

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# SunTouch® TapeMat®

## 120 and 240 Voltages

SunTouch TapeMats are a series resistance heating cable assembly installed over plywood, backer board, or concrete slab (according to ANSI or TCNA guidelines), and then embedded in 3/8" (9.5 mm) or greater self-leveling or polymer-modified thin-set mortar.

### Specifications

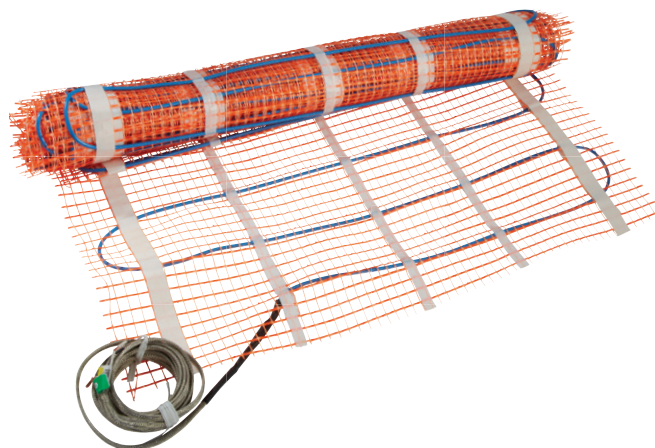
<b>Supply Voltage</b>	120VAC, 1-phase 240VAC, 1-phase
<b>Amp Draw</b>	120VAC: 1 amp per 10 sf. 240VAC: 1 amp per 20 sf.
<b>Maximum Circuit Load</b>	20 amps (15 amps with SunStat Control)
<b>Wire Spacing</b>	3" (76 mm) o.c.
<b>Maximum Allowable Temperature</b>	194°F (90°C) Continuously
<b>EMF</b>	Less than 1 milligauss at 1/2" (12.7 mm) above surface.
<b>Heating Elements</b>	Oxygen-free copper or nickel-copper
<b>Insulation</b>	ETFE Fluoropolymer
<b>Ground</b>	Copper
<b>Double-Sided Tape</b>	3/4" (19 mm) wide, installed along both edges of mat.
<b>Minimum Allowable Bend Radius</b>	1" (25 mm)
<b>Power Lead Length</b>	10' (2.7 m)

Application Parameters ✓		
<b>Watt Density</b>	3" (76 mm) o.c.	12W/sq ft (129.0 W/m <sup>2</sup> )
<b>Minimum Polymer-modified Thinset</b>	3/8" (9.5 mm)	
<b>Allowable Substrate</b>	Backer board over wood subfloor	
	Polymer-modified setting bed over wood subfloor	
	Polymer-modified setting bed over concrete slab	
	Thin slab/self-leveling concrete over wood subfloor	
<b>Allowable Floor Coverings</b>	Thin slab/self-leveling concrete over concrete slab	
	Tile/Stone	
	Carpet	
	Hardwood	

\* Most anti-fracture membranes are approved for use with SunTouch TapeMat. Contact manufacturer for details on specific products.

### ⚠ WARNING

Never cut the heating cable or damage it in any way. Use only the attachment methods as described in the Installation Manual for SunTouch TapeMat as other methods may damage the heating element.



SunTouch TapeMats are available in various lengths with voltage options of 120 or 240 VAC.

### Installation Guidelines

- Measure and certify the correct wire resistance (ohms) value for the heating cables, record these readings in the chart provided in the installation manual.
- Use of manufacturer's alarm meter (LoudMouth™ meter) is recommended during installation.
- Clean the subfloor.
- Lay out and secure SunTouch TapeMat to the floor.
- Install the floor sensor in accordance with installation manual.
- Install floor coverings as detailed in installation manual.



UL Listed for U.S. under UL Standard 1693 and Canada under CAN/CSA C22.2 No. 130.2-93. Listing file number E185866.

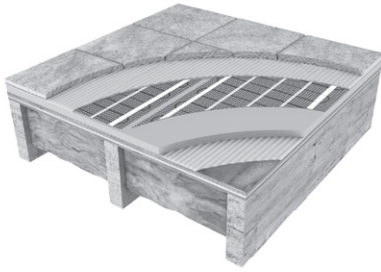
### ⚠ CAUTION

This Engineering Sheet is not intended to provide full installation instructions and safety information. In order to avoid property damage or injury, please refer to the complete installation manual and product safety information provided with the product.

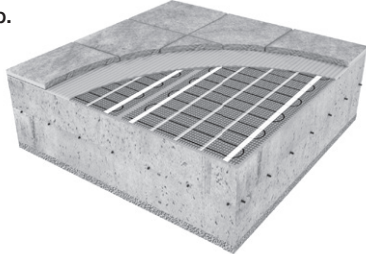
SunTouch product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact SunTouch Technical Service. SunTouch reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on SunTouch products previously or subsequently sold. Refer to the owner's manual for warranty information.

