

# ISORAD V2

### 1 | Product Name

**ISORAD V2 160**  
**ISORAD V2 250**  
**ISORAD V2 300**

### 2 | Manufacturer

**ISORAD V2** is manufactured by Isofoam Group, a premier manufacturer of insulation products for over 40 years.

#### Isofoam Group

1346, boul. Vachon Nord  
 Sainte-Marie (Québec) G6E 1N4  
 T: 418 387-3641 | F: 418 387-4039  
 info@isofoam.com

### 3 | Product Description

**ISORAD V2** is a rigid high-density expanded polystyrene insulation with a multidirectional tube retaining system and the **ISOCLICK ALIGN** clipping system on 4 sides.

### 4 | Dimensions

Dimensions	Thicknesses	R Value (RSI)
<b>ISORAD V2 160</b>		
48" x 48" IC4A	2 1/2" (overall 3 1/2")	10.1 (1.77)
	3 3/4" (overall 4 3/4")	15.1 (2.66)

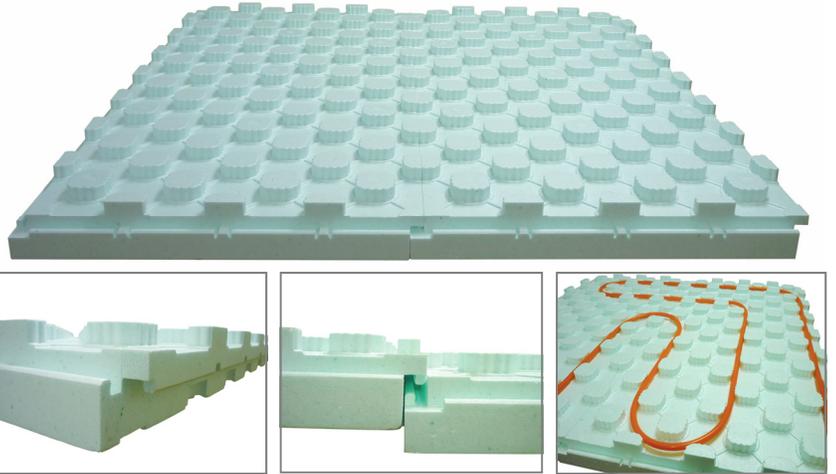
Dimensions	Thicknesses	R Value (RSI)
<b>ISORAD V2 250</b>		
48" x 48" IC4A	2 1/2" (overall 3 1/2")	10.5 (1.85)
	3 3/4" (overall 4 3/4")	15.7 (2.76)

Dimensions	Thicknesses	R Value (RSI)
<b>ISORAD V2 300</b>		
48" x 48" IC4A	2 1/2" (overall 3 1/2")	10.6 (1.87)
	3 3/4" (overall 4 3/4")	15.9 (2.80)

For 1/2" tube (Ø int. 1/2", Ø ext. 5/8") or 5/8" tube (Ø int. 5/8", Ø ext. 3/4").

Also available : 24" x 48".

Contact us for more informations.



### 5 | Applications

#### Insulation panel for hydronic radiant floor heating

- For installation under a residential, commercial or industrial concrete slab.
- Can also be used under slabs, sidewalks and outdoor parking lots to accelerate melting of ice and snow during winter.
- Reduces the cost of installing a hydronic radiant floor heating system.
- Simplifies installation of the tubing for hot water or glycol floor heating systems.
- Can be used with certain electrical systems according to manufacturer's specifications.

### 6 | Environmental Data

Containing between 95% and 98% air and only 2% to 5% of plastics, **ISORAD V2** presents risks of toxicity lower than those from conventional building materials and it does not and has never contained HFCs that damage the ozone layer.

The product **ISORAD V2** has been certified to meet the third-party chemical emissions standards for **UL-GREENGUARD** and **UL-GREENGUARD Gold** Certifications ([UL.COM/GG](http://UL.COM/GG)).

Isofoam Group products contribute to obtaining LEED® credits (see table 1).

For complete details of the potential contributions of the product for a LEED® Canada-NC-CS 2009 or a LEED® Canada for Homes 2009 project, contact us or fill out the form on our website.

**Table 1.** Contribution of **ISORAD V2** insulation to LEED® Canada-NC 2009, LEED® Canada-CS 2009 certification.

Categories	LEED® Canada NC & CS 2009
<b>SS</b> Sustainable Sites	<b>28 points for LEED® Canada-NC 2009</b> <b>&amp;</b> <b>30 points for LEED® Canada-CS 2009</b>
<b>WE</b> Water Efficiency	
<b>EA</b> Energy and Atmosphere	
<b>MR</b> Materials and Resources	
<b>EQ</b> Indoor Environmental Quality	
<b>IDP</b> Innovation & Design Process	
<b>RP</b> Regional Priority	

### 7 | Warranty

**ISORAD V2** meets the standards and requirements:

- CAN/ULC-S701  
Type 2 (**ISORAD V2 160**)  
Type 3 (**ISORAD V2 250, 300**)
- CCMC # 12895-L (ISORAD V2 160)**
- CCMC # 13638-L (ISORAD V2 250, 300)**
- Product certified for low chemical emissions: **GREENGUARD - UL 2818** and **GREENGUARD Gold - UL 2818**.

