FLEXEL

UNDERFLOOR HEATING

Underfloor Heating

Programmable Thermostats

Thermal Insulation

Ice & Snow Prevention

Pipe Freeze Protection

Table of Contents

TRAINED PROFESSIONALS
Dedicated Sales & Technical Team -
Highly trained professionals on
hand to assist you.

OVERNIGHT DELIVERY
Fast and Efficient Delivery -
Usually the next working day.

EXCELLENT DISTRIBUTOR SUPPORT
Our national distributor network provide
expertise and add real value to end
users on a daily basis.

FREE QUOTE SERVICE
Call or email details and
we will design the ideal
system at no obligation.

Why choose Flexel?

Flexel International Ltd have been designing and manufacturing innovative electric radiant heating systems to world markets for the past 40 years. These radiant heating products span applications such as underfloor heating, ceiling heating and radiant heaters. As part of the Fenix Group of companies, with production facilities in both the UK and throughout Europe, we are one of the world's largest Electric Heating equipment manufacturers.

FLEXEL, Glenrothes, Fife, UK

All Flexel electrical heating elements and cable systems are approved to relevant international standards - EN 60335-2-96 for ECOFILM element and IEC 60800 for ECOFLOOR cable mats and all loose cable products. In the UK the standard products described in this catalogue are available ex-stock via our stockist distributors or to order through the national builders/plumbers merchants and electrical wholesalers networks. We pride ourselves in the high level of technical support and customer service we provide and are recognised as an authoritative brand leader in the field of electric radiant heating for domestic and commercial applications.

Complete Heating Solution

- Complete Solution - Single source supply. Flexel provide the complete range of accessories to accompany your heating product including thermostats, thermal insulation and fixing accessories.
- Laminate, Timber, Carpet & Vinyl Floors - ECOFILM^{SET} is the ultra thin, dry installation system that is simple to install.
- Tile & Stone Floors - A versatile product range includes easy to lay ECOFLOOR Cable Mats or ECOFLEX Loose Cable for irregular shaped rooms.
- In-Screed & Ice Prevention - ECOFLEX In-Screed Cable is the economical solution for new screed floors. ECOFLEX Ice Prevention cables ensure ice free ramps and driveways.

EXCELLENT DISTRIBUTOR SUPPORT
We support our distributors - Flexel do not sell UFH to tilers, plumbers or end customers.

FREE DESIGN SERVICE
Request a quote at www.flexel.co.uk or simply email your plans and our expert technical team will prepare a detailed quote for you.

OVERNIGHT DELIVERY
Fast and Efficient Delivery - Usually the next working day.

18TH EDITION APPROVED

FULLY TESTED PRODUCTS
Safety First - All Flexel products are approved to comply with the 18th Edition of the IET Electrical Requirements.

TRAINED PROFESSIONALS
Dedicated Sales & Technical Team - Highly trained professionals on hand to assist you.

WWW.FLEXEL.CO.UK
Find detailed information, installation tips, POS, merchandise, information, literature & technical downloads.

MANUFACTURED IN THE UK

The quick and simple to install solution for all tile and stone floors

ECOFLOOR
u n d e r f l o o r   h e a t i n g   m a t

ECOFLOOR Underfloor Heating Mats are a combination of a heating cable attached to a fibreglass mesh scrim that makes installation easy. The mat can simply be rolled out onto the floor saving precious time. The mats have double sided tape on the underside so they can easily be fixed to any clean surface.

LIFETIME WARRANTY · LIFE TIME · WARRANTY

Features

- Approved to EN60335-2-96 as required by the 18th Edition Wiring Regulations
- Two heat outputs: 150W/m^2 and 200W/m^2
- Quick installation: simply roll out the mat & fix to floor
- Continuous metallic earth screen to ensure electrical safety
- Suitable for tile, stone, slate and marble floor finishes
- Low build height: minimal floor height build up
- Suitable for use in wet areas
- EMC safe

Technical Detail

- Max Power Loading: 150W/m^2 or 200W/m^2
- Diameter 3.0mm – 4.0mm
- 230V supply
- Twin conductor heating cable with single 3m "cold tail" connection lead

Floor Construction

- **Suspended Floors** - To prevent floor movement all wooden floorboards must be covered with Cement Coated Insulation Board or 18mm Plywood.
- **Concrete Floors** - It is recommended to fit a layer of Cement Coated Insulation Board to minimise heat loss & ensure quicker heat-up times.
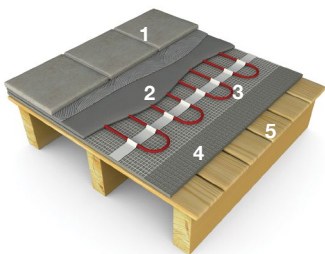
1. Tile/Stone Floor
2. Tile Adhesive/
   Self-levelling compound
3. Cable Mat
4. Cement Coated
   Insulation Board
5. Concrete / Timber Floor

visit www.flexel.co.uk for detailed product info & installation tips

Product Codes

150W/m² Cable Mat

Area to be heated (m²)	Mat References	Output (W)	Width (m)	Length (m)	Price ex VAT (£)
0.5m²	LDTS150-0.5	75	0.5	1.0	61.78
1.0m²	LDTS150-1.0	150	0.5	2.0	64.86
1.5m²	LDTS150-1.5	225	0.5	3.0	78.14
2.0m²	LDTS150-2.0	300	0.5	4.0	91.98
2.5m²	LDTS150-2.5	375	0.5	5.0	107.44
3.0m²	LDTS150-3.0	450	0.5	6.0	116.98
3.5m²	LDTS150-3.5	525	0.5	7.0	137.42
4.0m²	LDTS150-4.0	600	0.5	8.0	156.84
4.5m²	LDTS150-4.5	675	0.5	9.0	170.36
5.0m²	LDTS150-5.0	750	0.5	10.0	183.96
6.0m²	LDTS150-6.0	900	0.5	12.0	214.62
7.0m²	LDTS150-7.0	1050	0.5	14.0	216.92
8.0m²	LDTS150-8.0	1200	0.5	16.0	253.24
9.0m²	LDTS150-9.0	1350	0.5	18.0	317.40
10.0m²	LDTS150-10.0	1500	0.5	20.0	338.52
11.0m²	LDTS150-11.0	1650	0.5	22.0	400.54
12.0m²	LDTS150-12.0	1800	0.5	24.0	430.50
14.0m²	LDTS150-14.0	2100	0.5	28.0	474.70
16.0m²	LDTS150-16.0	2400	0.5	32.0	519.54

200W/m² Cable Mat

Area to be heated (m²)	Mat References	Output (W)	Width (m)	Length (m)	Price ex VAT (£)
1.0m²	LDTS200-1.0	200	0.5	2.0	67.84
1.5m²	LDTS200-1.5	300	0.5	3.0	90.70
2.0m²	LDTS200-2.0	400	0.5	4.0	113.58
2.5m²	LDTS200-2.5	500	0.5	5.0	134.62
3.0m²	LDTS200-3.0	600	0.5	6.0	155.68
3.5m²	LDTS200-3.5	700	0.5	7.0	173.46
4.0m²	LDTS200-4.0	800	0.5	8.0	191.28
4.5m²	LDTS200-4.5	900	0.5	9.0	213.44
5.0m²	LDTS200-5.0	1000	0.5	10.0	235.60
6.0m²	LDTS200-6.0	1200	0.5	12.0	254.92
7.0m²	LDTS200-7.0	1400	0.5	14.0	288.44
8.0m²	LDTS200-8.0	1600	0.5	16.0	316.82
9.0m²	LDTS200-9.0	1800	0.5	18.0	347.12
10.0m²	LDTS200-10.0	2000	0.5	20.0	443.98

Accessories

Product Code	Description	Price ex VAT (£)
TB06	6mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TB10	10mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TBSW	(25mm) Fixing Screws & (35mm) Washers (pack of 50)	18.86
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16S	Silver Touch Screen Thermostat (16A)	103.26
ET16B	Black Touch Screen Thermostat (16A)	103.26
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

Complete electric underfloor heating kits for tile and stone floors

ECOFLEX
underfloor heating cable kit

ECOFLEX Underfloor Heating Cable Kits provide an underfloor heating solution in your kitchen, bathroom or conservatory. Choosing the correct cable kit for the floor is made simple with an easy to use product table. Simply choose the correct product that matches the heated floor area.

ECOFLEX cables are ideal for smaller installations or in rooms with an irregular layout. The cables can be fitted on top of existing wooden or concrete floors that are sound and suitably prepared.

The flexibility of the loose cabling system makes it possible to heat the maximum floor area including hard to reach areas.

