

**4<sup>in</sup>1**

Insulating

Heat Spreading

Decoupling

Acoustic

69% Energy Savings during Heat Up +  
12% Energy Savings during the Heat Cycle =  
**Savings of \$1/sqft per Year in Electrical Costs**

## PRODUCT CODE

WCI-01

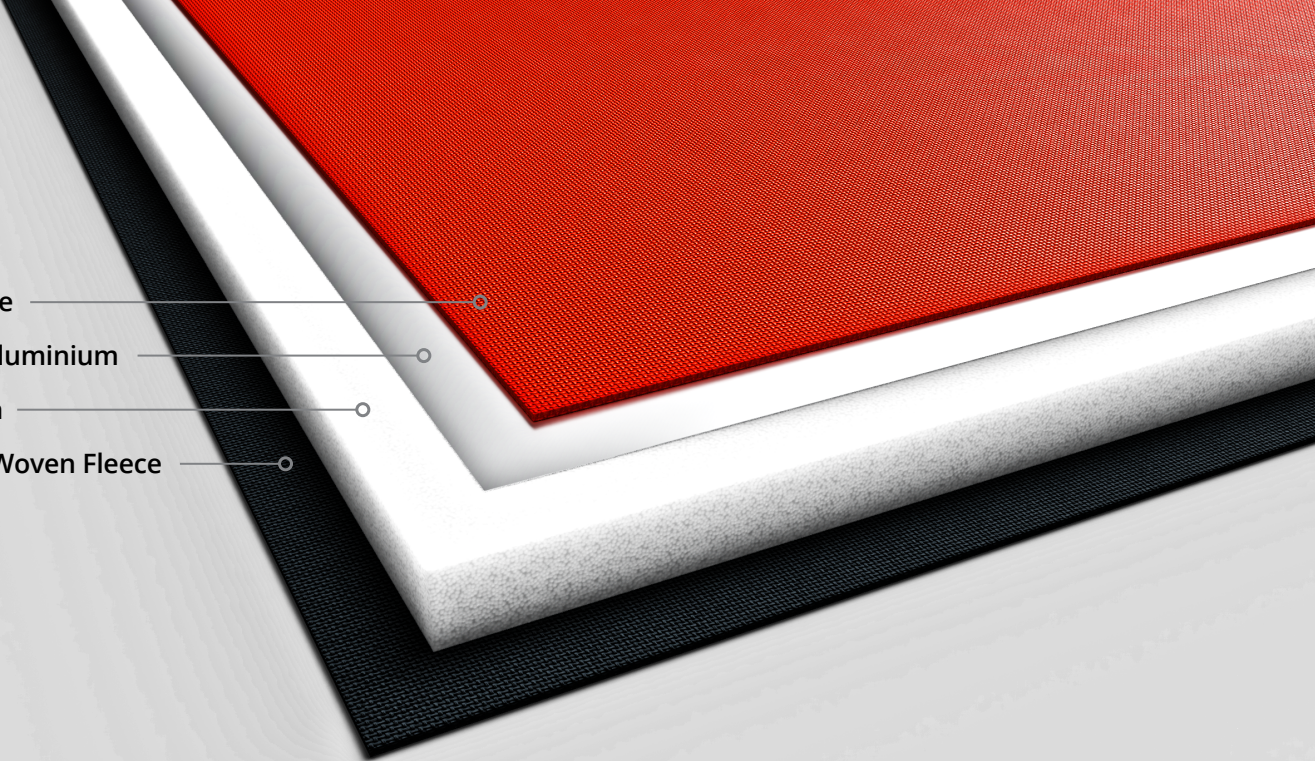
## OVERVIEW

Ultralight™ is a specialized composite board designed for floor heating applications. Manufactured as flat, flexible, sheets they are water and mold resistant. The top surface incorporates a heat spreading aluminum layer combined with non-woven fleece.

The core of PEF insulation provides thermal separation from the floor beneath, ensuring a rapid thermal response of a heated layer of tiles or leveling compound above.

