





# Installing Radiant Floor Tubing has never been so quick and easy!

- Compact (2' x 4') <u>and</u> easy to handle, Heat-Sheet® Heavy Panels securely interlock together.
- Tough preformed nodules resist job site breakage and form a multi-directional tubing channel grid.
- Tubing easily "walks into place" (in half the time or better!).
- And, tubing stays in place (without ties, clips or staples in most cases).

# **TECHNICAL INFORMATION**

### **SPECIFICATIONS**

Heat-Sheet® Heavy Panels are made with expanded polystyrene (EPS) — a tough, high-density, closed cell foam insulation that is engineered to support the weight of cast-in-place concrete. Heat-Sheet® Heavy Panels come in thicknesses of 3-1/4" (R10) and 4-1/4" (R14) (See Size & Packaging Chart). Heat-Sheet® Heavy's tubing channel system provides proper, multi-directional placement of 1/2", 5/8" or 3/4" I.D. tubing with 4" on-center points.

### **APPLICATIONS**

Heat-Sheet® Heavy Radiant Floor Panels can be used in all under-concrete radiant floor applications, including Slab-On-Grade, Sandwich Slab, Snow-Melt and Retrofit & Overlay Applications.

### APPLICABILITY AS AN UNDER-SLAB RADON MITIGATION INSULATION LAYER

Tested per NRC's Radon Infiltration Building Envelope Test System (RIBETS) to be able to serve, when when placed with the nodules facing down, as an under-slab radon mitigation insulation layer that is 50% more permeable than 4" (0.1m) of clean granular material. Test results available upon request.

### **ESTIMATING**

- 1. Measure the length and width to determine the size of the area in which you want to install
- 2. Heat-Sheet® Heavy Panels.
- 3. The panels are 8 sq. ft. each. Divide the area by 8 to get the number of panels you require.
- 4. Heat-Sheet<sup>®</sup> Heavy Panels come bundled in varying quantities as shown in the Size & Packaging Chart. When ordering your panels, round up to the nearest whole bundle.

## **INSTALLATION**

### LAYING HEAT-SHEET® HEAVY RADIANT FLOOR PANELS

- 1. Ensure the ground is reasonably level before beginning installation.
- 2. A vapor barrier may be required by your local building code. When installing a vapor barrier, ensure it is in place before you begin laying the Heat-Sheet® Heavy panels.
- 3. Remove the interlock from two sides of the starting panel to avoid an air gap. It is easiest to remove the interlock you can see when looking at the back of the panel. Starting in a corner, place the cut edges tight against the wall.
- 4. For the next panel, cut the interlock on the 4' length only. Place trimmed panels so that they interlock along the 2' dimension.
- 5. Continue placing panels until you come to a wall. You will likely need to cut the final panel in this row to fit.
- 6. Use the leftover segments to start the next rows, and be sure to maintain the 4" spacing pattern. The idea is to have a staggered (running bond) layout rather than rows or columns. This helps keep the panels bound together and reduces waste.

### ONCE HEAT-SHEET® HEAVY PANELS ARE INSTALLED

- 1. Heat-Sheet® Heavy Radiant Floor Panels are designed with a 4" grid for easy tube spacing. Please consult an HVAC designer to determine the required separation points.
- 2. Install the tubing by simply "walking it" into the panels.
- 3. Ensure the tubing is fully seated when turning a corner before you begin the next run. You may need to use a plastic staple on the turns to keep the pipe in place.
- 4. Wire mesh and rebar can be laid directly on top of the panels, if required.

### **SCREED VOLUME RATES**

To the top of the Heat-Sheet® Heavy nodules: 0.069 ft³/ft². For each additional inch of slab: 0.083 ft³/ft²

# **SIZE & PACKAGING CHART**

				Available Compressive Strengths <sup>6</sup>			
Product <sup>6</sup>	Nominal Panel Thickness <sup>1</sup>	Overall Thickness <sup>2</sup>	Average R-Value <sup>3</sup>	30 psi (212 kPa)	60 psi (414 kPa)	Panels/ Bundle <sup>5</sup>	Sq.Ft./ Bundle <sup>5</sup>
HSH-R10⁴	2"	3-1/4"	10	✓	✓	8	64
HSH-R14 <sup>4</sup>	3"	4-1/4"	14	✓	✓	6	48

### CCMC EVALUATION LISTING 14007-L

Additional thicknesses and compressive strengths may be available by custom order from your local Heat-Sheet supplier..

<sup>1</sup>Refers to thickness of the panel minus the nodules (grid height per image).

GRID HEIGHT = 1.25"

<sup>2</sup>Refers to thickness of nodule plus nominal panel thickness.

OVERALL THICKNESS

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<sup>3</sup>In accordance with ASTM C578 and CAN/ULC S701 at 750°F (240°C). R-value is determined based on weighted average R-value of nodule and panel profile.

<sup>4</sup>Meets water vapor barrier/retarder in accordance with the National Building Code of Canada and the International Residential Code. Confirm with local bylaws.

 $^5\,\mbox{Panels}$  per bundle may vary. Contact your local Heat-Sheet® representative to confirm.

<sup>6</sup>Based on compressive strengths at 10% deformation.

# FOR MORE INFORMATION:

Visit <u>Heat-Sheet.com</u> ● Email us at <u>info@heat-sheet.com</u> ● Call your local Heat-Sheet® manufacturer below

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**HEAT-SHEET.COM** 