Each kit includes:
Heating cable, adhesive tape, floor primer, roller, thermostat conduit, instructions & guarantee

Features

- Ultra-thin cable
- ECOFLEX can be installed under many floor coverings including ceramic tiles, natural stone and slate
- Twin conductor ultra flexible cable simplifies installation with only a single "cold tail" connection
- Two extremely tough, durable insulation layers which minimises the risk of damage during the installation process and ensures prolonged cable life

Floor Construction
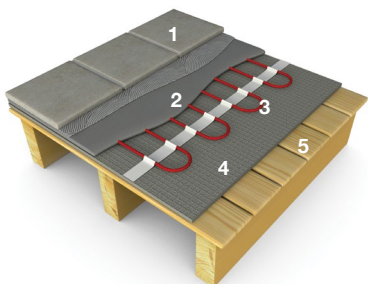
1. Tile/Stone Floor
2. Tile Adhesive
3. Cable
4. Cement Coated Insulation Board/ 18mm WBP Plywood
5. Concrete / Timber Floor

visit www.flexel.co.uk for detailed product info & installation tips

Technical Detail

- Maximum power Loading: 10W/Lin metre
- Diameter: 3.3 - 4.3mm
- 230V supply
- Twin conductor cable
- 1 x 3m cold tail connection lead

Product Codes

HEATED FLOOR AREA TO BE COVERED (m^2)						
coverage at 160W/m^2	coverage at 130W/m^2	coverage at 100W/m^2	Cable Kit without Thermostat			
c-c 7.0cm	c-c 9.0cm	c-c 11.0cm	Product Code	Output (W)	Length (m)	Price (ex Vat)
0.4m^2	0.5m^2	0.6m^2	CK65	65	6.6	£67.50
0.7m^2	1.0m^2	1.2m^2	CK120	120	11.4	£73.66
1.4m^2	1.7m^2	2.1m^2	CK200	200	18.9	£84.52
1.7m^2	2.2m^2	2.6m^2	CK250	250	23.6	£91.66
2.3m^2	2.9m^2	3.5m^2	CK320	320	31.6	£104.96
2.6m^2	3.4m^2	4.1m^2	CK400	400	36.9	£110.16
3.3m^2	4.2m^2	5.1m^2	CK450	450	45.7	£127.14
3.4m^2	4.3m^2	5.2m^2	CK520	520	49.6	£128.18
4.5m^2	5.8m^2	7.1m^2	CK600	600	63.9	£158.70
5.4m^2	6.9m^2	8.4m^2	CK750	750	75.8	£179.56
6.1m^2	7.9m^2	9.6m^2	CK950	950	87.0	£209.28
8.1m^2	10.4m^2	12.6m^2	CK1100	1100	114.5	£242.42
9.2m^2	11.9m^2	14.5m^2	CK1300	1300	131.3	£288.12
11.2m^2	14.3m^2	17.5m^2	CK1700	1700	158.8	£367.98
13.7m^2	17.6m^2	21.4m^2	CK2000	2000	194.5	£493.58

Accessories

Product Code	Description	Price ex VAT (£)
TB06	6mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TB10	10mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TBSW	(25mm) Fixing Screws & (35mm) Washers (pack of 50)	18.86
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16S	Silver Touch Screen Thermostat (16A)	103.26
ET16B	Black Touch Screen Thermostat (16A)	103.26
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

The versatile electric underfloor heating solution for tile & stone floors

ECOFLEX
underfloor heating cable

ECOFLEX underfloor heating cables are available as a loose cable only option for professional installer use.

ECOFLEX underfloor heating cables provide an underfloor heating solution in your kitchen, bathroom or conservatory. The large range of cables & the flexibility of the loose cabling system makes it possible to heat the maximum floor area including hard to reach areas. Each cable is packaged on a convenient cardboard cable drum and heat sealed for protection.

Minimum packaging provides an economical and environmentally friendly solution for the professional installer. Thermostats and fixing/installation accessories are available as optional extras.

Features

- Approved to IEC 60800
- Small diameter cable
- ECOFLEX can be installed under many floor coverings including ceramic tiles, natural stone and slate
- Twin conductor ultra flexible cable simplifies installation with only a single "cold tail" connection
- Two extremely tough, durable insulation layers which minimise the risk of damage during the installation process and ensures prolonged cable life

Floor Construction

- Suspended Floors - To prevent floor movement all wooden floorboards must be covered with Cement Coated Insulation Board or 18mm Plywood.
- Concrete Floors - It is recommended to fit a layer of Cement Coated Insulation Board to minimise heat loss & ensure quicker heat-up times.
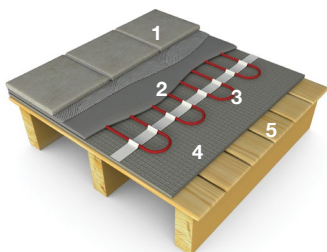
1. Tile/Stone Floor
2. Tile Adhesive
3. Ecoflex Cable
4. Cement Coated Insulation Boards
5. Concrete / Timber Floor

Technical Detail

- Maximum power loading - 10W/lin metre
- Diameter - 3.3 - 4.3mm
- 230V supply
- Twin conductor cable
- 1 x 3m cold tail connection lead

Product Codes

Heated Floor Area to be Covered (m^2)						
coverage at 160W/m^2	coverage at 130W/m^2	coverage at 100W/m^2	Cable Reference	Output (W)	Length (m)	Price ex VAT (£)
c-c 7.0cm	c-c 9.0cm	c-c 11.0cm				
0.4m^2	0.5m^2	0.6m^2	10065	65	6.6	33.62
0.7m^2	1.0m^2	1.2m^2	10120	120	11.4	39.78
1.4m^2	1.7m^2	2.1m^2	10200	200	18.9	50.64
1.7m^2	2.2m^2	2.6m^2	10250	250	23.6	57.78
2.3m^2	2.9m^2	3.5m^2	10320	320	31.6	71.08
2.6m^2	3.4m^2	4.1m^2	10400	400	36.9	76.28
3.3m^2	4.2m^2	5.1m^2	10450	450	45.7	93.26
3.4m^2	4.3m^2	5.2m^2	10520	520	49.6	94.30
4.5m^2	5.8m^2	7.1m^2	10600	600	63.9	124.82
5.4m^2	6.9m^2	8.4m^2	10750	750	75.8	133.30
6.1m^2	7.9m^2	9.6m^2	10950	950	87.00	163.02
8.1m^2	10.4m^2	12.6m^2	101100	1100	114.5	196.16
9.2m^2	11.9m^2	14.5m^2	101300	1300	131.3	241.86
11.2m^2	14.3m^2	17.5m^2	101700	1700	158.8	321.72
13.7m^2	17.6m^2	21.4m^2	102000	2000	194.5	447.32

Accessories

Product Code	Description	Price ex VAT (£)
TB06	6mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TB10	10mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TBSW	(25mm) Fixing Screws & (35mm) Washers (pack of 50)	18.86
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16S	Silver Touch Screen Thermostat (16A)	103.26
ET16B	Black Touch Screen Thermostat (16A)	103.26
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75
ADT15	Heavy Duty Fixing Tape (15mm x 50m)	5.14

An economical solution for new build projects

ECOFLEX

In-screed underfloor heating cable

ECOFLEX In-Screed Underfloor Heating is a single core cable rated at 15W/lin metre. Used to provide underfloor heating in new build projects in screeded floors. Typically laid directly onto foil backed insulation then covered with a minimum of 50mm sand & cement screed. On new build projects with screed floors this cable can provide an economical heating solution.


Features

- 15W/lin metre provides heating to new builds
- Tough and durable thick heating cable
- Suitable for all floor finishes in wet and dry areas
- Full metallic earth screen for total safety

Technical Detail

- Diameter: 4.6 - 5.1mm
- 230V supply
- Single core conductor cable
- Power loading: 15W/lin metre
- 2 x 5.0m cold connection leads
- Approved to IEC 60800

Floor Construction
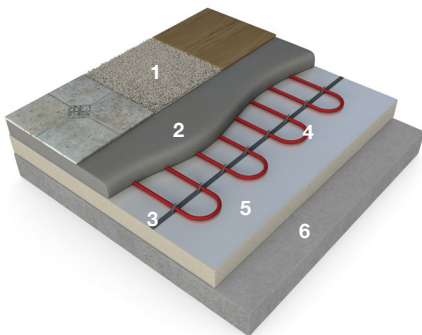
1. Floor coverings
2. Screed (min 50mm)
3. ECOFLEX HD fixing band
4. ECOFLEX In-screed cable
5. Foil faced floor slab insulation
6. Concrete subfloor

Product Codes

Coverage at 100W/m²	Coverage at 160W/m²	Coverage at 200W/m²	Cable Ref	Output (W)	Length (m)	Resistance (ohms)	Price ex VAT (£)
2.0m²	1.3m²	1.0m²	15200	200	13.7	264.5	53.52
3.3m²	2.0m²	1.6m²	15340	340	22.0	155.5	64.00
4.2m²	2.6m²	2.1m²	15420	420	28.0	126.0	73.02
5.5m²	3.5m²	2.8m²	15550	550	37.0	96.0	81.96
6.7m²	4.2m²	3.4m²	15660	660	45.0	80.0	89.64
7.8m²	4.9m²	3.9m²	15800	800	52.0	66.0	94.04
9.0m²	5.5m²	4.4m²	15880	880	59.0	60.0	99.30
9.6m²	6.0m²	4.8m²	15960	960	64.0	55.0	109.92
10.8m²	6.7m²	5.4m²	151070	1070	72.0	49.5	125.82
12.0m²	7.6m²	6.1m²	151210	1210	81.0	43.5	130.26
12.6m²	7.9m²	6.3m²	151300	1300	84.0	40.5	140.66
15.7m²	9.8m²	7.9m²	151580	1580	105.0	33.5	173.22
19.3m²	12.0m²	9.7m²	151900	1900	129.0	27.8	208.76
22.5m²	14.0m²	11.3m²	152200	2200	150.0	24.0	222.70
28.3m²	17.7m²	14.2m²	152800	2800	189.0	18.9	289.54
34.2m²	21.4m²	17.1m²	153400	3400	228.0	15.5	354.96

Accessories

ADT15 Fixing Tape

ECO-FIX Clip

ECO-FIX P.F.