### 9 | Advantages & Benefits

#### Superior insulation

- Stable and permanent insulation value.
- Prevents heat loss through the soil. Efficient thermal barrier ensuring permanent energy savings.
- ISORAD V2** allows to meet the highest insulation requirements.
- High compressive strength. Available in 16 psi (110 kPa), 25 psi (173 kPa) or 30 psi (210 kPa).

#### Multidirectional retaining system

- Simplifies tubing installation. The tubing retaining system layout allows multidirectional installation.
- Eliminates the need for wire mesh when it is not required for slab reinforcement.
- The raised lines and rings (circles) around the nubs enable a spacing between insulation panel and tubing to maximize the contact of the concrete with the tubes.
- Provides a regular interval of tubing.

#### ISOCLICK ALIGN clipping system

- Clipping system ensuring continuity of insulation. Once installed, panels are clipped together and remain in place during installation.
- Contains notches to position easily and quickly the panels and ensuring the alignment of the nubs.

### 8 | Technical Data

Table 2. Physical Properties

PROPERTIES	METHODS	UNITS	ISORAD V2 160	ISORAD V2 250	ISORAD V2 300
<b>THERMAL RESISTANCE</b>	ASTM C-518	m <sup>2</sup> ·°C/W/25 mm (hr·ft <sup>2</sup> ·°F/Btu/in)	<b>0.71 (4.05)</b>	<b>0.74 (4.2)</b>	<b>0.75 (4.25)</b>
<b>COMPRESSIVE STRENGTH MIN.</b>	ASTM D-1621	kPa (psi)	<b>110 (16)</b>	<b>173 (25)</b>	<b>210 (30)</b>
<b>FLEXURAL STRENGTH MIN.</b>	ASTM C-203	kPa (psi)	<b>240 (35)</b>	<b>345 (50)</b>	<b>345 (50)</b>
<b>WATER VAPOR TRANSMISSION MAX.</b>	ASTM E-96	ng/Pa·s·m <sup>2</sup> (perms)	<b>200 (3.5)</b>	<b>130 (2.3)</b>	<b>130 (2.3)</b>
<b>WATER ABSORPTION MAX.</b>	ASTM D-2842	%	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>
<b>DIMENSIONAL STABILITY MAX.</b>	ASTM D-2126	%	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>
<b>COEFFICIENT OF THERMAL EXPANSION</b>	ASTM D-696	mm/mm/°C (in/in/°F)	<b>6 X 10<sup>-5</sup> (3.5 X 10<sup>-5</sup>)</b>	<b>6 X 10<sup>-5</sup> (3.5 X 10<sup>-5</sup>)</b>	<b>6 X 10<sup>-5</sup> (3.5 X 10<sup>-5</sup>)</b>
<b>EFFECTIVE TEMPERATURE RANGE MAX.</b>	CONTINUOUS	°C (°F)	<b>75 (167)</b>	<b>75 (167)</b>	<b>75 (167)</b>
	INTERMITTENT	°C (°F)	<b>82 (180)</b>	<b>82 (180)</b>	<b>82 (180)</b>
<b>FLAME SPREAD</b>	CAN/ULC S102.2M	-	<b>240</b>	<b>240</b>	<b>240</b>

The Safety Data Sheet of Isofoam Group products is available on the website.

### 10 | Installation

**ISORAD V2** insulation panels are easy to handle and install. They can be cut with a utility knife.

#### Installation tips:

Refer to Master Specifications or to the Installation Guide available on the website for more information.

#### Integrated start arrow

- To begin installation, locate the arrow on the panel and point it to the corner of the wall. Install all the panels in the same direction.



#### Cutting lines on the back of panel

- Help to start a new row using leftover panels ensuring the retaining system is well aligned for tubing installation.
- Reduces material waste.



### 11 | Maintenance

No maintenance is required after **ISORAD V2** panels are properly installed.

### 12 | Technical Services

Our experts will be pleased to answer your questions regarding application and installation of our products.

### 13 | Availability & Cost

Availability: Throughout eastern Canada.  
Cost: Current price list available on request.

### 14 | Limitations

Combustible if exposed to an open flame or other substantial and sustained source of combustion. Avoid contact with petroleum-based solvents or their vapours. Avoid prolonged exposure to direct sunlight.

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T: 418 387-3641 – 1 800 463-8886 | F: 418 387-4039  
info@isolofoam.com | www.isolofoam.com

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