

FOR SUPERIOR HEATING PERFORMANCE AND COMFORT

# THERMA-FLOOR®



## THERMA-FLOOR THE IDEAL UNDERLAYMENT FOR RADIANT FLOOR HEATING

Therma-Floor is a gypsum underlayment by Maxxon® Corporation designed specifically for radiant floor heating systems. Poured over hot water tubes or electric heating cables, it's the ideal thermal mass for any radiant floor system.

Therma-Floor encases the tubes or cables in noncombustible gypsum specially formulated to resist breakdown to 150 °F (66 °C). Poured only 1¼" (32 mm) thick, Therma-Floor also makes your heating system more stable — and your home more comfortable.

Some radiant systems install under plywood subfloors resulting in lost heat, as plywood is nearly 4 times more insulative than Therma-Floor. Therma-Floor works above the subfloor for greater efficiency and consistent comfort.

Therma-Floor is always a "green" building material, manufactured with recycled content. It is also GREENGUARD Gold certified.

### WHY A RADIANT FLOOR HEATING SYSTEM ISN'T COMPLETE WITHOUT THERMA-FLOOR:

- Resists heat deterioration — it's formulated specifically for radiant floor heating
- Enhances heating system responsiveness due to its thin thermal mass
- Provides a smooth, tough surface
- Stiffens the floor
- Seals perimeter walls, keeping out baseboard drafts
- Eliminates squeaks and nail pops common to wood underlayments
- Muffles sound transfer
- Backed by a nationwide applicator network with over 4 billion square feet of experience
- Accepts virtually all floor coverings
- Contains no urea formaldehyde

THERMA-FLOOR  
Always a "Green" Building Material



# THERMA-FLOOR®

## TECHNICAL DATA

<b>Compressive Strength</b> .....	Up to 3,000 psi (20.7 MPa)
ASTM C472	
<b>Weight</b> .....	At 1 1/4", 12 lbs/sq ft (At 32 mm, less than 58.7 kg/m <sup>2</sup> )
<b>Point Loading</b> .....	Typical loading of up to 2,500 lbs on a 1" (1,134 kg on a 25 mm) diameter disc
<b>Dry Density</b> .....	115 lbs/ft <sup>3</sup> (1,842 kg/m <sup>3</sup> )
<b>Thermal Resistance</b> .....	R-0.208 at 1" Thickness
<b>Coefficient of Conductivity (K)</b> .....	4.96 Btu•in/(h•ft <sup>2</sup> •°F) (.7142 W/[m•°C])
<b>Specific Heat</b> .....	0.224 Btu/(lb•°F) at 85 °F (.9385 kJ[kg•°C] at 29.44 °C)
<b>Fire Performance</b> ASTM E-84	
Fuel Contribution.....	0
Smoke Density .....	0
Flame Spread .....	0
<b>VOC Emissions</b> .....	GREENGUARD Gold Certified

## PREPARATION

Building interior should be enclosed and maintained at a temperature above 50 °F (10 °C) until structure and subfloor temperatures are stabilized. Preferred wood-frame construction is tongue-and-groove veneer or nonveneer subfloors. The subfloor must be broom clean and contaminant free. Before pouring Therma-Floor®, the subfloor is coated with a company approved primer.

## INSTALLATION METHODS

The thickness of Therma-Floor varies with the type of radiant floor heating system. Therma-Floor is poured to a depth that is 3/4" (19 mm) above the tops of the tubes or cables, in one or two lifts at the discretion of the installer.

Continuous ventilation and adequate heat should be provided to rapidly remove moisture from the area until the underlayment is dry. The general contractor must supply mechanical ventilation and heat, if necessary.\* Under the above conditions, drying time of 10 to 14 days is usually adequate. Reference the *Building Conditions Guide* for complete installation guidelines.

For a complimentary copy of the brochure, *Procedures for Attaching Finished Floor Goods*, contact Maxxon Corporation. It is the responsibility of the floor goods installer to determine the compatibility of their product with a particular floor underlayment.

