

DERBIBOARD

High performance Polyisocyanurate roof insulation board

PRODUCT DESCRIPTION

DERBIBOARD is a high performance polyisocyanurate insulation board designed to provide a clean, strong base for a variety of roofing systems. The polyiso foam has superior fire resistance as well as the ability to retain high 'R' values. The foam core is integrally bonded to non-asphaltic fiber-reinforced organic felt facers for added strength and dimensional stability. A tapered system is also available; designed to provide a positive slope to roof drains. Product comes in a variety of thicknesses with a wide range of 'R' values.

CODES AND COMPLIANCES

- ▶ ASTM C1289, Type II, Class 1, Grade 2 (20 psi) or Grade 3 (25 psi)
- ▶ CAN/ULC-S704, Type 2, Class 3 or Type 3, Class 3
- ▶ CCMC No. 12423-L
- ▶ UL Certified for Canada - Insulated Roof Deck Assemblies Construction No C38 and 52. Meet CAN/ULC-S126, CAN/ULS-S101 and CAN/ULC-S107
- ▶ UL Standard 1256 Classification Construction No. 120, 123, & 292
- ▶ UL Standard 790 (ASTM E108) Roofing Systems Classification
- ▶ UL Standard 263 (ASTM E119) Fire Resistance Classification
- ▶ UL Standard 1897 Uplift Resistance
- ▶ FM Standard 4450/4470 Approved Refer to FM Approvals RoofNav for Specific System Details
- ▶ IBC Chapter 26 & NBC Sections on Foam Insulation
- ▶ California State Insulation Quality Standards and Title 25 Foam Flammability Criteria (License #TC 1231)
- ▶ Miami-Dade County Approved
- ▶ State of Florida Product Approval (FL17989)

STANDARD THICKNESSES & THERMAL VALUES

NOMINAL THICKNESS		RIC/TIMA 1	
millimeters	inches	LTTR-Value	RSI
25.4	1.0	5.7	1.00
38.1	1.5	8.6	1.50
50.8	2.0	11.4	2.01
55.9	2.2	12.6	2.22
63.5	2.5	14.4	2.53
66.0	2.6	15.0	2.64
71.1	2.8*	16.2	2.85
76.2	3.0*	17.4	3.06
78.7	3.1*	18.0	3.17
83.8	3.3*	19.2	3.38
88.9	3.5*	20.5	3.60
101.6	4.0*	23.6	4.15

* Multi-layer application is strongly recommended when the total insulation thickness exceeds 2.7"

** LTTR (long-term thermal resistance) values were determined in accordance with CAN/ULC-S770-09. Test samples were third party selected and tested by an accredited material laboratory. The LTTR results were reviewed by FM Global and certified by the PIMA Quality Mark Program.

*** RSI is the metric expression of R-value (m² • K/W)

INSTALLATION

DERBIBOARD Roof Insulation Products may be installed with or without vapor retarder, the need for which is determined by the designer. Before installation, the deck should be firm, well attached, even, clean and dry. Proper attachment of the insulation is necessary to prevent roof failures. Performance Roof Systems will not be responsible for any damage caused by improper attachment. DERBIBOARD products can be attached to decks that are approved by FM and local codes. The responsibility to determine the suitability of the deck is that of the designer/specifier and/or owner's representative. Roof insulation which has become wet and/or damaged should be removed and replaced with solid, dry insulation. Surface protection such as plywood must be used in areas where heavy and/or repeated traffic is anticipated both during and after installation. Where possible, a two-layer application of DERBIBOARD is strongly recommended. The joints in each layer should be offset in order to avoid a vertically continuous joint through the total insulation thickness. Two layers (or more) with joints staggered can provide improved insulation performance by eliminating thermal bridges. This method also reduces condensation potential and thermal stress on the roof membrane.