ECO-FIX H.D.

| Product Code	Description	Price ex VAT (£)
ADT15	Heavy Duty Fixing Tape (15mm x 50m)	5.14
ECOPF	500mm Plastic Fixing Strip	0.70
ECOHD	10m Steel Fixing Strip	15.10
ECOCLIP	Plastic Fixing Clips (Pack of 50)	5.46
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16S	Silver Touch Screen Thermostat (16A)	103.26
ET16B	Black Touch Screen Thermostat (16A)	103.26
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

**The ultra-thin solution
for laminate & timber floors**

ECOFILM^{SET}

underfloor heating element

Features

- Dry installation: no self levelling compound required
- Suitable for most laminate and engineered hardwood floors
- Extremely low build height: less than 7mm
- Quick installation: roll out the elements & connect pre-wired elements
- Heat output: 130W/m^2
- Suitable for carpet & vinyl floors when used with ECOMAX-DUO
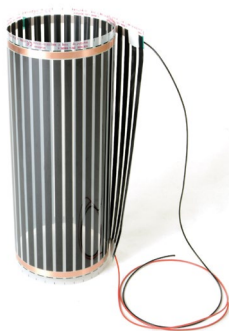
Technical Detail

- Construction: Carbon based flexible heating element
- Operating Voltage: 230V, 50Hz
- Output Rating: 130W/m^2
- Available In 3 Widths: 300mm, 500mm & 1000mm for max coverage
- Element Length: 2.0m to 10.0m in 0.5m increments
- Cold Tail Lengths: 5m

Product Codes

300mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)	Price ex VAT (£)
2.00	ES13-320	70	33.58
2.50	ES13-325	88	37.00
3.00	ES13-330	105	40.40
3.50	ES13-335	123	43.80
4.00	ES13-340	140	47.22
4.50	ES13-345	158	50.62
5.00	ES13-350	176	54.02
5.50	ES13-355	193	57.42
6.00	ES13-360	211	60.84
6.50	ES13-365	228	64.24
7.00	ES13-370	246	67.64
7.50	ES13-375	263	71.06
8.00	ES13-380	281	74.46
8.50	ES13-385	298	77.88
9.00	ES13-390	316	81.28
9.50	ES13-395	333	84.68
10.00	ES13-3100	351	88.08

500mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)	Price ex VAT (£)
2.00	ES13-520	122	42.66
2.50	ES13-525	153	48.36
3.00	ES13-530	183	54.02
3.50	ES13-535	214	59.70
4.00	ES13-540	244	65.38
4.50	ES13-545	275	71.06
5.00	ES13-550	306	76.74
5.50	ES13-555	336	82.42
6.00	ES13-560	367	88.08
6.50	ES13-565	397	93.78
7.00	ES13-570	428	99.44
7.50	ES13-575	458	105.12
8.00	ES13-580	489	110.80
8.50	ES13-585	519	116.48
9.00	ES13-590	550	122.16
9.50	ES13-595	580	127.84
10.00	ES13-5100	611	133.50

1000mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)	Price ex VAT (£)
2.00	ES13-1020	252	69.92
2.50	ES13-1025	315	81.28
3.00	ES13-1030	378	92.64
3.50	ES13-1035	441	103.98
4.00	ES13-1040	504	115.34
4.50	ES13-1045	567	126.70
5.00	ES13-1050	631	138.06
5.50	ES13-1055	694	149.40
6.00	ES13-1060	757	160.76
6.50	ES13-1065	820	172.12
7.00	ES13-1070	883	183.48
7.50	ES13-1075	946	194.82
8.00	ES13-1080	1009	206.18
8.50	ES13-1085	1072	217.54
9.00	ES13-1090	1135	228.90
9.50	ES13-1095	1198	240.24
10.00	ES13-10100	1261	251.62

Accessories

Product Code	Description	Price ex VAT (£)
EX06-5	ECOMAX-LITE Thermal Insulation (5m^2 coverage pack)	33.86
ADT50	Heavy Duty Adhesive Tape (50mm x 50m)	8.28
PVB12	Polyester Vapour Barrier (1m x 12m)*	34.26
PVB25	Polyester Vapour Barrier (1m x 25m)**	54.30
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16S	Silver Touch Screen Thermostat (16A)	103.26
ET16B	Black Touch Screen Thermostat (16A)	103.26
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

*1m x 12m of PVB has floor coverage of 10m^2 **1m x 25m of PVB has floor coverage of 22m^2

The professional kit for laminate & timber floors

MANUFACTURED IN THE UK

ECOFILM PRO
professional underfloor heating kit

ECOFILM PRO Professional Heating Kits are available in 5m², 10m², 15m² and 20m² kits and include all the tools for the professional installer. Simply cut the roll of 500mm wide ECOFILM into lengths and make the connections using the supplied crimping tool. The standard heat output of ECOFILM is 130W/m² ECOFILM PRO is NOT designed for use in wet areas e.g. bathrooms/shower rooms.

Kit Contents

- Roll of 500mm Wide Film
- Heating Element Connection Crimps
- Cold Tail Connection Leads (Brown & Blue)
- Mastic Insulation Tape

- Green Polyester Tape Discs
- Ratchet Crimping Tool
- Full Installation Instructions
- 10 Year Guarantee Certificate

Features

- Approved to EN60335-2-96 as required by the 18th Edition Wiring Regulations
- Standard heat output: 130W/m²
- Extremely low build height: less than 7mm
- Available as: 5m², 10m², 15m² and 20m² kits for maximum floor coverage
- Quick installation: simply cut the roll to length and connect
- Suitable for most laminate and engineered hardwood flooring
- When used in conjunction with ECOMAX-DUO, ECOFILM PRO is suitable for carpet and vinyl floors

Technical Detail

- Construction: Carbon based flexible heating film
- Operating Voltage: 230V, 50Hz
- Heat Output: 130W/m²
- Element Width: 500mm

Floor Construction
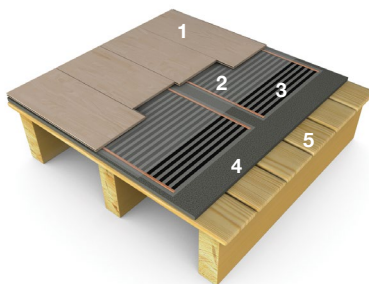
1. Laminate/Timber Floor
2. Polyester Vapour Barrier
3. ECOFILM Elements
4. Ecomax-Lite Insulation
5. Wood/Concrete Sub Floor

Product Codes

Product Code	Description	Price ex VAT (£)
EPRO - 5	5m^2 kit	180.46
EPRO - 10	10m^2 kit	294.00
EPRO - 15	15m^2 kit	407.58
EPRO - 20	20m^2 kit	521.12

Required Accessories

Product Code	Description	Price ex VAT (£)
EX06-5	ECOMAX-LITE Thermal Insulation (5m^2 coverage pack)	33.86
ADT50	Heavy Duty Adhesive Tape (50mm x 50m)	8.28
PVB12	Polyester Vapour Barrier (1m x 12m)*	34.26
PVB25	Polyester Vapour Barrier (1m x 25m)**	54.30
ET16W	White Touch Screen Thermostat (16A)	99.76
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

* 1m x 12m of PVB covers 10m^2 of floor area
** 1m x 25m of PVB covers 22m^2 of floor area

Additional Accessories

The accessories included in a standard Ecofilm^{Pro} kit are sufficient to install the kit in a single regularly shaped room. If installing a larger sized kit in multiple smaller rooms, additional accessories may be required.

Product Code	Description	Price ex VAT (£)
CRIMP10	10 x Connection Crimps	6.84
CTBL10	1.5mm^2 x 10m Cold Tail Leads (Blue)	7.40
CTBR10	1.5mm^2 x 10m Cold Tail Leads (Brown)	7.40
MASTIC1	1000mm x 101mm Mastic Tape	22.74
GTD20	20 x Green Termination Discs	1.38

ECOFOIL
under laminate aluminium foil mats

ECOFOIL Aluminium Foil Heating Mats are designed for use under laminates which are installed in wet environments like bathrooms and shower rooms. ECOFOIL mats are a combination of heating cable encased in an aluminium foil.