The rapid thermal response promoted by the PEF insulation and diffusion layer allows the flooring to heat up faster, resulting in a more energy-efficient and comfortable heated floor.

The base layer of non-woven fleece functions as a high-performance anti-fracture membrane for tile and stone floor coverings. It also facilitates a high-strength mechanical bond.

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- Non-Woven Fleece
  - Heat Spreading Aluminium
  - 220kPa Insulation
  - Decoupling Non-Woven Fleece

## FEATURES & BENEFITS

- The heat spreading aluminum layer **improves comfort and reduces running costs**. This enabled the floor to achieve the same comfort temperature with 12% less energy
- PEF insulation layer **reduces heat up times by 76 minutes** on slabs and reduces energy used during heat up by 69%
- Decoupling fleece layer provides high performance **protection against tiles cracking** due to lateral subfloor movement in accordance with ANSI A118.12 standard
- Warmup Ultralight is **tested and rated for its acoustic performance** by Intertek Building & Construction in accordance with ISO 10140-2, ISO 10140-3, ASTM E90 and ASTM E492 . Results obtained are tested values and were obtained by using the designated test methods in test chambers that satisfy the lab requirements specified in ISO 10140-5. See page 4 for detailed information
- Ultralight weighs just over 2lbs per board making it much **lighter and easier to carry** than standard cement-based tile insulation and backer boards and is more durable due to the high strength composite design meaning it **wont break if bent or dropped**
- Ultralight achieved **Heavy Commercial rating** when used with large format tiles (600 mm x 600 mm) and Light Commercial rating when used with standard tiles (300 mm x 300 mm), in accordance with ATSM-C627 (Robinson Test)
- The lightweight composite design makes it **easier to cut** curves and complex shapes, compared with cement-based tile insulation and backer boards and will not dull knife blades
- Ultralight will not crumble, dent, or create dust when cutting or kneeling on the boards which means **no dust to clean or breathe in during installation**

## TECHNICAL DATA

|  |  |  |                               |
|--|--|--|-------------------------------|
| <b>Product Code</b>                                | WCI-1  | <b>Compressive Strength, 10% Compression, EN 826</b>               | 32 psi (220 kPa)              |
| <b>Pack Size</b>                                   | Sold individually  | <b>Point Loading, tiled ANSI A118.12</b>                           | ≥ 500 lbf (≥ 2.2 kN)          |
| <b>Thickness</b>                                   | 1/4" (6 mm)  | <b>Robinsons test, 100 - 199 mm tiles, ASTM C627</b>               | Domestic                      |
| <b>Dimensions</b>                                  | 24" W (610 mm) x 48" L (1219 mm) ±1/4" (6mm)               | <b>Robinsons test, 200 - 599 mm tiles, ASTM C627</b>               | Light Commercial              |
| <b>Area</b>  | 8 sqft (0.75m <sup>2</sup> )                               | <b>Robinsons test, ≥ 600 mm tiles, ASTM C627</b>                   | Heavy Commercial              |
| <b>Weight of Board</b>                             | 1.43lb (0.86kg)  | <b>7 Day Shear Strength, ANSI A118.12</b>                          | 113 psi (780 kPa)             |
| <b>Thermal Resistance EN 12667</b>                 | 0.630 °F·ft <sup>2</sup> ·h/BTU (0.111 m <sup>2</sup> K/W) | <b>Crack Resistance (Anti-Fracture / Decoupling), ANSI A118.12</b> | ≥ 1/8" => High Performance    |
| <b>Thermal Conductivity EN 12667</b>               | 0.031 BTU/°F·ft·h (0.054 W/mK)                             | <b>Long Term Water Absorption, EN 12087</b>                        | 0.052% w/w                    |
| <b>Reaction to Fire, EN 13501-1 EN ISO 11952-2</b> | Euroclass E  | <b>Water Vapour Permeability, EN 12086</b>                         | 9.12 mg/m <sup>2</sup> h      |
| <b>Release of Dangerous Substances</b>             | SVHC ≤ 0.1% w/w  | <b>Mould Growth, ANSI A118.12</b>                                  | Does not support mould growth |