## LIMITATIONS

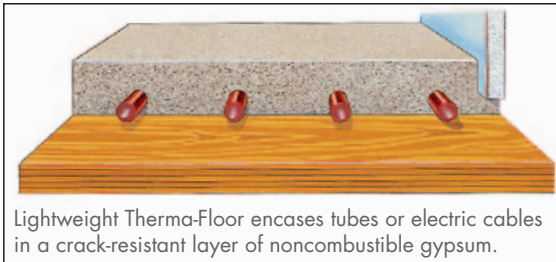
1. Therma-Floor is to be poured to a depth that is 3/4" (19 mm) above the tops of the tubes or cables.
2. Therma-Floor can be poured before or after drywall is installed.
3. All materials above crawl spaces must be protected by a vapor barrier.
4. During construction, place temporary wood planking over the underlayment wherever it will be subjected to heavy wheeled or concentrated loads.
5. Therma-Floor is not designed to be installed on or below grade, except over well-drained structural substrates.

## \*DRYING CONDITIONS

Maxxon Gypsum Underlayments are inorganic and provide no source of nutrients to sustain mold growth. Prolonged contact of moisture with other construction materials, however, can result in mold growth. To avoid growth of mold on construction materials such as wallboard, drywall compound and even dust, it is vital to maintain a low relative humidity both before and after placement of Maxxon Gypsum Underlayments.

The general contractor must provide and maintain correct environmental conditions to keep the building clean and dry, and protect against infestation of moisture from a variety of potential sources. Moisture can be introduced by other trades through spillage, tracked in mud and rain, plumbing leaks, etc. Often stored in damp conditions, building products may arrive on site laden with moisture that releases after installation. Outside sources such as rain, snow, wind, etc. can also increase moisture levels.

Controlling moisture levels in the building, through appropriate trade sequencing and prevention of potential damage by other trades, is the responsibility of the general contractor. The general contractor must supply mechanical ventilation and heat if necessary. These controls fall under the scope of work of the general contractor — not Maxxon Corporation or the Maxxon Gypsum Underlayment installer. See Maxxon *Building Conditions Guide* for additional information.



6. The structural subfloor and floor joist must both comply with manufacturers' maximum span criteria. Typically a deflection limitation of L/360 is adequate for Therma-Floor. Some floor coverings may require a stiffer floor system. Therma-Floor is non-structural and therefore cannot be expected to reinforce structurally deficient subfloors. Necessary allowances should be made for expected live, concentrated, impact, and/or dead loads including the weight of finished floor goods and setting beds.

7. Additional consideration should be taken for concentrated/dynamic loads. U.S. building codes typically specify a uniform live load of 40 pounds per square foot for residential floor designs. This load is intended to account for large loads that can occur in a building. In reality these loads are not uniform, but rather consist of items such as furniture and appliances that actually induce concentrated loads far exceeding 40 lbs per sq ft. Rolling concentrated loads such as office chairs, wheel chairs, and motorized scooters add turning, twisting, repetition, and other dynamics which should also be taken into consideration. Determining the appropriate structural design of the floor is not the responsibility of Maxxon nor the Maxxon applicator.

8. Therma-Floor should not be used for exterior application, or where it will come in prolonged contact with water.

9. Therma-Floor should not be applied directly to a plastic vapor barrier.

10. Maxxon Underlayments are "breathable" and not a vapor barrier. The general contractor, architect, specifier, or building owner shall test slabs-on-ground or elevated slabs for MVER (ASTM F1869-09) or RH (ASTM F2170). If the MVER or RH of the concrete substrate exceeds the floor covering manufacturer's respective requirements for the finished flooring system, the concrete must be treated with a damp proof membrane, such as Maxxon DPM or Maxxon MVP, before installation of a Maxxon Underlayment.

## ACOUSTICAL PERFORMANCE

The acoustical performance of all Maxxon Underlayments is similar. Visit [www.MaxxonCorporation.com](http://www.MaxxonCorporation.com) or contact Maxxon Corporation for reports.

