

# 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

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### 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)

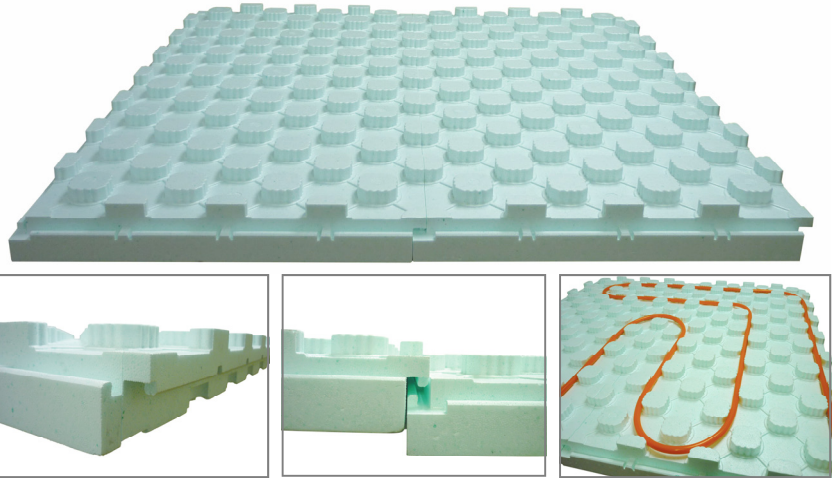
Dimensions	Thicknesses	R Value (RSI)
<b>ISORAD V2 250</b>		
48" x 48" IC4A	2 1/2" (overall 3 1/2")	10.5 (1.85)
	3 3/4" (overall 4 3/4")	15.7 (2.76)

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
THERMAL RESISTANCE	ASTM C-518	m <sup>2</sup> ·°C/W/25 mm (hr·ft <sup>2</sup> ·°F/Btu/in)	0.71 (4.05)	0.74 (4.2)	0.75 (4.25)
COMPRESSIVE STRENGTH MIN.	ASTM D-1621	kPa (psi)	110 (16)	173 (25)	210 (30)
FLEXURAL STRENGTH MIN.	ASTM C-203	kPa (psi)	240 (35)	345 (50)	345 (50)
WATER VAPOR TRANSMISSION MAX.	ASTM E-96	ng/Pa·s·m <sup>2</sup> (perms)	200 (3.5)	130 (2.3)	130 (2.3)
WATER ABSORPTION MAX.	ASTM D-2842	%	4	2	2
DIMENSIONAL STABILITY MAX.	ASTM D-2126	%	1.5	1.5	1.5
COEFFICIENT OF THERMAL EXPANSION	ASTM D-696	mm/mm/°C (in/in/°F)	6 X 10 <sup>-5</sup> (3.5 X 10 <sup>-5</sup> )	6 X 10 <sup>-5</sup> (3.5 X 10 <sup>-5</sup> )	6 X 10 <sup>-5</sup> (3.5 X 10 <sup>-5</sup> )
EFFECTIVE TEMPERATURE RANGE MAX.	CONTINUOUS	°C (°F)	75 (167)	75 (167)	75 (167)
	INTERMITTENT	°C (°F)	82 (180)	82 (180)	82 (180)
FLAME SPREAD	CAN/ULC S102.2M	-	240	240	240

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.

#### Isofoam Group

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