

Radiant Heat INSTALLATION COMPARISON



*A Fact-Based Guide to
Delivering Maximum Value
and Efficiency*

From the Manufacturers of

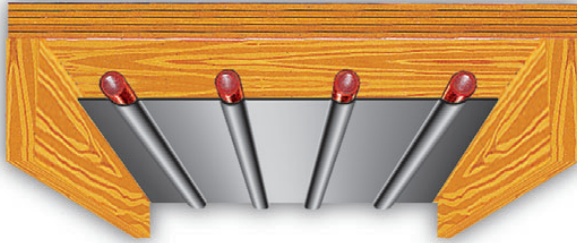
THERMA-FLOOR

The Ideal Underlayment for Radiant Floor Heat

UNDERFLOOR



THERMA-FLOOR®



- **Lower Efficiency.**

Since a plywood subfloor is nearly four times more insulative than Therma-Floor®, underfloor installations consume more energy to provide the same amount of heat to the room above. It's a little like putting an electric blanket *underneath* the mattress. The heat has to fight its way through the floor first, before it can ever begin to heat the room.

- **Limited Design.**

Design of underfloor installations is driven by accessibility to the joists and crawl spaces, rather than strategic placement to address specific heating challenges. In other words, the tubing goes "wherever it will fit." Since you can't get heat where you don't have tubes, the final result can often be a floor with hot and cold spots and a conspicuous lack of comfort.

- **More Labor.**

Additional labor includes difficulty of drilling holes between joists, installing tubing through the joists, and installing reflective heat distribution plates, all done over head. If you've heard that an underfloor installation saves money, think again. With the additional labor required for this type of system, there's just no coming out ahead. Instead of saving money, you're sacrificing comfort.

- **Weakened Joists.**

The leading truss manufacturer reports that heating wood joists above 150 °F for prolonged periods of time (as is typical of underfloor installations to drive heat through the subfloor to the room) causes permanent loss of strength — up to 30%.

From a Radiant Floor Heating Contractor

"In most cases the labor costs alone to install a staple-up far exceed the cost of Therma-Floor...plus, of course, the price of the reflective plates."



- **Higher Efficiency.**

As a thermal mass, Therma-Floor® provides the ultimate mass, evenly transferring heat from hydronic tubes or electric cables to the living area. Therma-Floor is specially formulated to provide superior heat conduction and long-term durability. Installed easily above the subfloor, Therma-Floor encases the tubes to capture all the heat and deliver it above the subfloor, where it's needed most.

- **Customized Design.**

Design of above-floor installations using Therma-Floor allows for custom tube/cable placement to address heating challenges in specific areas such as entryways, along perimeters of walls with many windows, etc.

- **Less Labor.**

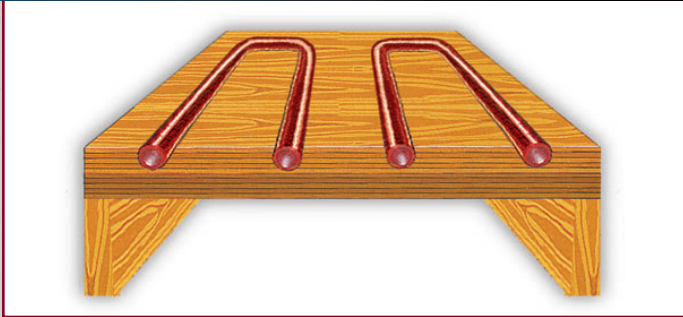
Installed over the subfloor, Therma-Floor is conveniently pumped in, and dries to accommodate foot traffic in just 90 minutes. A 2400-sq.-ft. home can be poured in just two hours.

- **Added Structural Integrity,**

Including Sound Control and Fire Resistance.

Therma-Floor actually stiffens the floor, while sealing perimeter wall areas for added sound control and elimination of drafts. Its noncombustible formulation is UL/ULC fire rated, enhancing home safety.

PATTERNED WOOD VS THERMA-FLOOR®



- **Limited Design.**

Pre-patterned means just that — you'll live with the pattern for all floor areas. You can't adjust the layout for areas of greater heat loss unless you buy special equipment to make your own custom panels.

- **No Thermal Mass.**

When you think of materials that store heat best, wood doesn't end up on anyone's list. Because it's a fibrous, more porous material, wood just can't store or spread heat as well as mineral-based materials.

- **Extra Equipment / Work in Non-Standard Areas.**

If you need to break out of the "pattern" you'll need to buy a pricey router and bit to make your own grooves, wherever the standard layout doesn't fit the room layout or the specific heating challenge.

- **Exposed Tubing Vulnerable to Damage.**

As anyone who's ever installed radiant heat tubing or cable knows, they're easily damaged while left exposed during construction — and even after if covered only with vinyl or carpet, as it is with patterned wood. When vinyl is the selected floor covering, its direct contact with the tubing heats unevenly, creating uncomfortable hot spots that also may damage and/or discolor the floor covering over time.

- **Time-Consuming Installation.**

To cover the floors of an entire home, pre-patterned panels represent an expensive materials purchase and time-consuming installation — at least 50% longer than stapling tubing directly to plywood. And even more time in areas requiring non-standard tube layout. Add up the pricey material and additional labor costs, and you'll discover there really aren't any savings after all.



