



Ultra-Max[®] HD

High Density Roof Coverboard

ROOF

WALL

SPECIALTY

PRODUCT DESCRIPTION

Rmax Ultra-Max[®] HD is a high density roof coverboard composed of a closed-cell polyisocyanurate (polyiso) foam core bonded to inorganic polymer coated glass fiber mat facers on both sides. Ultra-Max[®] HD is available in 0.5" thick 4' x 8' and 0.5" thick 4' x 4' panels. It 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 insulated roofing system constructions utilizing mechanically attached and fully adhered single-ply roofing systems. Ultra-Max[®] HD is approved for use in new and re-roofing applications.



PRODUCT BENEFITS

- Increased dimensional stability
- Roof system protection
- Lightweight and easy to handle
- Reduces material and labor costs
- Mold resistant per ASTM D3273 (no defacement)

COMPLIANCES

- ASTM C1289 Type II, Class 4
- International Building Code (ICC) Chapter 26 Section 2603, Foam Plastic
- Factory Mutual – Class 1 roofing insulation 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.
 - FM Standard 4450/4470 approved
 - FM 4473 rated SH-1 for severe hail
- Underwriters Laboratories – UL listed and labeled as shown in UL Certifications Directory:
 - External Flame – UL Standard 790
 - Internal Flame – UL Standard 1256
 - Fire Rated Roof/Ceiling Assemblies – UL Standard 263
 - Class B over combustible decks with UL classified membranes

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	Bundle Data (48" x 96")		Truckload Data (48" x 96")	
		Inches	°F·ft ² ·hr/Btu	Pieces	Sq. Ft.
0.50	2.5	42	1344	1008	32,256

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.

TYPICAL PHYSICAL PROPERTIES

Physical properties are based on data obtained under controlled conditions and are subject to normal manufacturing tolerances.

Property	Test Method	Results
Compressive Strength	ASTM D1621	Grade 1 ¹
Tensile Strength	ASTM D1623	>2000psf
Flame Spread	ASTM E84	40-60
Smoke Developed	ASTM E84	50-170
Water Vapor Transmission	ASTM E96	< 1.5 perm
Water Absorption	ASTM C209	< 3.0% Vol.
Dimensional Stability	ASTM D2126	< 0.5% Linear Change
Service Temperatures		-100°F to +250°F

¹80 psi (551 kPa) minimum

²Flame spread and smoke numbers are shown for comparison purposes only and are not intended to represent the performance of Ultra-Max[®] HD and related components under actual fire conditions.

FASTENING GUIDELINES

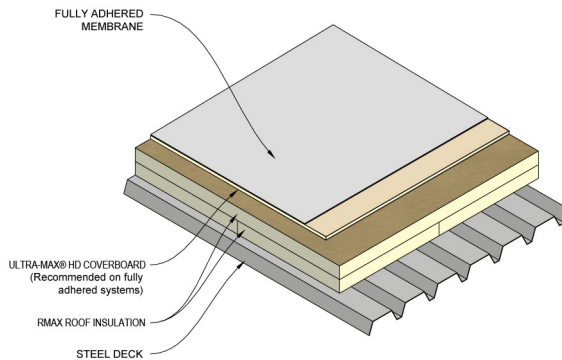
Thickness (Inches)	FM Rating	Field Fasteners per 4'x8' Board
0.50	1-75	12
	1-90	16

APPLICATION / INSTALLATION

General - Ultra-Max® HD is applied to the roof deck or insulation layer 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.

When using Ultra-Max® HD in adhered systems, field testing has confirmed significantly more efficient use of solvent-based adhesives than with glass fiber/organic mat faced insulations. Adhesive application rates vary by manufacturer. Check adhesive manufacturer's recommendation for application rates.

Ultra-Max® HD 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® HD shall be adhered to properly prepared concrete roof decks with air-cured polyurethane foam adhesives. 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 the insulation is being installed over concrete decks. Joints should be offset a minimum of 6" with insulation below. No more insulation shall be laid than can be covered with the completed membrane system by the end of the day's work or before the onset of inclement weather. 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.

LIMITATIONS

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

DO NOT use hot asphalt to attach Ultra-Max® HD coverboards or apply roofing systems directly.

DO NOT torch apply membranes directly to Ultra-Max® HD coverboards.

Ultra-Max® HD is not a structural panel.

WARNING

DO NOT leave Ultra-Max® HD 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 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. Requests for Certification Letters and/or special warranty considerations must be submitted to Rmax Sales prior to delivery of the products.**

Rmax Sales Offices and Plant Locations

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