## CODE LISTINGS

ICC-ES Evaluation Report ESR-2540 and UL Evaluation Report 8477-01 for fire and sound code. Contact Maxxon Corporation for major city approvals. GREENGUARD Certified and GREENGUARD Gold Certified.

## PRODUCT SUPPORT

Additional product literature and information are available upon request. CSI formatted specifications are available at [www.maxxon.com](http://www.maxxon.com).

## TESTING

Compressive strength testing must be performed in accordance with modified ASTM C472. Before independent sampling, contact the Maxxon Corporation quality control department to ensure that proper procedures are followed.

## WARRANTY

Maxxon Corporation warrants Therma-Floor Underlayment to be free from manufacturing defects as defined in this warranty. Manufacturing defects are considered to be those defects that occur due to the quality of the Therma-Floor ingredients or from the manufacturing process itself. This warranty does not include labor costs and other costs or expenses associated with the removal or installation of Therma-Floor.

Because Maxxon Corporation does not perform the actual Therma-Floor installation, it cannot be held responsible for the results of the application. Maxxon Corporation specifically disclaims problems that occur due to weather conditions, structural movement, structural design flaws and application techniques.

This warranty is in lieu of all other warranties expressed or implied including the warranty of merchantability and fitness of a particular purpose and of all other obligations or liabilities on Maxxon Corporation's part. Maxxon Corporation neither assumes nor authorizes any person to assume for Maxxon Corporation any liability in connection with the sale and installation of Therma-Floor.

## FIRE/SOUND RATINGS

### Evaluation Reports - Meeting fire and sound code together

Accepted by local building officials for fire and sound code compliance, Evaluation Reports are technical reports which verify that specific products meet the following code requirements and warrant regulatory approval. Minimum code requirements: Sound - 50 STC/10C, Fire - 1 Hour

### International Code Council

ICC ESR #2540 For the following assembly types:

- Parallel Chord Truss
- I-Joist
- Precast
- 2x10 Wood Truss
- Steel Joist
- Concrete

Additional ICC ES Reports: ESR #1141, ESR #1153, ESR #1774

### Underwriters Laboratory International

UL ER #8477-01 For the following assembly types:

- Parallel Chord Truss
- I-Joist
- Steel Joist
- 2x10 Wood Truss
- Hambro
- Precast Concrete

## FIRE RATINGS

### UL Design

G516	L210	L518	L540	L570	M506
G524	L211	L519	L541	L571	M507
G230	L212	L520	L542	L573	M508
G561	L501	L522	L543	L574	M510
J917	L502	L523	L545	L576	M511
J919	L503	L524	L546	L577	M513
J920	L504	L525	L547	L579	M514
J924	L505	L526	L549	L581	M515
J927	L506	L527	L551	L583	M517
J931	L507	L528	L552	L585	M518
J957	L508	L529	L556	L588	M519
J958	L509	L530	L557	L589	
J991	L510	L532	L558	L590	
J994	L511	L533	L560	L592	
L006	L512	L534	L562	L593	
L201	L513	L535	L563	M500	
L202	L514	L536	L564	M502	
L206	L515	L537	L565	M503	
L208	L516	L538	L567	M504	
L209	L517	L539	L569	M505	

### ULC Design

I530	L201	L512	M501	M514	M521
L003	L511	M500	M503	M520	

## LEED® INFORMATION

For information regarding how Therma-Floor may contribute toward points for LEED project contribution, contact your Regional Representative at (800) 356-7887 or visit [www.maxxon.com/go\\_green](http://www.maxxon.com/go_green).



## Another superior product from:

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For more info: 800-356-7887 • Email: [info@maxxon.com](mailto:info@maxxon.com)  
[www.MaxxonCorporation.com](http://www.MaxxonCorporation.com)



THE MAXXON GREEN MARK  
Maxxon products with this symbol  
may help contribute toward points  
for LEED project certification.