



Ultra-Max[®]

Insulation for Above the Deck

ROOF
WALL
SPECIALTY

PRODUCT DESCRIPTION

Rmax Ultra-Max[®] is an energy-efficient thermal insulation board composed of a closed-cell polyisocyanurate (polyiso) foam core bonded to inorganic polymer coated glass fiber mat facers on both sides.

COMPLIANCES

- ASTM C1289 Type II, Class 2
- International Building Code (ICC) Chapter 26 Section 2603, Foam Plastic
- ASHRAE 90.1
- Miami-Dade County Product Control Approved
- Florida Product Approval (FL11207)
- CA Insulation Directory
- Factory Mutual – Class 1 roofing insulation per FM Standard 4450/4470 (1.5” minimum thickness). Ultra-Max[®] is subject to the conditions of approval as a roof insulation when installed as described in the current edition of the FMRC “Approval Guide”. Refer to FM Approvals RoofNav for specific system details.
- Underwriters Laboratories – UL listed and labeled as shown in UL Certifications Directory:
 - Class A for External Flame – UL Standard 790
 - Class A for Internal Flame – UL Standard 1256
 - Fire Rated Roof/Ceiling Assemblies – UL Standard 263

APPLICATIONS

Built-up roof; modified bitumen; mechanically attached single ply; loose laid ballasted single ply; metal panel roofing

THERMAL PROPERTIES / PRODUCT DATA

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

Nominal Thickness ¹	Long Term Thermal Resistance (LTTR) ²	Bundle Data ³ (48" x 96")		Truckload Data (48" x 96")	
		Pieces	Sq. Ft.	Pieces	Sq. Ft.
1.50	8.6	32	1,024	768	24,576
1.75	10.0	27	864	648	20,736
2.00	11.4	24	768	576	18,432
2.50	14.4	19	608	456	14,592
2.60	15.0	18	576	432	13,824
3.00	17.4	16	512	384	12,288
3.10	18.0	15	480	360	11,520
3.50	20.5	13	416	312	9,984
4.00	23.6	12	384	288	9,216
4.25	25.2	11	352	264	8,448

¹The 1.50" and thicker products are approved for FM Class 1-90 wind uplift.
²LTTR values are determined in accordance with CAN/ULC-S770. LTTR predicts a 15-year, time-weighted average.
³Ultra-Max[®] is shipped in bundles that are approximately 48" high and wrapped in plastic for easy handling.
 NOTE: Metal deck flute span shall be a maximum of 4 3/8"

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	25 - 60
Smoke Developed, Core ²	ASTM E84	75 - 160
Water Vapor Transmission	ASTM E96	< 1.5 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability Length and Width	ASTM D2126	< 2% Linear Change
Service Temperatures		250°F max

¹Also available in Grade 2 or Grade 3 upon request.
²Flame Spread and Smoke Developed Indexes are used to measure and describe the properties of this material in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of this material and other related roofing components under actual fire conditions.

Visit www.rmax.com for a complete list of thicknesses and packaging information.



APPLICATION / INSTALLATION

General - Ultra-Max® is applied to the roof deck in order to provide a continuous layer of thermal insulation and a suitable substrate for the application of many different kinds of roofing membranes available in the market today.

Refer to *Rmax Polyiso Roof Insulation Fastening Guide* for details on fastening patterns, thickness requirements and approved washers. Ultra-Max® must be secured to steel or wood roof decks with FM listed mechanical screw and plate fasteners. It may be secured to other types of “nailable” decks with suitable mechanical fasteners for that type of “nailable” deck. Ultra-Max® shall be adhered to properly prepared concrete roof decks with hot bitumens or air-cured polyurethane foam adhesives. For applications utilizing hot bitumens, the asphalt should be applied at its recommended equiviscous temperature (EVT) plus or minus 25°F. Adhesives shall be used in strict accordance with recommended installation procedures as supplied by the manufacturer. NOTE: Panel size shall be limited to 4' x 4' when hot bitumens are used or when the insulation is being installed over concrete decks. No more insulation shall be laid than can be covered with the completed membrane system by the end of the day's work. Refer to PIMA Technical Bulletin 109 for storage and handling recommendations.

Rmax strongly recommends that the decision to use or not use a vapor retarder in any insulated roofing assembly be guided by the recommendations of the National Roofing Contractors Association (NRCA) in the latest edition of the “NRCA Roofing and Waterproofing Manual.” Designers and installers are referred to Rmax publication “General Notes for Use of Rmax Roofing Insulations in Low Slope Applications,” for specifics regarding construction applications utilizing Rmax roof insulation products.

Multi-Layer Insulation Systems - Rmax recommends two layers of insulation whenever the total insulation requirement exceeds 3.0” to reduce thermal bridging, moisture migration and system movement. Joints should be offset between the insulation layers as well as between the insulation and cover board.

LIMITATIONS

Ultra-Max® is not recommended nor warranted for use in inverted or protected roofing membrane systems (IRMA).
Ultra-Max® is not a structural panel.

WARNING

DO NOT leave Ultra-Max® 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.

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. Requests for Certification Letters and/or special warranty considerations must be submitted to Rmax Sales prior to delivery of the products.**

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