



Smart Ideas. Better Insulation.

## Panel Deck PSK

Formaldehyde-free Thermal and Acoustical  
Fiber Glass Insulation



### FORMALDEHYDE-FREE

Johns Manville has revolutionized the building insulation industry by introducing an entire line of formaldehyde-free fiber glass building insulation. JM Formaldehyde-free insulation provides the same high-quality thermal and acoustical properties as conventional JM fiber glass – just without the formaldehyde-based binder. Why? Because it's a smart thing to do for our customers and the environment. Formaldehyde has traditionally been used as part of the binder in fiber glass insulation. Although there is no health risk with the traditional product, formaldehyde at higher levels may cause irritation and sensitivity. JM Formaldehyde-free building insulation utilizes an innovative new acrylic binder that eliminates binder-related formaldehyde emissions during manufacturing and, once installed, will not off-gas formaldehyde in the indoor environment. No formaldehyde means fewer things to worry about. Visit us at [www.jm.com](http://www.jm.com) for more information.

### PRODUCT DESCRIPTION

Johns Manville Panel Deck PSK-faced thermal and acoustical fiber glass insulation is made of long, resilient glass fibers bonded with an acrylic thermosetting binder. The batts are laminated with PSK (polypropylene-scrim-kraft) which enables the insulation to carry a fire hazard classification rating of 25/50 per ASTM E 84 and serves as an excellent vapor retarder. Extra-wide tabs extend full length along both sides for specialty applications. The reflective facing may be left exposed where codes permit.

### AVAILABLE FORMS

- 2 x 4 modular roof construction – commercial buildings
- Building systems where extended tabs assist in application

### APPLICATIONS

#### For 2 x 4 Modular Roof Deck

- **Step 1.** Position the first folded tab on the near side of the first longitudinal wood member and staple it in place parallel to the deck. Space staples 6" (152 mm) apart the entire length of the tab, with a staple within 1" (25 mm) of each end of the folded tab. Make certain that the staples are installed with the width dimension parallel to the 93" (2.36 m) long side of the batts.
- **Step 2.** Position the batt into the cavity and pull the second folded tab across the face of the adjoining framing member. Staple the tab to the near side of the second framing member while holding the tab in alignment parallel to the deck. Maintain fullest "drape" on each tab to ensure sufficient space above the facing to permit the batt to recover to its full thickness.
- **Step 3.** In the second module, double layer the tab of the next batt against the stapled tab of the first batt, and repeat Steps 1 and 2.  
In applications where framing is not present, it may be attached to the underside of steel or wood roof decks using impaling pins and washers (in which case, adjacent tabs are folded together and stapled for a continuous vapor retarder).

### PACKAGING

Panel Deck PSK insulation is compression-packaged for savings in storage and freight costs.

### RECOMMENDED STORAGE AND TRANSPORT

Store insulation indoors. Keep insulation clean and dry at all times. When transporting, cover completely with a waterproof tarpaulin as necessary.

### SPECIFICATION COMPLIANCE

ASTM C 665, Type II, Class A, Category 1  
ASTM E 96 Permeability; PSK facing – .10 Perm Rating  
ASTM E 84 Flame Spread 25 or less, Smoke Developed 50 or less

### LIMITATIONS OF USE

Check applicable building codes.

### PERFORMANCE ADVANTAGES

- Formaldehyde-free – will not off-gas formaldehyde in the indoor environment.
- Fire-resistant and Noncombustible – (see Specification Compliance). Panel Deck PSK may be left exposed where building codes permit.
- Moisture Control – when properly installed without openings, the PSK facing resists water vapor transmission.
- Light-reflective Surface – when exposed, the white polypropylene reflective surface helps maximize lighting efficiency, and may reduce lighting requirements.
- Strong – the PSK facing provides a tough protective surface. The fiber glass scrim reinforcement in the facing increases tensile strength and product durability.
- Thermal Efficiency – provides effective resistance to heat transfer with R-values up to R-30 (RSI 5.3).
- Sound Control – reduces transmission of sound through exterior and interior walls and floor/ceiling assemblies.
- Noncorrosive – does not accelerate corrosion of pipes, wiring or metal studs.
- Durable – unaffected by moisture, oil, grease and most acids. It will not rot, mildew or otherwise deteriorate.
- Resilient – bonded glass fibers will not pull apart during normal applications and resist settling, breakdown and sagging from vibration.
- Flexible – forms readily around corners and curved surfaces.

# Panel Deck PSK

Formaldehyde-free Thermal and Acoustical Fiber Glass Insulation

Visit our website at [www.jm.com](http://www.jm.com)  
Or call: 1-800-654-3103

## BUILDING CODE COMPLIANCE AND FIRE HAZARD CLASSIFICATION

	ICBO	SBCCI	BOCA	IBC/IRC	Flame Spread*	Smoke Developed*
Panel Deck PSK	All Types	All Types	All Types	All Types/All Types	25	50

\*Per ASTM E 84.