### 10 Year Warranty

### Acoustic Performance\*

| Floor Construction   | Standards   | Result   | Report No.                               |
|--|---|--|--|
| 3/4" (19mm) OSB board<br>18" (450mm) Open Web Joists<br>3.5" (90mm) Fibreglass Insulation<br>1/2" (12.7mm) RC Deluxe Resilient Channel<br>5/8" (15.9mm) Gypsum Panel | ISO 717-1<br>ISO 10140-2<br>ISO 10140-3<br>ASTM E90<br>ASTM E492                            | Rw 54 dB<br>L <sub>n,w</sub> 60 dB<br>STC 54<br>IIC 50<br>HIIC 50  | M5642.01-113-11-R0<br>M5642.02-113-11-R0 |
| 75 lb/ft <sup>2</sup> (350 kg/m <sup>2</sup> ) Concrete Slab   | ISO 717-1<br>ISO 10140-2<br>ISO 10140-3<br>ASTM E90<br>ASTM E492<br>ASTM 3222<br>ASTM E2179 | Rw 53 dB<br>L <sub>n,w</sub> 67 dB<br>ΔL <sub>n,w</sub> 11 dB<br>STC 53<br>IIC 43<br>ΔIIC 15<br>HIIC 42<br>ΔIIC 14 | M5643.01-113-11-R0<br>M5643.02-113-11-R0 |

\* See page 4 for detailed information

## ACOUSTIC PERFORMANCE

Warmup Ultralight is tested and rated for its acoustic performance by Intertek Building & Construction in accordance with ISO 10140-2, ISO 10140-3, ASTM E90 and ASTM E492. Results obtained are tested values and were obtained by using the designated test methods in test chambers that satisfy the lab requirements specified in ISO 10140-5.

Each tested construction included standard ceramic tiles and tile adhesive installed over Ultralight installed in accordance with its manual. These installation layers are common to and cover all floor constructions\* detailed below.

1/3" (8mm) Ceramic Tile

1/8" (3mm) Cementitious Tile Adhesive

1/4" (6mm) Warmup Ultralight

1/8" (3mm) Cementitious Tile Adhesive

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\* Construction from Top to Bottom

**NOTE:**

Rw = Sound Reduction Index

L<sub>n,w</sub> = Normalised Impact Sound Pressure Level

STC = Sound Transmission Class

IIC = Impact Insulation Class

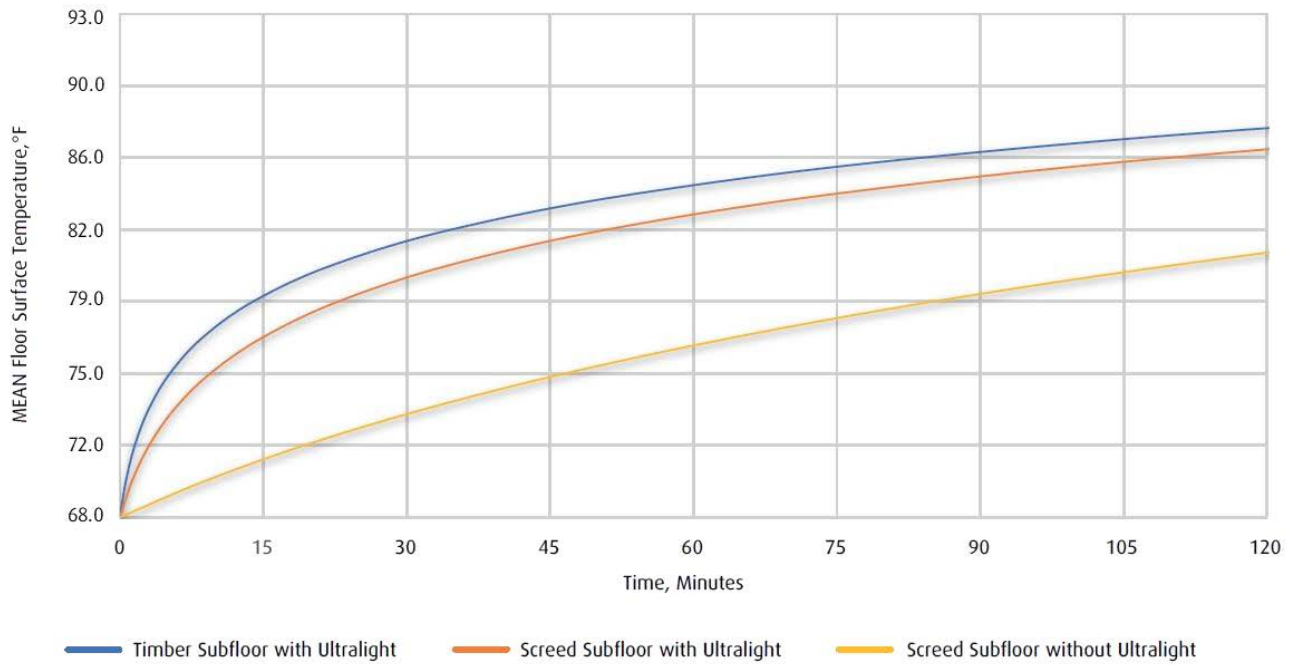
HIIC = High-Frequency Impact Insulation Class

