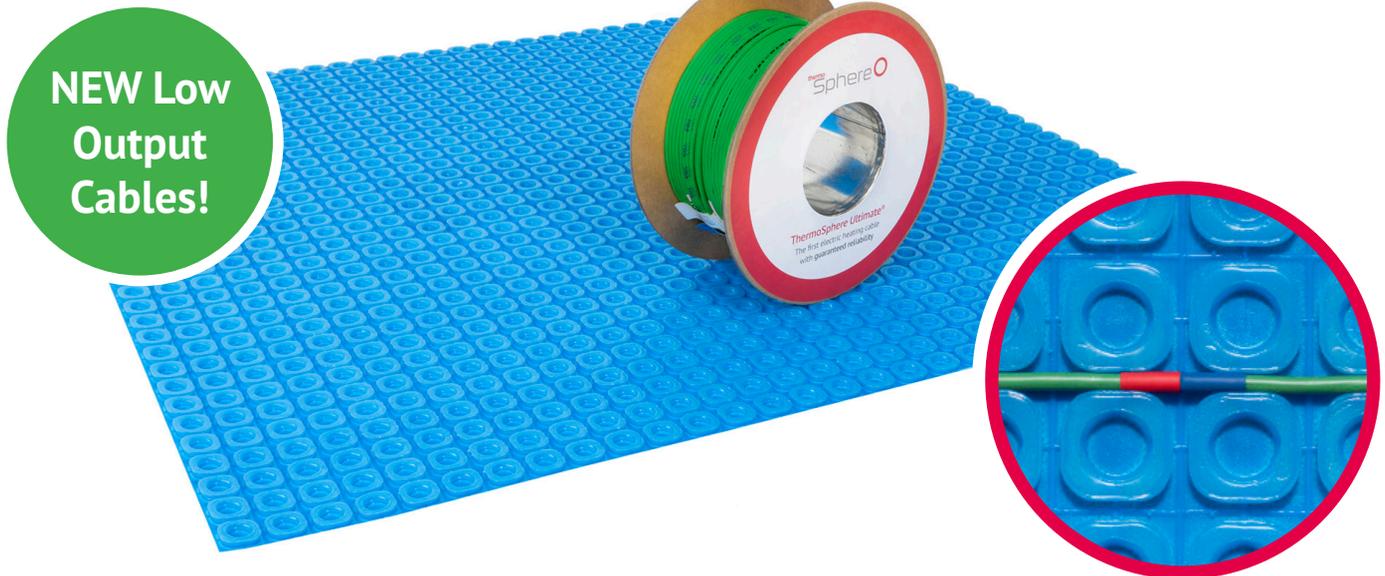


ThermoSphere Ultimate® Low Output

Electric heating cable for homes with low load supplies



ThermoSphere Ultimate® Low Output is designed for use in homes with a restricted load supply, or properties that need to manage electrical loads carefully.

ThermoSphere Ultimate combines a TwistedTwin cable with in-line joint technology. This removes the risk of damaging the cable during installation, as cutting into the membrane and substrate is no longer required.

- Compatible with self-generated solar electricity and battery systems.
- There is no bulky hot/cold joint that needs cutting into the floor - installation is quick and easy, plus it's the most reliable underfloor heating cable.
- Install ThermoSphere Ultimate Low Output into ThermoSphere Membrane or Self-adhesive Membrane at either 57W/m² or 85W/m².
- ThermoSphere Membrane's decoupling properties neutralise lateral movement in the floor and minimise the risk of cracking and delamination.
- Creates a waterproof layer within the floor when used with waterproofing products.
- Fleece backed membrane is adhered with a flexible tile adhesive and self-adhesive membrane can be laid directly onto a clean plywood sub floor.