The aluminium layer above the heating cable acts as a heat dispersion medium and earthing grid making the product suitable for use in wet areas like bathroom or shower rooms where ECOFILM carbon elements should not be used.

Features

- Quick Installation - simply roll out the mat and fix to floor
- Suitable for use under floating laminate and engineered hardwood floors
- Fully earthed aluminium foil suitable for use in wet areas
- Dry installation - no self levelling compound required
- Low build height - only 7mm when used in conjunction with ECOMAX-LITE insulation

Technical Detail

- Advanced fluoropolymer heating cables encased in an aluminium foil
- Operating Voltage: (230V, 50Hz)
- Heat Output: ($140W/m^2$)
- Mat Width: 500mm
- Cold Lead Length: 3m

Floor Construction
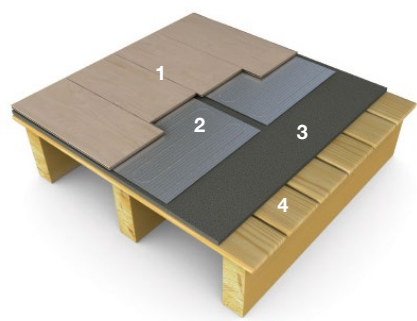
1. Laminate/Timber Floor
2. ECOFOIL Mat
3. ECOMAX-LITE Thermal Insulation
4. Wood/Concrete Sub Floor

Ecofoil Aluminium Foil Mats
140W/m^2, 230V, 500mm wide

Product Code	Area (m^2)	Output (W)	Length (m)	Price ex VAT (£)
EF140-1.0	1.0	140	2.0	66.36
EF140-1.5	1.5	210	3.0	92.24
EF140-2.0	2.0	280	4.0	108.68
EF140-3.0	3.0	420	6.0	150.26
EF140-4.0	4.0	560	8.0	190.33
EF140-5.0	5.0	700	10.0	224.48
EF140-6.0	6.0	840	12.0	262.38
EF140-7.0	7.0	980	14.0	278.68
EF140-8.0	8.0	1120	16.0	301.28
EF140-9.0	9.0	1260	18.0	347.74
EF140-10.0	10.0	1400	20.0	386.92
EF140-12.0	12.0	1680	24.0	477.44
EF140-14.0	14.0	1960	28.0	575.84

Additional Accessories

Product Code	Description	Price ex VAT (£)
EX06-5	ECOMAX-LITE Thermal Insulation (5m^2 coverage pack)	33.86
ADT50	Heavy Duty Adhesive Tape (50mm x 50m)	8.28
ET16W	White Touch Screen Thermostat (16A)	99.76
FT16WIFI	Flexel Touch Wifi Thermostat	145.00
MCD3	Digital Programmable Thermostat	78.75

ECOMAX-DUO
d u a l   b o a r d   o v e r l a y   s y s t e m

ECOMAX-DUO is a dual board overlay system suitable for use over ECOFILM underfloor heating. It is a dry lay system that creates a free floating subfloor that is extremely stable and is instantly ready to receive the finished floor covering.

ECOMAX-DUO provides a smooth stable laying surface onto which most finished floor coverings can be fixed. This enables ECOFILM elements to be used as the underfloor heat source for a variety of floor coverings such as carpet, linoleum and luxury vinyl.

Installation of ECOMAX-DUO is quick, clean and simple. The system consists of a baseboard and a top board, each with a layer of contact adhesive.

The combination of ECOFILM and ECOMAX-DUO provides a labour saving, cost effective method for heating linoleum, vinyl and carpet.

Features

- Allows ECOFILM to be installed under carpet and vinyl
- Creates a stable sub-floor for laying a variety of floor coverings
- Simple installation
- Low build height – only 7mm
- Dry Lay. Consists of a base board (3mm) and top board (4mm) with pre-applied contact adhesive to bond them together.

Technical Detail

- Dimensions - 600mm x 1200mm
- Pack contents - 4 base boards & 4 top boards (2.88m^2)
- Material - MDF coated with contact adhesive
- Density - 770 kg/m^3
- Thermal Resistance - 0.07m^2 °K/W

Floor Construction
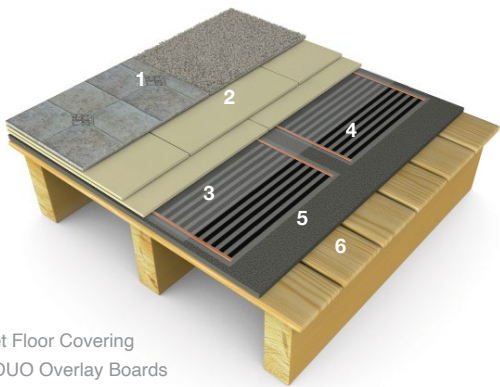
1. Vinyl/Carpet Floor Covering
2. ECOMAX-DUO Overlay Boards
3. Polyester Vapour Barrier
4. ECOFILM Element
5. ECOMAX-LITE Thermal Insulation
6. Suspended timber or concrete subfloor

Product Codes

Product Code	Description	Price ex VAT (£)
EDUO 7	4 base boards (3mm) & 4 top boards (4mm) Total coverage 2.88m^2	80.84

For ECOFILM^{SET} information see page 12 - 13
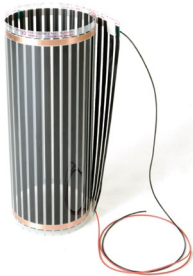
Simplicity in Control

FLEXEL**TOUCH**

FLOOR SENSING THERMOSTAT

- The new Flexel-Touch is designed to be the simplest to use electric floor heating control available.

- The Flexel-Touch comes packed with innovative features to optimise your comfort and minimise running costs with the simplest touch screen interface.

- A large full colour backlit touch screen provides simple programming by guiding you through program setup and adjustment - no need for any complicated instruction manual.

Features and Benefits

- **Easy To Use**
  Touch screen interface makes adjustment easy

- **Intuitive Programming**
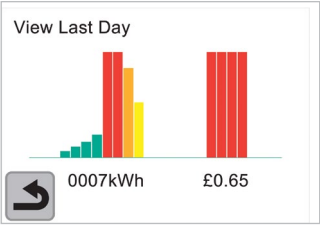 Simple to use graphical display with user configured screen colours

- **Easy Installation**
  Choice of 4 factory preset program schedules to get your heating working quickly.

- **Energy Monitor**
  Shows how much energy
  is being used and when

- **Energy Efficient**
  Optimise comfort and save energy with
  multiple time and temperature settings

- **Attractive Styling**
  Choice of thermostat finishes and display options.

Specification

- Electrical Protection: Class II
- Floor Limit Sensor Type: NTC, 3M cable
- Maximum Load: 16 Amps, 230V AC, 3680W
- Dimensions H/W/D: 90 x 90 x 19mm
- External Sensor Compatibility: 10K, 12K or 15K @25°C
- Installation Depth: 22mm
- Warranty: 3 years
- Approvals: EN 60730-1:2003

Product Codes

Product Code	Description	Price ex VAT (£)
ET16W	White Touch Screen Thermostat (16A)	99.76
ET16B	Black Touch Screen Thermostat (16A)	103.26
ET16S	Silver Touch Screen Thermostat (16A)	103.26
RAS	Optional Remote Auxiliary Sensor	18.18

SPARE PART ONLY- Each thermostat is supplied with a 3m Floor Probe.

ET16PR	Replacement Floor Probe	17.04

Simplicity in Control

FLEXELTOUCH WIFI

INTERNET CONNECTED THERMOSTAT

The Flexel Touch WiFi is an App controlled smart heating controller that works with your Smartphone to provide energy efficient heating by allowing you to take control of your electric floor heating system from anywhere.

You can remotely adjust temperatures and programs to ensure comfort conditions when you need them and run at lower temperatures when you don't. This reduces energy wastage and maximises energy efficiency.

works with
alexa

works with
Hey Google

Features

- **Easy to use**
  Remote access and control via a simple App designed for easy management and suitable for every type of user.
- **Easy Installation**
  Choice of 4 editable preset programs to get your heating working quickly
- **Intuitive Programming**
  Full capacitive colour touchscreen for clarity and ease of use.
- **Manage Costs & Comfort Remotely**
  Complete control of your WiFi controlled heating system where and when you need it. Adjust temperatures and program schedules, monitor energy consumption all from the palm of your hand.

Specification

- Maximum Load: 16 Amps, 230V AC, 3680W
- Electrical Protection: Class II
- External Sensor Compatibility: 10K, 12K or 15K @25°C
- Floor Sensor Type: NTC, 3M cable
- Dimensions H/W/D: 90 x 90 x 19mm
- Installation Depth: 22mm
- Warranty: 3 years
- Approvals: EN 60730-1:2003

Product Codes

Product Code	Description	Price ex VAT (£)
FT16WIFI	Flexel Touch Wifi Thermostat	145.00

FLEXEL

MCD3 Digital Programmable Thermostat

Digital Programmable Thermostat

The MCD3 Digital Programmable Thermostat is a full feature, premium quality, digital programmable thermostat designed for the control of underfloor heating.