MECHANICAL ATTACHMENT: Mechanical fastening is the preferred method of attachment. Fastener frequency and spacing are covered in the Performance Roof Systems Specifications and Details Guide according to the membranes system. Refer to FM Loss Prevention Data Sheet 1-28 for special considerations regarding perimeter and corners of the roof.

ADHESIVE ATTACHMENT: When mechanical fastening is not preferred or may not be practical, such as on concrete decks, low rise foam adhesive or hot applied bitumen may be used. The maximum DERBIBOARD insulation size for adhesive or bitumen attachment is 4 ft x 4 ft. Low rise foam adhesive shall be applied according to the manufacturer's published instructions at the rate and spacing shown in the Performance Roof Systems Specifications & Details Guide, or as necessary to comply with wind uplift requirements. Boards shall be weighted down after application while the low rise foam adhesive is still curing. When using bitumen on concrete decks, priming is necessary. Precautions must be taken to prevent bitumen drippage. When using hot applied bitumen care must be taken to apply the bitumen in sufficient quantity to totally cover the available deck surface (18-30 lb per square). To ensure embedment, the board must also be walked in while the bitumen is hot enough for positive attachment.

For proper attachment of insulation to lightweight insulating decks or poured gypsum decks, follow the instructions outlined in the NRCA Roofing and Waterproofing Manual.



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PHYSICAL PROPERTIES

CHARACTERISTIC	ASTM	VALUES
Dimensional Stability; %	D2126	< 2%
Compressive Strength; psi (kPa)	D1621	20 (140) or 25 (172)*
Water Absorption; %	C209 & D2842	<1.5, <3.5
Moisture Vapor Transmission; perm	E96	< 1.5
Product Density;	D1622	Nominal 2.0 pfc (32.04 kg/m ³)
Flame Spread (foam core)	E84 (10 minutes)	40 - 60**
Smoke Development	E84 (10 minutes)	50 - 170**
Tensile Strength; pcf (kPa)	D1623	> 730 (35)
Service Temperature	---	-100°F to + 250°F max

Physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.

* Available in 25 psi for SOPRANATURE Systems.

** Numerical ratings are not intended to reflect performance under actual fire conditions. Flame spread index of ≤ 75 and smoke development ≤ 450 meet code requirements for foam plastic roof insulation. Codes exempt foam plastic insulation when used in FM 4450 or UL 1256.

TYPICAL PHYSICAL PROPERTIES

NOMINAL THICKNESS		PIECES PER PACKAGE	SQUARE FEET PER PACKAGE	
millimeters	inches		4 X 4	4 X 8
25.4	1.0	48	768	1,536
38.1	1.5	32	512	1,024
50.8	2.0	24	384	768
63.5	2.5	19	304	608
76.2	3.0	16	256	512
88.9	3.5	13	208	416
101.6	4.0	12	192	384

* Multi-layer application is strongly recommended when the total insulation thickness exceeds 2.7"

** Mechanical attachment only. 4' X 8' boards are not recommended for bitumen or adhesive attachment to the deck.

WARRANTIES

Other than the aforementioned representatives and descriptions, Performance Roof Systems (hereinafter, «Seller») makes no other representations or warranties as to the insulations sold herein. The Seller disclaims all other warranties express or implied, including the Warranty of merchantability and the warranty of fitness for a particular purpose.

LIMITATION OF LIABILITY: The Seller shall not be liable for any incidental or consequential damages including the cost of installation, removal, repair or replacement of the product. The Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of a like quantity of non-conforming product. Performance Roof Systems distributors, agents, sales persons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.

WARNING: DO NOT LEAVE EXPOSED. This product is a polyiso organic plastic foam and will burn if exposed to an ignition source of sufficient heat and intensity, or open flame, such as a welder's torch. Like other organic materials, this product will release smoke if ignited. Do not apply flame directly to DERBIBOARD roof insulation when installing a torch applied modified bitumen system. This product should be used only in strict accordance with Performance Roof Systems recommended uses and application instructions.