

PRODUCT DATA SHEET

DESCRIPTION

R-Panel® is a rigid roof insulation board composed of a closed-cell polyisocyanurate foam core bonded in the foaming process to universal fiber glass reinforced facers.

R-Panel utilizes an environmentally compliant blowing agent containing pentane hydrocarbon to enhance the thermal performance of the foam insulation. This hydrocarbon has zero ozone depletion potential and conforms to the Montreal Protocol established in 1987. R-Panel meets the physical property requirements of ASTM C1289-01 Type II, Class I, Grade 2 and CAN/ULC S704, Type II, Class 3.

USE

R-Panel provides high thermal insulation value over metal, nailable and non-nailable roof decks in built-up, modified bitumen and single-ply membrane roofing systems. It may be applied using hot bitumen, cold adhesives or mechanical fasteners. The universal facer on the top and bottom sides provides a suitable surface for mechanical attachment to a structural deck as well as a suitable surface to apply hot asphalt or cold adhesives. R-Panel meets the International Building Code requirements for a foamed plastic roof insulation.

TYPICAL PHYSICAL PROPERTIES

PROPERTY	VALUES	TEST METHOD
WATER ABSORPTION	<1.0% max	ASTM C209
DIMENSIONAL STABILITY CHANGE (LENGTH & WIDTH)	<2% (LINEAR)	ASTM D2126
COMPRESSION RESISTANCE* 10% CONSOLIDATION-psi (kPa)	20 (138) min	ASTM C1621
MOISTURE VAPOR PERMEANCE	<1 perm (57.5 NG/(PA•S•M2))	ASTM E96
SERVICE TEMPERATURE	-100° to 250°F (-73° to 121°C)	ASTM D1623
TENSILE STRENGTH-PSF (kPa)	730 (35) nom	ASTM D1623

*Also available in 25 psi (172kPa).

FOR USE OVER METAL DECKS

The minimum thicknesses of R-Panel insulation over metal decks are as follows:

WIDTH OF RIB OPENING	Up to 2s" (67 mm)	Up to 3s" (86 mm)	Up to 4a" (111 mm)
THICKNESS OF INSULATION (MINIMUM)	1.0" (25 mm)	1.2" (30 mm)	1.3" (33 mm)

SIZES

SIZE	THICKNESS
4' x 4' (1.22 m x 1.22 m)	1.0"-4.0" (25 mm-102 mm)
4' x 8' (1.22 m x 2.44 m)	1.0"-4.0" (25 mm-102 mm)

Other sizes available by special request.



PERFORMANCE ADVANTAGES

Thermal Efficiency: provides a high degree of insulation efficiency, resisting heat transfer with R-values up to R-22.8 (RSI-4.01).

Universal Facer: compatible with BUR, modified bitumen and single-ply membrane systems.

Noncorrosive: does not accelerate corrosion of pipes, wiring or metal studs.

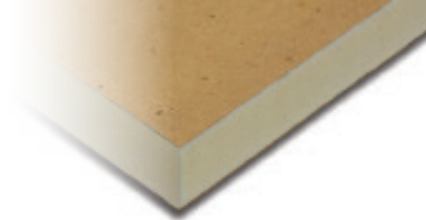
Lightweight: easy to handle, can be cut with a utility knife or saw.

Clean Air: meets Clean Air Act Amendments of 1990.

Miami-Dade County Product Control Approved: complies with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.



Polyisocyanurate Foam Sheathing



PRODUCT DATA SHEET

R-PANEL® ROOF INSULATION

LIMITED WARRANTY/SPECIFICATIONS

All products sold are subject to the following limited warranty: seller warrants that for a period of one year from the date of shipment the product will be free from defects in material and workmanship and is manufactured in all material respects to seller's product specifications. Note: seller's products may vary in details of design and construction from descriptions in any literature or from any sample, display or other model inspected by purchaser.

Seller disclaims all other representations and warranties of any kind, express or implied, in fact or in law, including, without limitation, the implied warranty of fitness for a particular purpose. Every claim under this limited warranty shall be deemed waived unless in writing and received by seller within 10 days of delivery if visibly damaged or defective, and otherwise, within 30 days after the defect to which each claim relates is discovered, or should have been discovered, but in no event longer than one year after product shipment.

LIMITATION OF REMEDY

Purchaser's exclusive remedy and the limit of seller's liability for breach of the limited warranty set forth in the above limited warranty/specifications, whether based on negligence, breach of warranty, strict liability, or any other theory, shall be, at seller's option, repair, replacement with a like quantity of non-defective product or refund of the purchase price, plus reasonable commercial charges incurred for approved returns.

NO RECOVERY OF CONSEQUENTIAL OR SPECIAL DAMAGES

Seller shall not be liable for any consequential or special damages based on negligence, breach of warranty, strict liability or any other theory for failure to perform its obligations under this agreement. Additionally, consequential and special damages shall not be recoverable even if the repair, replacement or refund remedy for seller's breach of its limited warranty fails its essential purpose or for any other reason.

THERMAL PERFORMANCE

THICKNESS (NOM.)		C-VALUE (CONDUCTANCE)		LONG-TERM THERMAL RESISTANCE (LTTR) VALUES	
in	mm	BTU/(hr•ft²•°F)	W/m²•°C	(hr•ft²•°F)/BTU	m²•°C/W
1.0	25	0.167	0.95	5.7	1.00
1.5	38	0.111	0.63	8.6	1.51
1.7	43	0.098	0.55	9.7	1.71
2.0	51	0.082	0.47	11.4	2.01
2.3	58	0.071	0.41	13.2	2.32
2.5	64	0.063	0.37	14.4	2.53
3.0	76	0.054	0.31	17.4	3.06
3.3	84	0.049	0.28	19.2	3.39
4.0	102	0.040	0.23	23.6	4.16

Note: Long-term thermal resistance (LTTR). LTTR values were determined in accordance with CAN/ULC S770, at 75°F (24°C). The ultimate R-value of these products will depend on individual installation circumstances.

Refer to the Material Safety Data Sheet and Product Label prior to using this product.



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Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of thermal insulation listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the sales office nearest you for current information. All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy or for information on other Johns Manville thermal insulation and systems, visit the website or call the 800 number above. © 2014 Johns Manville. 717 17th Street, Denver, CO 80202