Features

- Intuitive user - interface for trouble free programming and daily use
- Fully flexible " built-in" 4 event heating schedule that can be tailored to your daily/weekly needs
- "Manual Over-ride" function allows easy modification of heating schedule to match your actual needs
- Intelligent "adaptive start" function which automatically adjusts the heating to your specific environment
- Recommended for both tile and wooden floors
- Choice of operational modes: Air, Floor or Air & Floor Limit Sensor
- The MCD3 is supplied with a 3M sensor cable
- 3600W @230V, 16A

Product Codes

Product Code	Description	Price ex VAT (£)
MCD3	Digital Programmable Thermostat	78.75

FLEXEL

Wireless 7 Day Programmable Room Thermostat

The V22 Wireless Programmable Thermostat is designed to provide wireless time and temperature control to heating systems in domestic and light commercial buildings. It is ideal for use in renovation projects where it is impractical to run wires from the room thermostat to the heating appliance being controlled. Ideal for control of all type of electric heating systems; underfloor, radiant panels, convector heaters or ceiling heating etc.

Advantages

- Wire free installation from thermostat location to heating appliance reduces wiring costs and decoration disruption
- Easy setup - Choice of 9 factory preset programs to reduce set up time
- Capable of controlling up to 4 receiver/switching units

Features

- 7 day programming with digital accuracy. Up to 6 time / temperature settings per day
- Manual override with timer function
- Heat symbol display shows on call for heat
- Auto, manual, holiday and off (frost) modes
- Display battery powered using 2 x 1.5V AAA batteries (supplied)
- V22 Thermostat can control up to four V23 switching units (1 x master and 3 x slaves)
- V23 receiver/switching unit rated to 16 Amp at 230V
- V23 receiver/switching unit has a floor probe connection facility for use with underfloor heating

ROOM

V22 WIRELESS THERMOSTAT

V23 SLAVE

GLASS RADIATOR

WIRELESS SIGNAL

V23 MASTER
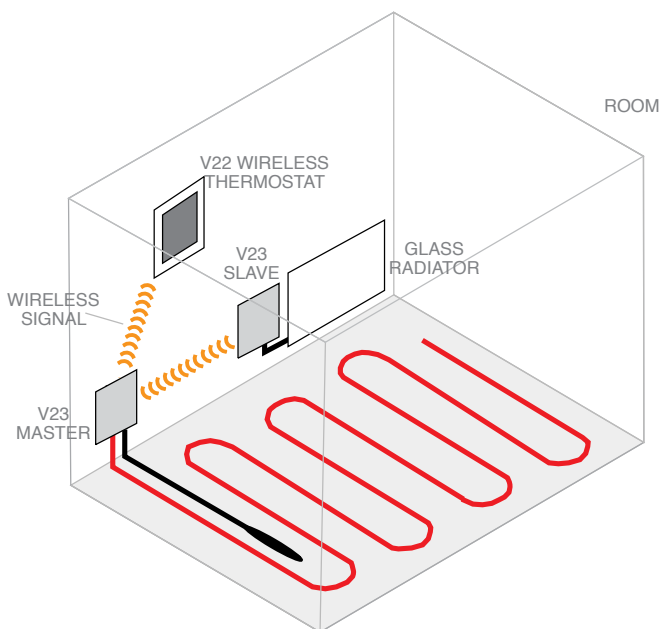
Technical Detail

- Placement: wall or stand
- Frequency: 868Mhz
- Range: 30 metres
- Power Supply: 2 x AAA 1.5V (inc) – approx life 2 years
- Thermostat Dimensions: 83x75x24mm WxHxD
- Receiver Dimensions: 89x89x24mm WxHxD
- IP Rating: 30

Product Codes

Product Code	Description	Price ex VAT (£)
V22	Wireless programmable room thermostat	73.82
V23	Wireless receiver/switching unit (16A)	73.82

FLEXEL

Central Wireless Control System

Central Wireless Control System

The Flexel "Central Control System" is a multizone central heating control system. It consists of a centrally located colour touch screen panel that communicates wirelessly with thermostats and sensors throughout your home. It is a modular system that is fully scalable up to 24 heating zones. It allows convenient control of your whole home, enabling you to maximise comfort and heating efficiency from a central location. Ideal for control of all type of electric heating systems; underfloor, radiant panels, convector heaters or ceiling heating etc.

Advantages

- Wire free installation between control system components reduces wiring costs and decoration disruption
- Simple installation and setup
- Modular system – fully scalable for future expansion (up to 24 zones).

Features

- Colour touch screen panel for simple use
- Convenient central control
- Wirelessly controls your whole house heating system.

Product Codes

| Product Code	Description	Price ex VAT (£)
V22	Wireless Room Thermostat	73.82
V23	Wireless Receiver/Switching Unit (16A)	73.82
V24	Central Touch Panel Control Unit	154.44
V24WiFi	WiFi Enabled Central Touch Panel Control Unit	300.94

Additional Accessories

V22 wireless room thermostat which allows temperature adjustment in individual rooms.

V23 wireless wall mounted receiver/switching unit. Connected to the 230V mains, this unit switches the connected heating on/off. It has a floor probe facility for use with floor heating.

V24 WiFi Central Control Unit allows control of your heating system from your smartphone, using the intuitive iOS or Android App.
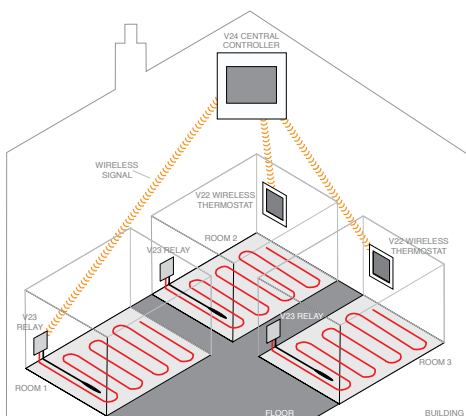
The ideal product to prevent downward heat loss under tile and stone floors

ECOMAX
Cement Coated Insulation Board

FOR USE BELOW ECOFLOOR OR ECOFLEX CABLE SYSTEMS

ECOMAX is a robust Cement Coated Insulation Board developed specifically for the thermal insulation of tiled floors. It is constructed from an extruded polystyrene core covered on both sides by a glass fibre mesh reinforced polymer cement coating. ECOMAX has exceptional compressive strength and moisture resistance.

Features

- Available in 6mm or 10mm thickness
- Waterproof
- Can be fixed to any surface
- Keyed surface ready to receive tile adhesive
- Easy to work with - Cut with a knife or saw
- Lightweight and easy to handle

Technical Detail

- Dimensions: 600mm x 1200mm ($0.72m^2$)
- Weight (kg/board): 1.8kg (6mm) or 2.0kg (10mm)
- Extruded Polystyrene core with polymer cement coating
- Density: $32Kg/m^3$
- Thermal Conductivity: $0.033W/m^ok$

Floor Construction

Cement Coated Insulation Board reduces downward heat losses to the sub-floor ensuring more of the heat is transferred through the finished floor surface.

1. Tile/Stone Floor
2. Tile Adhesive/ Self-levelling Compound
3. Heating Cable Mat
4. Thermal Insulation
5. Wood/Concrete Sub Floor
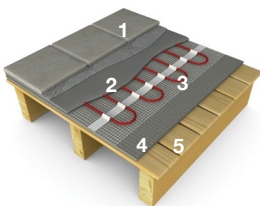
Product Codes

Product Code	Description	Price ex VAT (£)
TB06	6mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TB10	10mm Cement Coated Insulation Board (600mm x 1200mm)	20.50
TBSW	(25mm) Fixing Screws & (35mm) Washers (pack of 50)*	18.86

* Fixing washers should only be used with 10mm backer board. Approx 12 fixings per board

Board Usage Guide

Area to be covered (M²)	No of boards req	Price ex VAT (£)
1m²	2	41.00
2m²	3	61.50
3m²	5	102.50
4m²	7	143.50
5m²	8	164.00
6m²	10	205.00
7m²	11	225.50
8m²	13	266.50
9m²	14	287.00
10m²	16	328.00
11m²	17	348.50
12m²	19	389.50
13m²	20	410.00
14m²	22	451.00
15m²	23	471.50
16m²	25	512.50
17m²	26	533.00
18m²	28	574.00
19m²	29	594.50
20m²	31	635.50

* Each board covers 0.72m² simply order the number of boards you require for your chosen floor area adding approx 10% to cover cutting wastage.
* Be sure to specify 6mm or 10mm boards.

Heat-Up Times

The speed of response of your ECOFLOOR system depends on several factors including subfloor construction and tile material and thickness.

The table below provides indications of heat-up times for various sub-floor constructions.