## SunTouch TapeMat Application Examples

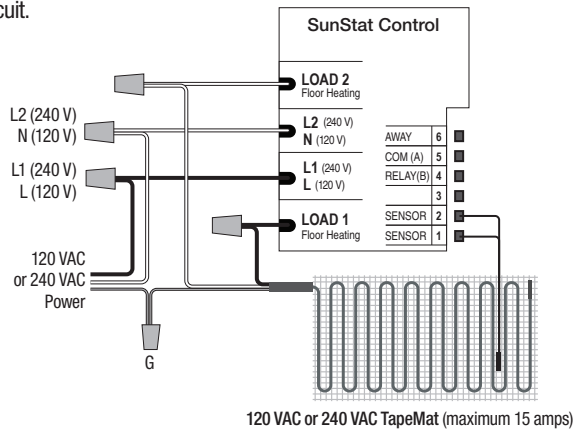
SunTouch over wood frame floor with backer board



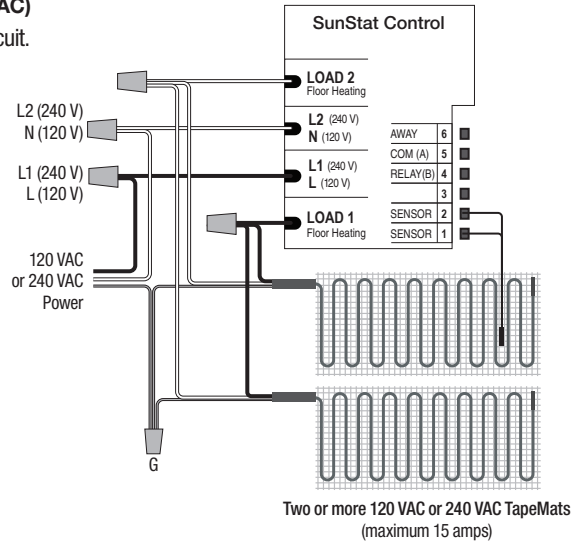
SunTouch over concrete slab.



Typical Wiring for one TapeMat with SunStat Control (120/240VAC)  
20-amp circuit.



Typical Wiring for multiple TapeMats with SunStat Control  
(120/240VAC)  
20-amp circuit.



## 120 VAC SunTouch TapeMats

Application Parameters					
Order No.	Mat Sizes (W x L)	Total sq.ft	Reet Value*	Amp Draw	
81002183	2' x 5' (0.61 m x 1.52 m)	10	0.11	1.0	
81007233	2' x 7'-6" (0.61 m x 2.29 m)	15	0.13	1.5	
81002197	2' x 10' (0.61 m x 3.05 m)	20	0.13	2.0	
81007234	2' x 12'-6" (0.61 m x 3.81 m)	25	0.10	2.5	
81002208	2' x 15' (0.61 m x 4.57 m)	30	0.06	3.0	
81007235	2' x 17'-6" (0.61 m x 5.33 m)	35	0.13	3.5	
81002217	2' x 20' (0.61 m x 6.10 m)	40	0.10	4.0	
81007236	2' x 22'-6" (0.61 m x 6.86 m)	45	0.11	4.5	
81002226	2' x 25' (0.61 m x 7.62 m)	50	0.14	5.0	
81002234	2' x 30' (0.61 m x 9.14 m)	60	0.13	6.0	
81002240	2' x 35' (0.61 m x 10.67 m)	70	0.13	7.0	
81002246	2' x 40' (0.61 m x 12.19 m)	80	0.19	8.0	
81002184	3' x 5' (0.91 m x 1.52 m)	15	0.13	1.5	
81002188	3' x 6'-8" (0.91 m x 2.03 m)	20	0.13	2.0	
81002194	3' x 8'-4" (0.91 m x 2.54 m)	25	0.10	2.5	
81002200	3' x 10' (0.91 m x 3.05 m)	30	0.06	3.0	
81002209	3' x 15' (0.91 m x 4.57 m)	45	0.11	4.5	
81002220	3' x 20' (0.91 m x 6.10 m)	60	0.13	6.0	

## 240 VAC SunTouch TapeMats

Application Parameters					
Order No.	Mat Sizes (W x L)	Total sq.ft	Reet Value*	Amp Draw	
81002265	2' x 10' (0.61 m x 3.05 m)	20	0.11	1.0	
81002269	2' x 15' (0.61 m x 4.57 m)	30	0.13	1.5	
81002274	2' x 20' (0.61 m x 6.10 m)	40	0.13	2.0	
81002279	2' x 25' (0.61 m x 7.62 m)	50	0.10	2.5	
81002284	2' x 30' (0.61 m x 9.14 m)	60	0.06	3.0	
81002288	2' x 35' (0.61 m x 10.67 m)	70	0.13	3.5	
81002293	2' x 40' (0.61 m x 12.19 m)	80	0.10	4.0	
81002407	2' x 45' (0.61 m x 13.72 m)	90	0.11	4.5	
81002410	2' x 50' (0.61 m x 15.24 m)	100	0.14	5.0	
81002415	2' x 60' (0.61 m x 18.29 m)	120	0.13	6.0	
81002419	2' x 70' (0.61 m x 21.34 m)	140	0.13	7.0	
81002422	2' x 80' (0.61 m x 24.38 m)	160	0.19	8.0	
81002266	3' x 10' (0.91 m x 3.05 m)	30	0.13	1.5	
81002268	3' x 13'-4" (0.91 m x 4.06 m)	40	0.13	2.0	
81002272	3' x 16'-8" (0.91 m x 5.08 m)	50	0.10	2.5	
81002277	3' x 20' (0.91 m x 6.10 m)	60	0.06	3.0	
81002286	3' x 30' (0.91 m x 9.14 m)	90	0.11	4.5	
81002406	3' x 40' (0.91 m x 12.19 m)	120	0.13	6.0	

\*REET, (Radiant Electric Emissions Test), which is conducted by an independent third party test lab known as ETL Semko.