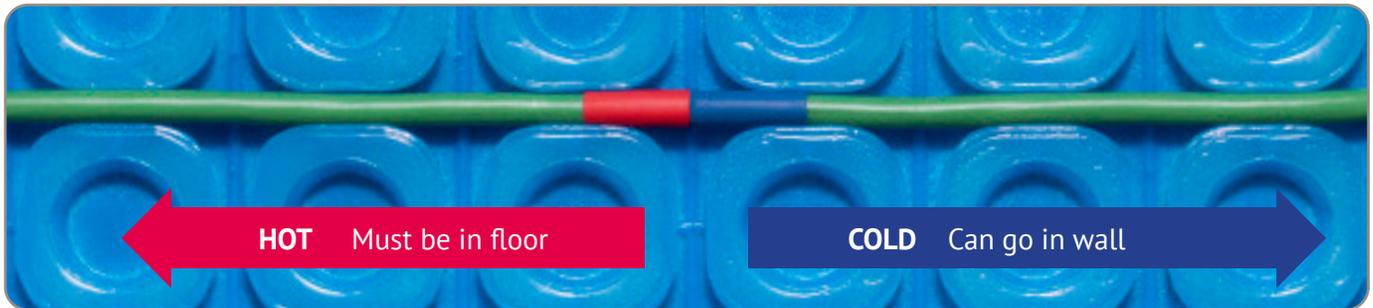
Technical data

| | |
|----------------------|--|
| Voltage | 230V |
| Outputs | 57W/m ² or 85W/m ² |
| Membrane thickness | 5.5mm |
| Cable length | 12 to 200m |
| Protection rating | IP68 |
| Membrane material | Polyethylene |
| Cable insulation | FEP and HR-PVC |
| Robinson test rating | Extra heavy use |
| Recommended max temp | 27°C (limited by controls) |
| Warranty | Lifetime |
| Cable made in | India |
| Membrane made in | Italy |

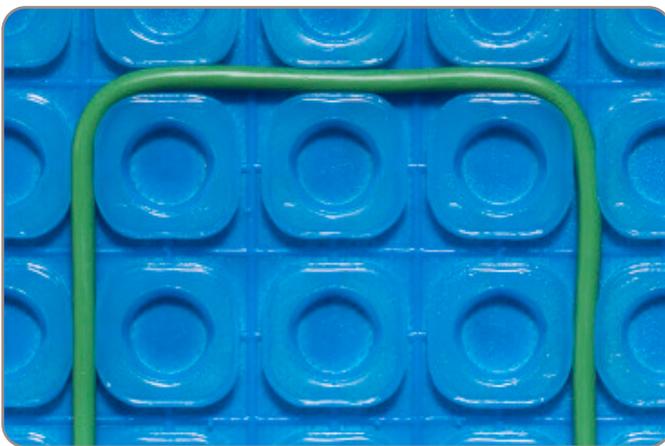


ThermoSphere manufactures underfloor heating products in Marden, Kent. However, some accessory products are imported from trusted sources. To make it easy to tell where a product is from you'll find the country of origin stated on all product data sheets. Please visit our website for more information.

ThermoSphere Ultimate's in-line joint technology removes bulky joints for easier, faster installation