Sub Floor Construction	Heat -Up Time (hrs)
ECOMAX insulated tile backer board (10mm) on timber	0.5
Concrete screed floor (insulated under screed)	2.5
Un-insulated Concrete	3-8+
Concrete with ECOMAX insulated tile backer board (10mm)	1

The ideal product to prevent downward heat loss under tile and stone floors

ECOMAX-XPS

Uncoated Insulation Board

FOR USE BELOW ECOFLOOR CABLE MAT SYSTEMS

ECOMAX-XPS Uncoated Thermal Insulation is an extruded polystyrene insulation material for use over concrete sub floors in conjunction with ECOFLOOR cable mats where a more economical alternative to coated insulation boards are required. It should never be used on timber subfloors.

Available in 6mm or 10mm thickness each board covers 0.72m^2. When ordering insulation boards, add around 10% to the amount required to make up for any wastage when cutting.

Features

- Available in 6mm or 10mm thickness
- Excellent moisture resistance
- Excellent sound insulation
- Levels small floor imperfections
- Suitable for use with concrete sub floors
- Easy to work with - cut with a knife or saw
- Lightweight and easy to handle
- Colour of board may vary

Technical Detail

- Dimensions: 600mm x 1200mm (0.72m^2)
- Weight (kg/board): 0.10kg (6mm) or 0.15kg (10mm)
- Extruded Polystyrene
- Density: 34Kg/m^3
- Thermal Conductivity: 0.03W/m^{o}k

Floor Construction

The Insulation Board reduces downward heat losses to the sub-floor ensuring more of the heat is transferred through the finished floor surface.

1. Tile/Stone Floor
2. Tile Adhesive/
   Self-levelling Compound
3. Ecofloor Cable Mat
4. Thermal Insulation
5. Concrete Sub Floor
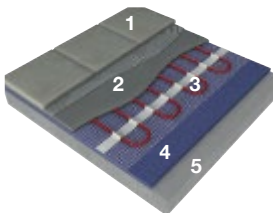
Product Codes

Product Code	Description	Price ex VAT (£)
UB06	6mm Uncoated Insulation Board (600mm x 1200mm)	7.64
UB10	10mm Uncoated Insulation Board (600mm x 1200mm)	11.56

ECOMAX-LITE
t h e r m a l   i n s u l a t i o n

FOR USE WITH ECOFILM

ECOMAX-LITE Thermal Insulation is an extruded polystyrene insulation material for use below wood or laminate floors in conjunction with ECOFILM underfloor heating elements. ECOMAX-LITE is available in 6mm thick sheets and is manufactured from recycled material free from ozone depleting chemicals.

Produced from a closed cell construction foamed polystyrene it has excellent thermal insulation properties. It MUST be used below ALL ECOFILM heating systems. Each board covers 0.5m², simply order the pack size you require for your chosen floor area adding approximately 10% for cutting wastage. Where threshold height limitations permit in conservatories we recommend installing a double layer of ECOMAX-LITE insulation.

Features

- 6mm thick
- Excellent moisture resistance
- Excellent sound insulation
- Levels small floor imperfections
- Suitable for most floor constructions
- Easy to work with – cut with knife
- Lightweight and easy to handle

Technical Detail

- Dimensions: 1000mm x 500mm x 6mm (0.5m² coverage per sheet)
- Material: Close cell foamed polystyrene
- Density: 50Kg/m³
- Thermal conductivity: 0.03W/m°K
- Actual colour varies

Floor Construction

ECOMAX-LITE reduces downward heat losses to the sub-floor ensuring more of the heat is transferred through the finished floor surface.

1. Laminate/Timber Floor
2. Polyester Vapour Barrier
3. ECOFILM^{SET} Elements
4. ECOMAX-LITE Thermal Insulation
5. Wood/Concrete Sub Floor
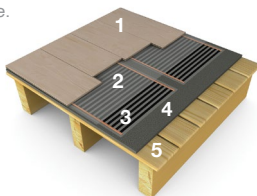
Ecomax-Lite board size: 1000mm x 500mm x 6mm (0.5m² coverage per sheet).

Product Code	Coverage (m²)	Pack Size	Price (£) Ex Vat
Ex06-3	3	6 Boards	23.66
Ex06-5	5	10 Boards	33.86
Ex06-18	18	36 Boards	114.36

**Clear walkways,
pavements and drives**

ECOFLOOR
ice prevention & snow melting cable mat

In the winter months, serious injury can occur from the formation of ice on work platforms in warehouse loading bays or on entrance walkways to busy public buildings etc. This potential hazard can easily be minimised by installing an ice prevention system.

In the case of snow fall, an ice prevention system will quickly melt any snow that falls providing clear access for pedestrians and vehicles on pavements and drives.

MST heating cable mats are rated at 300 W/m^2 and are used for ice and snow melting of outdoor areas and other applications where the cable is embedded in concrete. The most common application in industry is heating of ramp or loading platforms in factories and warehouses, where an ice prevention system can reduce the risk of accidents and ensure work can be carried out at all times. There are however a variety of applications for ice and snow melting. All these applications can be kept free from ice and snow so heavy salting and snow shovelling are avoided. These include: car parks; garage drive ways; pavements and outdoor steps.

Before   **After**

Features

- Approved to IEC 60800
- 300W/m^2 power density provides clear, safe access for pedestrians and vehicles on pavements and drives.
- 500mm wide mat format with pre-spaced cables ensure even heat distribution and ease of installation
- Suitable under concrete, paviours and asphalt

MST Mats, 230V, 500mm wide

Product Code	Output (W)	Area (m^2)	Length (m)	Price ex VAT (£)
MST300/1.5	450	1.5	3.0	83.72
MST300/2.0	600	2.0	4.0	105.58
MST300/3.0	900	3.0	6.0	155.12
MST300/4.0	1200	4.0	8.0	176.64
MST300/5.0	1500	5.0	10.0	232.42
MST300/6.0	1800	6.0	12.0	261.34
MST300/7.0	2100	7.0	14.0	285.30
MST300/8.0	2400	8.0	16.0	302.72
MST300/9.0	2700	9.0	18.0	358.26
MST300/10.0	3000	10.0	20.0	378.60
MST300/12.0	3600	12.0	24.0	480.20
MST300/15.0	4500	15.0	30.0	491.00
MST300/20.0	6000	20.0	40.0	783.46

Technical Detail

- Single conductor cable with full protection screen
- Cold tails: 1x5m with other cold lead 1x5m + length of mat
- 5.0-5.5mm thick cable with UV protective outer jacket
- 230V supply, IP 67 Rated
- Power density - 300W/m^2

Ice Detector & Combined Sensor

Accessories

Simply melt away the ice and snow.

An ice detector for the economical control of ice prevention and snow melting cables used on driveways, ramps and exterior steps. The use of an ice detector will reduce energy consumption by approximately 80% compared to control by a simple air thermostat.

The ice detector, equipped with a combined temperature and moisture ground sensor, monitors conditions and determines the optimum switch-on time so that the heating comes on in good time to prevent ice formation. Unnecessary waste of energy is avoided as the system is only activated when there is ice or snow present.

Product Code	Description	Max Load (W)	Price ex VAT (£)
IDC100	Single channel automatic ice detector	3600	249.84
IDC200	Two channel automatic ice detector	11000	374.76
IDCGS	Combined temperature & moisture sensor		312.30

ECOFLEX

pipe freeze protection cable

Ecoflex PFP cable is a simple solution to prevent frozen pipes in domestic and small commercial buildings. Composed of a pre-terminated fixed resistance heating cable fitted with a pipe thermostat this really is a simple, low cost solution.

The integrated thermostat monitors pipe temperature and energises the system when there is a risk of freezing. Once a safe pipe temperature has been reached the cable is de-energised to save energy.

Available in a range of 9 sizes, the product is fitted with a 1.5m cold lead for easy connection to the power supply. The product can simply be installed in a straight line along pipes up to 50mm diameter. Additional accessories required for installation are PFP fixing tape to secure the cable to the pipe and Alu50 aluminium heat dispersion tape for installation onto plastic pipework. Once the cable has been installed the entire installation should be covered with a layer of 20mm (max) thick flame retardant insulation.

