

## **Commonly asked questions about STEP Warmfloor™**

### **What is STEP Warmfloor™?**

STEP Warmfloor™ is a strong, flexible, thin plastic heating mat. It is made of an innovative polymer blend that heats when electricity is passed through the material. Unlike other types of radiant floor heating, STEP Warmfloor™ has the unique ability to self-regulate. So by design it cannot overheat. STEP Warmfloor™ operates on low-voltage and is normally connected to a 24-volt power supply, but can also be run by solar or wind-power source.

### **Can STEP Warmfloor™ be used for renovation?**

STEP Warmfloor™ is ideal for renovation and new construction. Because the product is so thin 1.2 mm (3/64") and flexible it can be installed without needing to change the height of molding, doors or cabinets. Additionally, each room can be individually controlled.

### **Can STEP Warmfloor™ be used as a building's only heat source?**

STEP Warmfloor™ is being used successfully in many homes as the only heat source. It is used in cold areas such as Alaska, Norway, Ushuaia, etc. Using this heating system eliminates the need for a forced air furnace, which blows dust and particles around. Studies have shown that dust and particles aggravate asthma and other respiratory ailments. Even better each room can be individually controlled.

### **What type of floors can STEP Warmfloor™ be used under?**

STEP Warmfloor™ can be used under almost any flooring including carpet, vinyl, laminate, marble, stone, tile, and even under wood.

### **Can STEP Warmfloor™ be installed under existing floors?**

Yes, as long as you have access to the sub-floor. STEP Warmfloor™ can be installed between floor joists without altering your existing floors.

### **How long has STEP Warmfloor™ been on the market?**

The self-regulating polymer technology was developed in 1981 and first used to provide heated seats for automobiles. Since then the technology has been used in a variety of applications, including the floor covering area. Hundreds of thousands of square feet of STEP Warmfloor™ have been installed globally.

### **What do you mean by self-regulating?**

Because of its polymer design, STEP Warmfloor™ cannot overheat. As the material gets warmer, less amount of electricity passes through the plastic and therefore less heat is generated. It is as if you had a sensor over the entire floor. STEP Warmfloor™ is even approved to be used in hospital beds, as it adapts to the temperature generated by the body heat.

## **How safe is the product?**

STEP Warmfloor™ is a very safe product and ideally suited for bathrooms and other wet environments. Because it is mainly a polymer it is unaffected by moisture. STEP Warmfloor™ is a low voltage system (24 volts), safe as a battery.

Even if there is an earthquake, STEP Warmfloor™ will not give rise to sparks or ignite.

Further the product has met the stringent international ETL listing protocol and conforms to the ANSI/UL-1693 standard and has the CE Marking.

## **Is it difficult to install?**

STEP Warmfloor™ is very easy to install. It was designed with simplicity and the installer in mind. The elements are cut and connected on site to fit the floor space.

## **How energy-efficient is the system?**

STEP Warmfloor™ can be placed closer to the surface than any other radiant floor heating system, and reacts fast to external temperature changes. STEP Warmfloor™ is self-regulating, therefore it draws only the energy required to maintain the ideal temperature, and it's method of continuous heating is more efficient than other cycled heating systems.

## **How can STEP Warmfloor™ be regulated?**

For floor warming, STEP Warmfloor™ uses a time-proportional controller for each individual zone. For larger projects, STEP Warmfloor™ uses a series of programmable/non-programmable thermostats to control the ambient and/or floor temperature. This allows each customer to choose the level of comfort desired, while maintaining the self-regulating properties of the material.

## **What consumption should I expect to run the system?**

STEP Warmfloor™ can give you an estimate on the consumption if they have the location, area size, insulation values and cost of electricity per kWh.

## **What type of insulation should I use under the elements?**

This will depend on the type of subfloor, floor covering and height available. Guidelines for all radiant heating systems require a higher R-value under the heating elements as opposed to over with a ratio of 4:1. Also some flooring materials will require insulation with higher compressive strength for under, e.g. ceramic tile, natural stone, etc.

## **How do I estimate the amount of material needed?**

It depends if you need total heating or just floor warming. On our website, you will find a Quote Request form which you can fill-in, then e-mail or fax to us or to your local distributor. You can request for a quick estimate or a quote with layout and work sheets. For assistance contact our technical service department.

## **Is STEP Warmfloor™ a Patented Technology?**

STEP Warmfloor™ has US and European patents.

### **What other radiant heat alternatives do I have?**

One method is to use hot water tubing below the floor. Hydronics systems require maintenance for pumps and valves, are difficult to use for smaller areas and for retrofits in an existing home.

Another alternative is the use of electric cables or films. These systems are fixed wattage and carry higher voltage (100V – 240V). They require thermostats, sensors and ground fault switches and are not recommended for under all floor coverings.

### **Has STEP Warmfloor™ won any awards?**

STEP Warmfloor™ has won several awards including:

Flooring Magazine Top 10 products	1996
1st place Most Innovative Product for the New Home Show	1997
Innovation Award Silver Medal at Batimat/Interclima	1997
Editors Top 50 Popular Home Automation	1998
11th International Construction Award	1999
RPA Electric Commercial and Residential Awards	2000
Radiant Panel Association Judge's Choice Award Winner	2004

### **Where else in the house can STEP Warmfloor™ be used?**

- STEP Warmfloor™ is ideal for those hard to heat places such as basements, 3 and 4 season sunrooms, and living spaces above garages.
- STEP Warmfloor™ can be used to take away the chill of cold walls.
- STEP Warmfloor™ can be placed behind mirrors to avoid them to fog-up.
- STEP Warmfloor™ can be used under shower seats and around tubs.
- STEP Warmfloor™ can be placed under stone counter tops.

### **What are some of the other areas STEP heating elements have been used?**

The technology has been used in a variety of areas:

- STEP Snowmelt™ is great under sidewalks and driveways to prevent snow and ice build-up. No more shoveling walkways or using salt to melt the ice.
- STEP De-icing™ for roofs and gutters to solve problems of snow buildup, ice damming and creation of icicles.
- STEP Marine™ on Alaskan tug boat decks to prevent ice and snow build-up in minus 40 degree weather.
- In the North Sea to keep warm and comfortable living areas on oil platforms (100 feet above the ice cold ocean).
- In the Antarctic to help keep delicate electronics working.
- By veterinarians to keep animals warm.
- In greenhouses to help plants grow.

These are only a few of the numerous applications that the product has been used for. To see more go to [www.electroplastics.com](http://www.electroplastics.com)