for suitable commercial roof insulation products.
ECOMAXci® Ply is not intended for use on surfaces subject to continuous or intermittent immersion in water.
ECOMAXci® Ply is not a structural panel; stud walls insulated with ECOMAXci® Ply 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.

DO NOT leave ECOMAXci® Ply exposed to the interior. Installations utilizing ECOMAXci® Ply must be separated from the interior of the building by a thermal barrier such as a minimum of 1/2" gypsum wallboard. Consult your local Building Official for specific governing codes and requirements.

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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