Features

- Protects hot and cold water pipework that may be subject to freezing conditions
- Simple, low cost solution for the prevention of burst pipes
- Suitable for both metal and plastic pipe up to 50mm diameter
- Ready made unit with fitted 1.5m cold lead
- Integrated thermostat energises system when temperature falls below +3°C
- Typical uses: boiler condensate pipes, external water pipes, waste pipes in unheated areas, lofts,outbuildings and external waste pipes
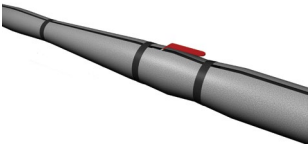
Installation

Wrap plastic pipe with aluminium tape
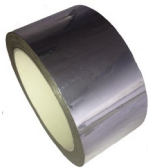

Position pipe thermostat and cable

Tape cable to pipe

Insulate pipe (20mm max)
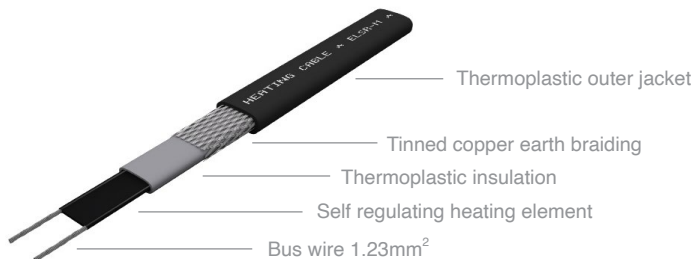
Required Accessories

Alu50 Tape

PFP Tape

Product Codes

Product Code	Length (m)	Voltage	Watts	Price ex VAT (£)
PFP2	2	230	20	64.76
PFP3	3	230	30	68.50
PFP4	4	230	40	69.60
PFP6	6	230	72	73.88
PFP10	10	230	136	81.50
PFP14	14	230	152	88.22
PFP21	21	230	281	104.36
PFP30	30	230	337	117.32
PFP42	42	230	490	144.96
Alu50	(45m x 50mm)	Aluminium tape		23.30
PFP tape	(33m x 18mm)	Fixing tape		7.40

FLEXEL

self regulating cables for pipe freeze protection

- Thermoplastic outer jacket
- Tinned copper earth braiding
- Thermoplastic insulation
- Self regulating heating element
- Bus wire 1.23mm^2

The ELSR Self Regulating 230V heating cables provide an effective and affordable solution for the freeze protection of water pipes. They are suitable for use on metal and plastic pipes. Typical applications would be the protection of boiler condensate pipes, exposed water pipes in the home, farm buildings, stables, garages and lofts plus many other applications.

ELSR cables are supplied by the metre and can be cut to length on site minimising wastage. The ELSR trace heating range will not produce dangerous hot spots even when cables are touching or overlapping and the two power outputs within the range can be used when straight tracing pipes of between 15mm and 150mm in diameter.

Advantages

- Easy termination
- Time saving
- Economical

To provide pipe freeze protection the ELSR cables are simply taped along the bottom of the pipe.
For plastic pipes we recommend the use of aluminium foil tape to provide better heat dispersion. For maximum protection, trace heated pipes should always be insulated. A connection kit using crimps and heat shrink insulation (kit 4) will be required per circuit. This kit includes components to produce a cold tail connection to the trace cable and seal the end.

Technical Detail

- Outer jacket: TPE-O
- Bus wire: nickel plated copper
- Construction: protective braid and a thermoplastic outer jacket
- Nominal Voltage: 230V
- Bend radius: 25mm (min)

Features

- Self regulating
- Two power outputs: 10W/lm and 20W/lm
- Can be cut to length on site
- Moisture proof with full length earth braid

Product Codes

Product Code	Output W/m at 10°C	Max Temp	Min Temp	Max Circuit Length (m)	Price ex VAT (£)
ELSR-M-10-BO	10	65	-30	126	13.28
ELSR-M-20-BO	20	80	-10	146	17.00

Accessories

Product Code	Description	Price ex VAT (£)
Kit 4	Connection and Termination Kit	14.36
Alu50	Aluminium Foil Tape (For plastic pipes) (45m x 50mm)	23.30
PFP tape	Fixing Tape, High Temp (33m x 18mm)	7.40

MIRROR DEMISTER PADS

Mirror Demister Pads are the simple and totally safe answer to steamed-up mirrors in wet areas such as Bathrooms, Shower Rooms and En-Suites.

The self adhesive pads are easy to install behind existing or new mirrors. Simply integrate the mirror pad into the lighting circuit, so it only switches on when you need it. For larger mirrors, multiple pads can be used together.

Features

- Very low energy consumption
- Self adhesive, easy to install
- Can be used in multiples to cover larger areas
- Ultra slim pad fits behind existing or new mirrors
- Integrate into lighting circuit for automatic operation when light is switched on

Technical Detail

- IP44 rated
- Output Rating: 200W/m^2
- Operating Voltage: 230V, 50Hz
- Class II Connection
- CE and UKCA Marked - complies with all relevant standards
- 1m mains connection lead

Product Codes

Mirror Demister Pads			
Product Code	**Watts**	**Width & Length**	**Price ex. VAT (£)**
7030L025	13	300mm x 250mm	27.36
7030L049	27	300mm x 490mm	31.96
7030L057	31	300mm x 570mm	33.72
7030L081	45	300mm x 810mm	38.28
Product Code	**Watts**	**Width & Length**	**Price ex. VAT (£)**
7040L029	21	400mm x 290mm	28.92
7040L045	33	400mm x 450mm	32.98
7040L061	46	400mm x 610mm	36.36
7040L081	61	400mm x 810mm	40.96
7040L089	67	400mm x 890mm	43.02
7040L101	76	400mm x 1010mm	45.72
7040L145	109	400mm x 1450mm	56.42
Product Code	**Watts**	**Width & Length**	**Price ex. VAT (£)**
7050L029	27	500mm x 290mm	30.04
7050L049	46	500mm x 490mm	35.62
7050L053	50	500mm x 530mm	36.36
7050L069	65	500mm x 690mm	41.16
7050L077	73	500mm x 770mm	43.56
7050L097	92	500mm x 970mm	48.94
7050L105	100	500mm x 1050mm	51.34
7050L149	142	500mm x 1490mm	63.04
Product Code	**Watts**	**Width & Length**	**Price ex. VAT (£)**
7060L029	32	600mm x 290mm	31.70
7060L061	70	600mm x 610mm	41.84
7060L081	93	600mm x 810mm	48.36
7060L105	121	600mm x 1050mm	56.96
Product Code	**Watts**	**Width & Length**	**Price ex. VAT (£)**
7070L029	38	700mm x 290mm	32.40
7070L049	65	700mm x 490mm	39.30
7070L069	92	700mm x 690mm	46.24
7070L081	109	700mm x 810mm	50.06
7070L093	125	700mm x 930mm	53.98
7070L101	136	700mm x 1010mm	57.02
7070L113	152	700mm x 1130mm	60.92
7070L129	174	700mm x 1290mm	67.04

Other standard sizes available, please contact the sales office

# FLOOR CONSTRUCTION

Floor Constructions Details

It is important to choose the correct underfloor heating product dependant on your subfloor material and your chosen floor covering.

The following underfloor heating constructional details will show you the floor build-up for the most popular types of finished floor coverings.

On some occasions you may have a choice of product and floor construction to achieve your choice of heated floor surface. The final product decision may depend on a comparison of factors such as: finished floor build-up height, speed or ease of installation or cost. Whatever product or construction method you choose, you can be sure that it is well proven and will provide an excellent heating system.

Insulation materials are a crucial component in all the construction details shown. Use of the recommended insulation material will enable the floor to heat up faster and run more efficiently.
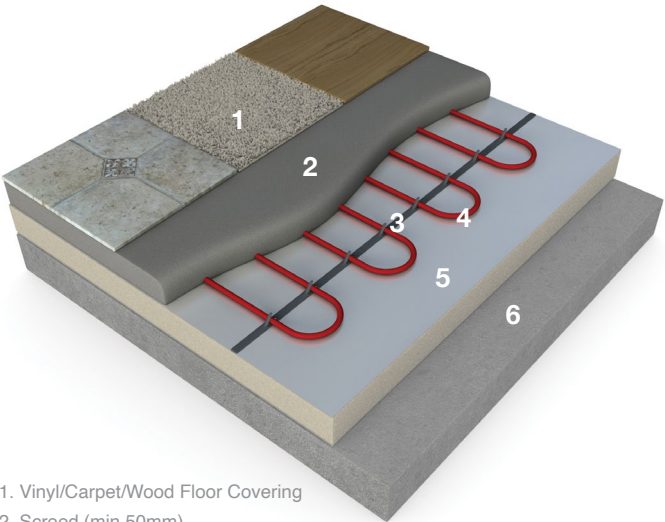
UFH beneath a Tile & Stone Floor
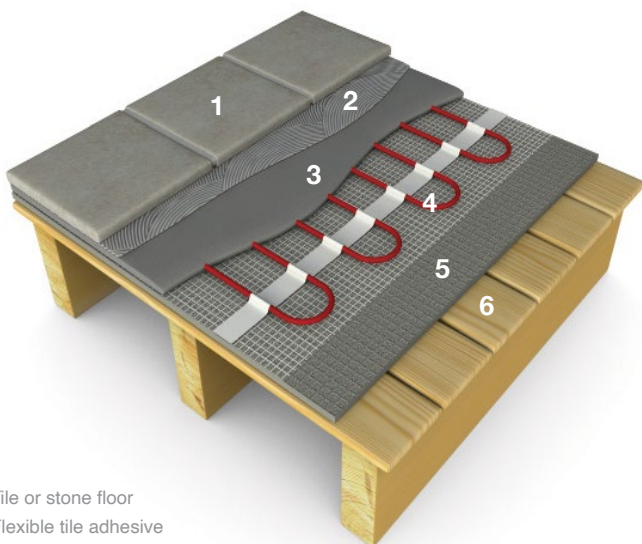
1. Tile or stone floor
2. Flexible tile adhesive
3. Flexible levelling compound
4. ECOFLOOR Cable Mat or ECOFLEX Loose Cable
5. ECOMAX Cement Coated Insulation Board
6. Suspended timber or concrete subfloor