## AVAILABLE FORMS\*

Specification Compliance	R-value (hr-ft <sup>2</sup> -°F/Btu)	RSI-value (m <sup>2</sup> -°K/Watts)	Thickness**		Width***	
			(in)	(mm)	(in)	(mm)
ASTM C 665	19	3.3	6 ¼	159	23	584
Panel Deck PSK Type II, Class A Category 1	30	5.3	10 ¼	260	24	610

\* Consult your local sales representative product availability chart for other available sizes and R-values (RSI-values).

\*\* Thickness may vary by producing location.

\*\*\* Special widths may be available. Check with your sales representative. Standard product lengths include 93 and 96 inch batts.

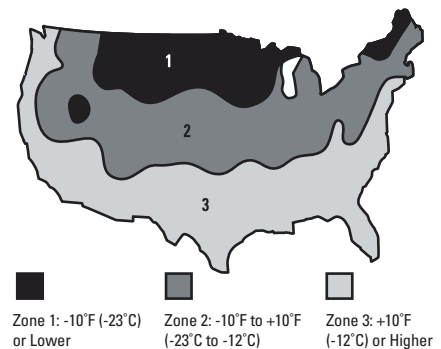
## HUMIDITY RECOMMENDATIONS: UNDER ROOF APPLICATIONS

In buildings with Panel Deck PSK insulation under the roof deck, humidity control is essential to help prevent water vapor condensation between the deck and the fiber glass. Indoor maximum humidity levels at 70°F (21°C) for the three zones are shown below. The zones on the map show 99 percent of the median winter temperature extremes for each zone. These indoor maximum humidity level recommendations are based on Johns Manville water vapor transmission chamber test results.

## HUMIDITY RECOMMENDATIONS

Winter Medium of Annual Extremes	Maximum Allowed Indoor Relative Humidity at 70°F (21°C) (Constant)	Maximum Allowed Indoor Relative Humidity Daytime (Intermittent)
Zone 1: -10°F (-23°C) or Lower	30%	40%
Zone 2: -10°F to +10°F (-23°C to -12°C)	35%	45%
Zone 3: +10°F (-12°C) or Higher	45%	50%

If the indoor relative humidity exceeds the maximums above, the building must be ventilated or other steps taken to reduce the humidity to the recommended levels. If it is not practical to meet these humidity recommendations, do not use the Panel Deck insulation system.



Properly insulating a structure using Johns Manville building insulation helps preserve our environment by reducing energy consumption for heating and cooling, reducing the pollution resulting from fuel burning, reducing the emission of hazardous air pollutants during manufacturing and reducing waste through the utilization of recycled materials. Look for the cross and globe emblem on Johns Manville building insulation which indicates independent certification by Scientific Certification Systems, Inc. of 25% or more recycled glass content.

Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of Panel Deck PSK-faced thermal and acoustical fiber glass 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 and acoustical insulation and systems, call or write to the 800 number or address listed below.



Distributed by:

## Building Insulation Division

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## DESCRIPTION

GL-VR is a flame retardant vapor barrier facing consisting of polypropylene film, fiberglass reinforcing yarn and natural kraft paper laminated together with a flame retardant adhesive.

## APPLICATION

This product is typically used as a facing for metal building insulation

## CONSTRUCTION

Basis Weight	19 lbs/MSF (93 g/m <sup>2</sup> )
Polypropylene Film	0.00125" (32 microns)
Fiberglass Reinforcing Yarn	MD: 4/inch (16/100mm) XD: 3/inch (12/100mm)
Natural Kraft Paper	15 lbs/3000 ft <sup>2</sup> (24 g/m <sup>2</sup> )
Adhesive	Flame Retardant

## FLAMMABILITY

### ASTM E84<sup>1</sup>

Flame Spread  $\leq 25$   
Smoke  $\leq 50$

1. Test results reflect using GL-VR with the foil facing outwards (foil exposed).



## SPECIFICATIONS

Properties	Test Method	
Flexible, Low Permeance, Vapor Retarders	ASTM C1136	Meets
Permeance (MVTR)	ASTM E96	0.09 max perms
Tensile Strength	ASTM D828	MD 30 lbs/in (5.3 N/mm) XD 20 lbs/in (3.5 N/mm)
Mullen Burst	ASTM D774	35 psi (240 kPa)
Mold and Mildew Resistance	ASTM D2020	None
Fungi Resistance	ASTM C1336	Pass
Elevated Temperature and Humidity Resistance	ASTM C1258	No Corrosion No Delamination
Temperature Integrity	ASTM C1263	Pass
Dimensional Stability	ASTM D1204	0.50% max
Adhesion	1 hour water @ 70°F (21°C)	Pass



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Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the product 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 Regional Sales Office nearest you for current information.

**All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit [www.jm.com/terms-conditions](http://www.jm.com/terms-conditions) or call (800) 654-3103.**