### RESPONSE TIME IMPROVEMENT

Ultralight significantly improves the response time of floor heating

#### Response Time Improvement - Ultralight

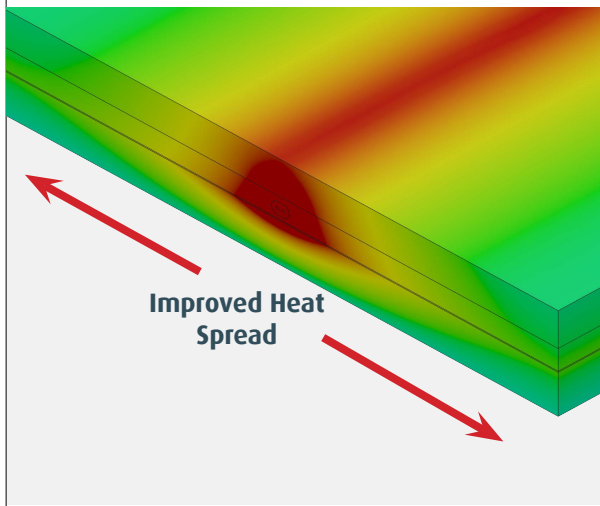
Tiles over eUFH @ 14W/SF



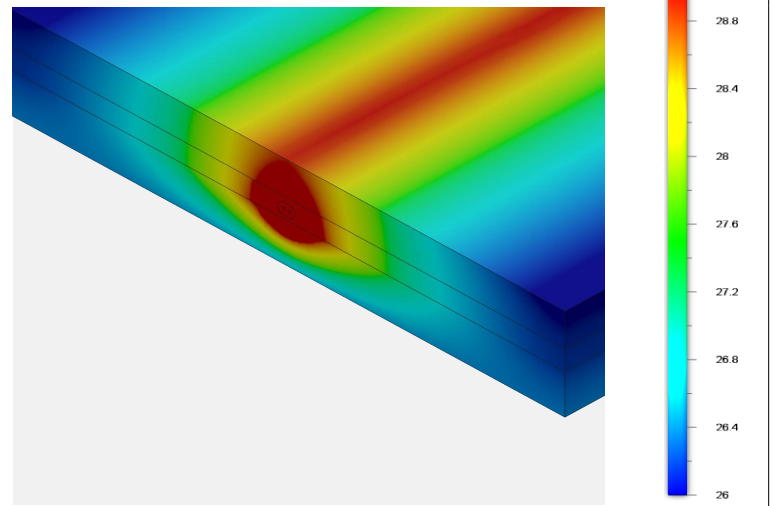
### HEAT SPREAD

Ultralight accelerates lateral heat spread for more even heat in less time

6 mm Ultralight - 29°C Surface Limit

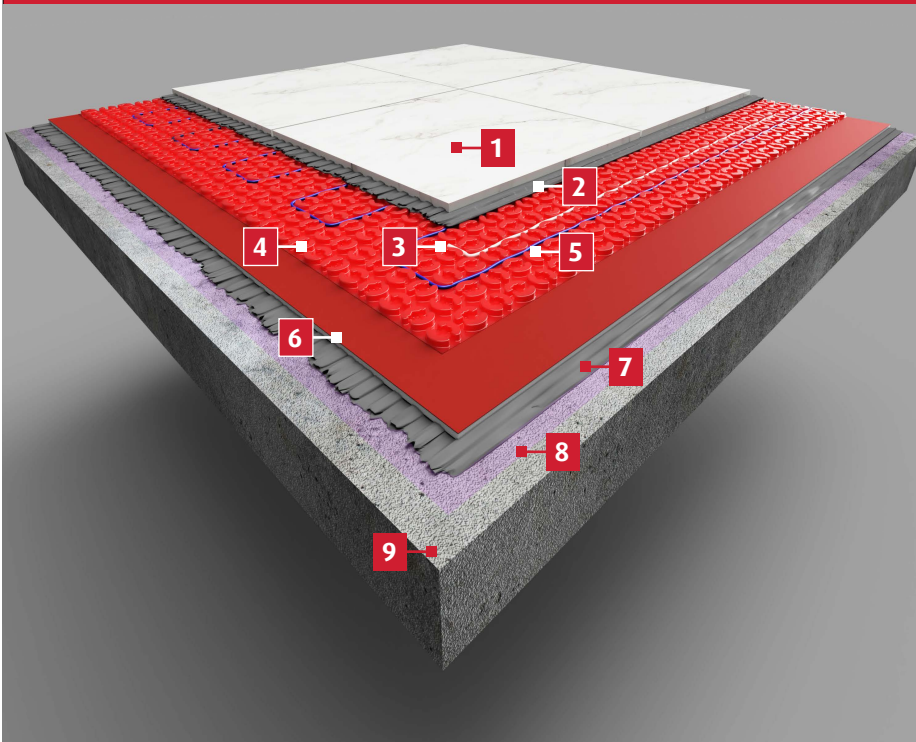


6 mm Traditional Insulation - 29°C Surface Limit



### TYPICAL FLOOR BUILD-UP

#### Ultralight with Warmup DCM-PRO



- 1 Tile floor finish**
- 2 Flexible tile adhesive**
- 3 Floor sensor**  
Tab tape the sensor to the subfloor. Do not tape over the sensor tip!
- 4 Decoupling membrane with adhesive backing**  
Apply pressure to the membrane to ensure a secure bond to the subfloor
- 5 Heating cable**  
DO NOT cut at any stage!
- 6 Warmup Ultralight (optional)**  
Adding Warmup Ultralight below DCM-PRO can help improve the response time of the system, particularly when installing over screed or concrete
- 7 Flexible tile adhesive (optional)**  
Required if installing Warmup Ultralight
- 8 Primer**  
Refer to tile adhesive manufacturers instructions for priming requirements
- 9 Pre-insulated subfloor with a surface regularity of SR1\***

\* If installing the optional Warmup Ultralight, refer to its installation manual for its subfloor requirements.

### TECHNICAL SUPPORT

Warmup is available 24/7/365 at (888) 927-6333.  
For quotes, layouts and specific technical information, contact us at:

**Warmup USA**  
(888) 927-6333  
us@warmup.com

**Warmup CANADA**  
(888) 592-7687  
ca@warmup.com

### RELATED PRODUCTS

- Heating Mat - DWM - see WSC-0720
- DCM-PRO Cable - see WSC-0816
- DCM-PRO Peel-and-Stick Membrane - see WSC-1001