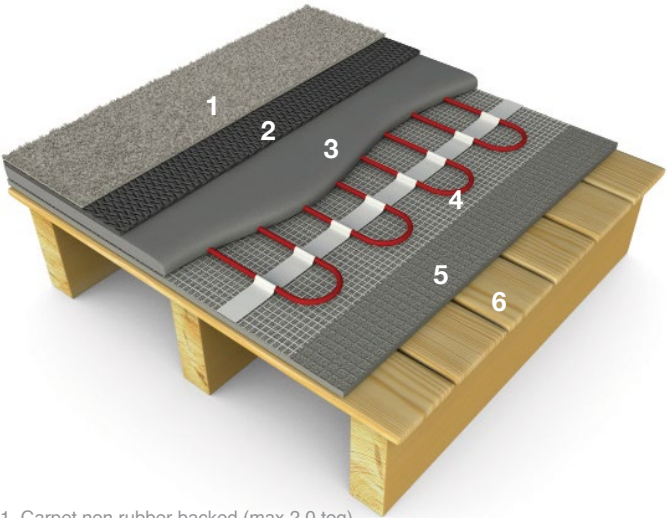## UFH beneath a Linoleum or Luxury Vinyl Floor
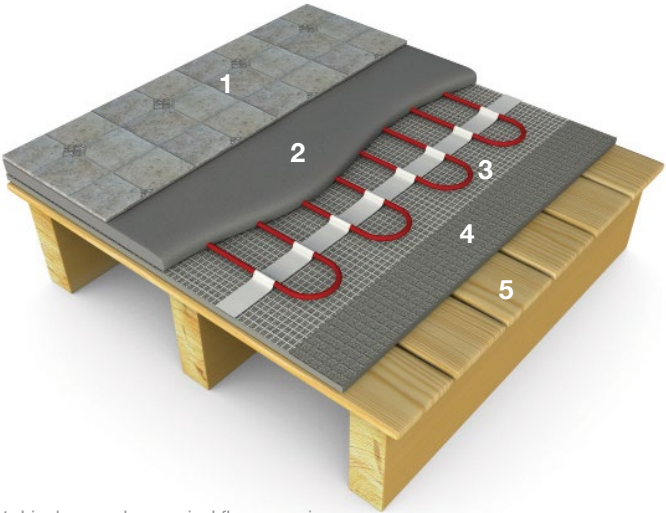
1. Linoleum or luxury vinyl floor covering
2. Flexible levelling compound (12mm min depth)
3. ECOFLOOR Cable Mat or ECOFLEX Loose Cable
4. ECOMAX Cement Coated Insulation Board
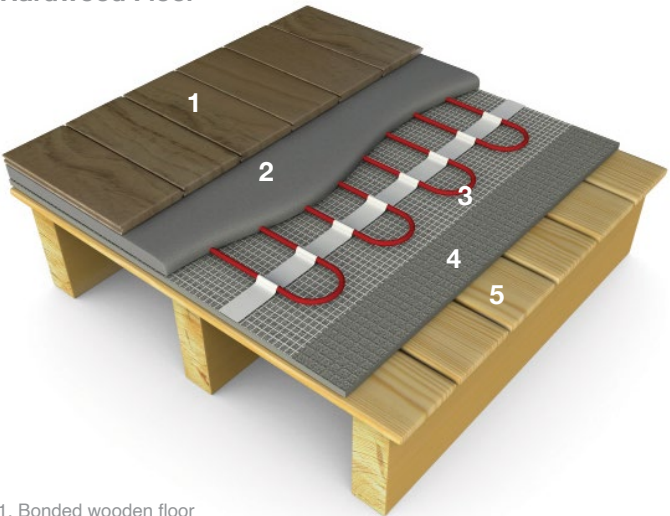5. Suspended timber or concrete subfloor

UFH beneath a Screed Floor

1. Vinyl/Carpet/Wood Floor Covering
2. Screed (min 50mm)
3. ECO-FIX HD Fixing Band
4. ECOFLEX In-screed Cable
5. Foil faced floor slab insulation
6. Concrete Subfloor

UFH beneath Carpet
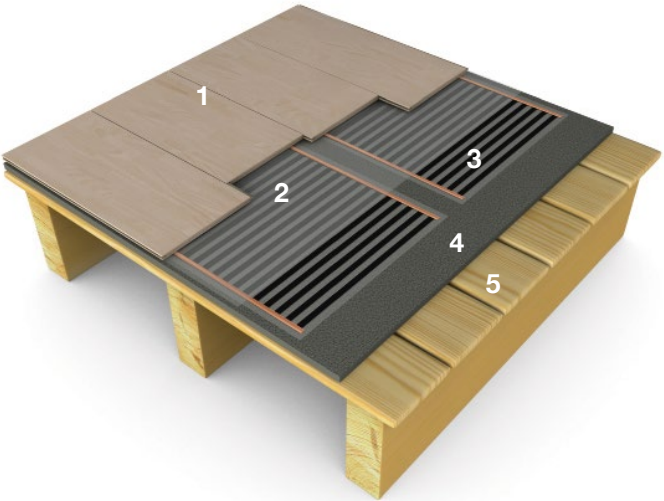

1. Carpet non rubber backed (max 2.0 tog)
2. Low tog underlay if required (max 0.8 tog)
3. Flexible levelling compound (12mm min depth)
4. ECOFLOOR Cable Mat or ECOFLEX Loose Cable
5. ECOMAX Cement Coated Insulation Board
6. Suspended timber or concrete subfloor

UFH beneath a Bonded Engineered Hardwood Floor

1. Bonded wooden floor
2. Flexible levelling compound (12mm min depth)
3. ECOFLOOR Cable Mat or ECOFLEX Loose Cable
4. ECOMAX Cement Coated Insulation Board
5. Suspended timber or concrete subfloor

UFH beneath Laminate or Engineered Hardwood Floor

1. Laminate or Engineered Hardwood Floor
2. Polyester Vapour Barrier
3. ECOFILM Element
4. ECOMAX-LITE Thermal Insulation
5. Suspended timber or concrete subfloor

UFH beneath Carpet or Vinyl Floor
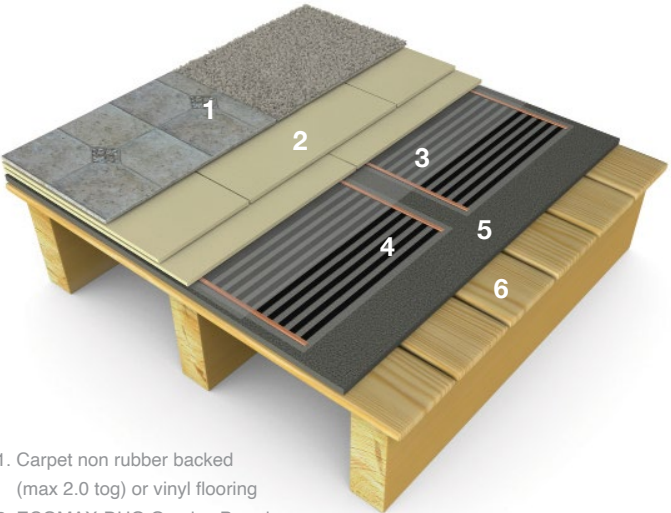
1. Carpet non rubber backed
   (max 2.0 tog) or vinyl flooring
2. ECOMAX-DUO Overlay Boards
3. Polyester Vapour Barrier
4. ECOFILM Element
5. ECOMAX-LITE Thermal Insulation
6. Suspended timber or concrete subfloor

TRAINING COURSES
Become a Flexel approved Installer

You can win more customers and grow your business, by adding the stamp of authority that comes from being a Flexel approved electric underfloor heating installer.

Our free training days will teach you everything you need to know about installing our cable mats, loose cable and film heating systems.
Our technical experts will be on hand to answer any questions and pass on tips to use on your next underfloor heating installation.
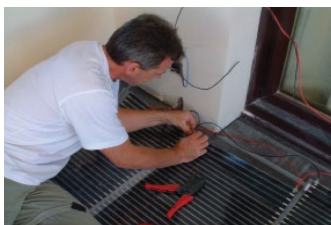Simply email enquiries@flexel.co.uk

Features

- Product demonstrations
- Installation practice
- Fitting guidance
- Technical advice
- Complimentary lunch and refreshments
- Installer packs to take away - including completion certificate

Topics

- ECOFLOOR Cable Mats and Loose Cable
- ECOFILM Installation
- In-Screed Cables
- Frost Protection Cables
- Insulation Options
- Thermostats
- Snow Melting Kits

Email enquiries@flexel.co.uk or call 01592 760928 to book a complimentary Flexel training course today.