Variable spacing and output per m² in ThermoSphere Membrane

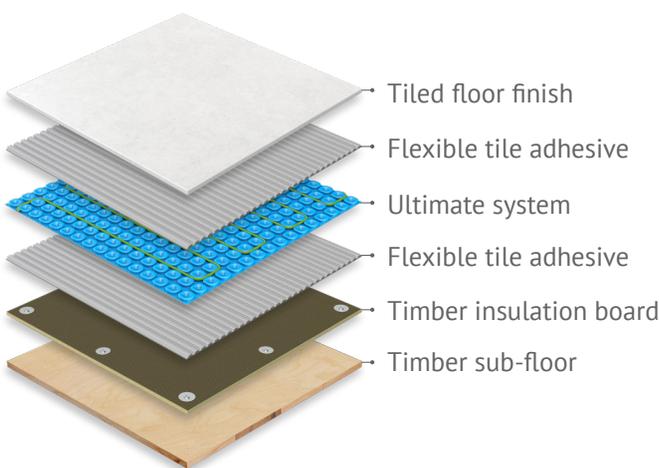


57W/m² at 3 dimple spacing

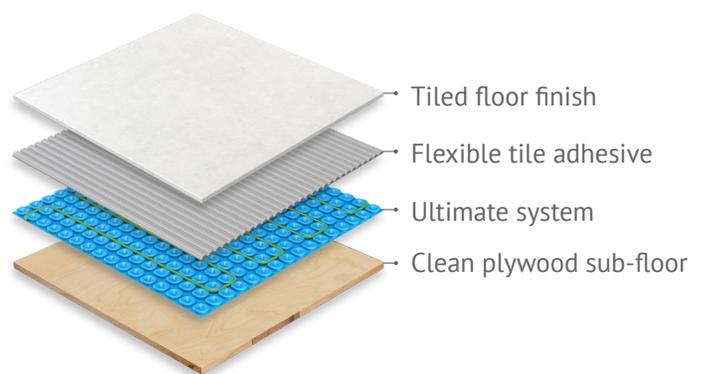


85W/m² at 2 dimple spacing

Fleece backed membrane example build up



Self-adhesive membrane example build up



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Cable sizes and outputs

| Code | Length (m) | Area (m ²) 57W/m ² | Area (m ²) 85W/m ² | Output (W) | Resistance (Ω) |
|-----------------|------------|---|---|------------|----------------|
| HDMC-5-012-0068 | 12 | 1.2 | 0.8 | 68 | 777.94 |
| HDMC-5-018-0102 | 18 | 1.7 | 1.2 | 102 | 518.63 |
| HDMC-5-025-0128 | 25 | 2.3 | 1.5 | 128 | 414.90 |
| HDMC-5-031-0162 | 31 | 2.9 | 1.9 | 162 | 327.55 |
| HDMC-5-037-0196 | 37 | 3.5 | 2.3 | 196 | 270.59 |
| HDMC-5-050-0264 | 50 | 4.6 | 3.1 | 264 | 200.76 |
| HDMC-5-061-0323 | 61 | 5.8 | 3.8 | 323 | 163.78 |
| HDMC-5-075-0391 | 75 | 6.9 | 4.6 | 391 | 135.29 |
| HDMC-5-100-0527 | 100 | 9.2 | 6.2 | 527 | 100.38 |
| HDMC-5-125-0655 | 125 | 11.5 | 7.7 | 655 | 80.83 |
| HDMC-5-150-0782 | 150 | 13.8 | 9.2 | 782 | 67.65 |
| HDMC-5-200-1046 | 200 | 18.5 | 12.3 | 1046 | 50.60 |

Membrane sizes

| Code | Description | Area (m ²) | Size (M) | Unit |
|------------|---|------------------------|----------|-------|
| HDM-001 | Fleece backed membrane 1m ² | 1 | 1 x 1 | Panel |
| HDM-005 | Fleece backed membrane 5m ² | 5 | 5 x 1 | Roll |
| HDM-015 | Fleece backed membrane 15m ² | 15 | 15 x 1 | Roll |
| HDM-SA-001 | Self-adhesive membrane 1m ² | 1 | 1 x 1 | Panel |
| HDM-SA-015 | Self-adhesive membrane 15m ² | 15 | 15 x 1 | Roll |



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Membrane technical data

| | |
|--------------------------------------|--|
| Appearance | Polimeric membrane |
| Colour | Cyan blue |
| Shelf life | 24 months in dry environment avoiding direct sunlight and heat sources |
| Total thickness | 5.5mm (EN 1849 - 2) |
| Width | 1m |
| Width of non-woven PP | 70g / m ² (EN 1849 - 2) |
| Weight of PP sheet | 700g / m ² (EN 1849 - 2) |
| Rounded square shaped reliefs number | 1024 m ² |
| Compressive strength | 600KN / m ² |
| Longitudinal breaking load | 620N / 50 mm (EN 12311 - 1) |
| Transversal breaking load | 550N / 50 mm (EN 12311 - 1) |
| Longitudinal ultimate elongation | 50% (EN 12311 - 1) |
| Transversal ultimate elongation | 50% (EN 12311 - 1) |
| Crack-bridging ability | 1mm |
| Air volume for vapor management | 2.2lt / m ² |



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