- **Custom Design.**

Therma-Floor® allows you to design for high heat loss exterior walls or other specific area heating challenges. You can also use more than one tubing configuration per zone, i.e. double-triple wall serpentine and a true counterflow configuration for large room interiors.

- **The Ideal Thermal Mass.**

Poured 1¼" to 1½" thick over any brand of hydronic tube or electric heating cable, Therma-Floor delivers the ultimate in heat conduction, for an entire home or one room at a time.

- **No Special Equipment Required.**

Your experienced, authorized Therma-Floor applicator does it all. Once you've installed the tubing or cable, a finished system installation is only a quick, clean pour away.

- **Protected Tube/Cables.**

Therma-Floor can be poured as soon as the tubing/cables are in place, encasing the heating elements in a permanent, protective layer that's rock hard, yet weighs about the same as a typical tile bed of the same dimensions.

- **Efficient Installation.**

For a typical 2400 sq. ft. home, experienced applicators can complete a Therma-Floor pour in just two hours.

From a Therma-Floor Customer in Minnesota

"We had been out of town for three days in February, with outside temperatures just above zero, and came home to find our boiler had gone out for at least a full day. Thanks to the heat stored in the Therma-Floor, the room temperature had only gone down to 63°F — a much better result than frozen or burst pipes!"

CONCRETE



THERMA-FLOOR®



Thin Slab Concrete Technical Specs

Set Time:	At least 1–2 days
Cure Time:	28 days
Finishing:	Hand troweling required
Fire Control:	Normal-weight concrete has no fire-rated designs

- **Made for Sidewalks.**

While concrete is great for many general construction applications, it is not intended to withstand the temperature fluctuations required of a genuine thermal mass, when installed over plywood. When thin slab concrete is used as the thermal mass, it often shrinks and cracks, breaking contact with the tubes/cables, and limiting its effectiveness in distributing and storing heat.

- **Won't Seal Under Drywall.**

During installation, concrete will not find its way under the drywall along the room's perimeter walls. Drafts and sound can still travel freely through these unsealed areas.

- **Excessive Weight.**

At 20 lbs. per square foot, concrete's excess weight requires additional framing to maintain overall structural integrity.

- **Hard to Match Varying Floor Coverings.**

Like we said before, concrete is made for sidewalks and cement blocks. But it's just not the ticket when you're trying to adjust for a transition from maple flooring to plush carpet.

- **No Warranty.**

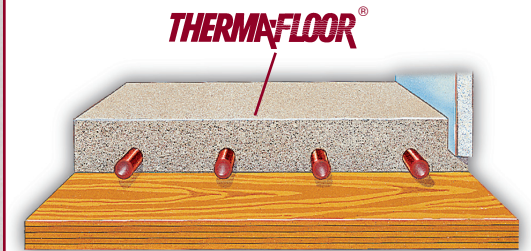
Can you name any manufacturer that would stand behind their product if it's used for something other than its intended use?

- **No Support.**

If there's no warranty for performance, you can bet there's no help with figuring out how to install it or apply finished floor goods.

Therma-Floor® Technical Specs

Set Time:	Can be walked on in 90 minutes, so trades continue
Cure Time:	7–10 days, at 1 1/4"
Finishing:	No troweling required, finishes smooth and flat
Fire Control:	Over 90 UL-rated designs



- **Made for Radiant Floor Heating.**

Therma-Floor® is specifically engineered for one purpose — to serve as the ultimate thermal mass in radiant floor heating applications. So it won't shrink, crack or break contact with the tubes due to temperature fluctuations. Instead, it provides smooth, even heat that warms from the floor up.

- **Seals Out Sound and Drafts.**

With its special formulation, Therma-Floor pours fast and smooth, instantly sealing off open areas under the drywall. Drafts and unwanted sound can't get through. Proven in over 50 documented sound tests from independent labs.

- **Light Weight.**

Square foot for square foot, Therma-Floor weighs about the same as a typical tile bed, so no special framing is required.

- **Smooth Transitions.**

Experienced Therma-Floor applicators use its special formulation to create smooth transitions between areas that will have floor coverings of different heights, for a truly "toe-friendly" floor plan.

- **Complete Warranty.**

Maxxon® Corporation is known as the floor specialists, for product knowledge and for standing behind its quality underlayment products. It's a reputation that is well earned.

- **Superior Support.**

In addition to providing the ultimate thermal mass, your Therma-Floor installer offers practical tools and support to help you design your radiant floor heating projects. Our brochure, *Procedures for Installing Finished Floor Goods*, is just one example. No concrete manufacturer comes close to matching Maxxon's technical support.

Get Maximum Value & Efficiency From Your Radiant Heating Investment.

THERMA-FLOOR DELIVERS THE HEAT.

Just one call is all it takes to add
Therma-Floor® to your project. For the
authorized Therma-Floor installer
nearest you contact:

Maxxon Corporation

1-800-356-7887

E-mail: info@maxxon.com

Ask for your
FREE guide
— *How to
Deliver the
Heat*



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are LEED-compliant and help to
contribute valuable points toward
LEED-certified projects.

Item #61023 4/08

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THERMA-FLOOR® 
The Ideal Underlayment for Radiant Floor Heat

Another Superior Product from Maxxon® Corporation

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