

Floor Plan:

300mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)
2.00	ES13-320	70
2.50	ES13-325	88
3.00	ES13-330	105
3.50	ES13-335	123
4.00	ES13-340	140
4.50	ES13-345	158
5.00	ES13-350	176
5.50	ES13-355	193
6.00	ES13-360	211
6.50	ES13-365	228
7.00	ES13-370	246
7.50	ES13-375	263
8.00	ES13-380	281
8.50	ES13-385	298
9.00	ES13-390	316
9.50	ES13-395	333
10.00	ES13-3100	351

500mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)
2.00	ES13-520	122
2.50	ES13-525	153
3.00	ES13-530	183
3.50	ES13-535	214
4.00	ES13-540	244
4.50	ES13-545	275
5.00	ES13-550	306
5.50	ES13-555	336
6.00	ES13-560	367
6.50	ES13-565	397
7.00	ES13-570	428
7.50	ES13-575	458
8.00	ES13-580	489
8.50	ES13-585	519
9.00	ES13-590	550
9.50	ES13-595	580
10.00	ES13-5100	611

Plan Your Installation

- The position of the thermostat should take account of the ease of access to the power supply.
- Remember to note down the dimensions of any items of furniture which cover-up the floor surface, such as wardrobes, cupboards, kitchen base units etc. as heating element should not be placed under these. Allow for a perimeter border around the room of at least 50mm from each wall or item of furniture, to determine the heating area of the room.
- Element edges should be butted together, do not overlap the ECOFILM^{SET} elements.
- It is recommended that when planning your room the elements run in line with the longest room dimension, this keeps elements and electrical connections to a minimum making installation easier and quicker.
- It is recommended that you plan to use the widest ECOFILM^{SET} element wherever possible (1000mm) as this minimises electrical connections. Widths of 500mm and 300mm should be used to maximise floor coverage when it is not possible to use the larger size.

Product Code	Description
EL06	ECOMAX-LITE thermal insulation (800mm x 1250mm)
ADT50	Heavy duty adhesive tape (50mm x 50m roll)
PVB12	Polyester Vapour Barrier (1mx12m)*
PVB25	Polyester Vapour Barrier (1mx25m)**
TH132AF	Digital programmable thermostat
EB100	Manual analogue thermostat

* 1m x 12m of PVB has a floor coverage of 10m²
** 1m x 25m of PVB has a floor coverage of 20m²

1000mm wide ECOFILM^{SET} element

Length (m)	Element Reference	Output (W)
2.00	ES13-1020	252
2.50	ES13-1025	315
3.00	ES13-1030	378
3.50	ES13-1035	441
4.00	ES13-1040	504
4.50	ES13-1045	567
5.00	ES13-1050	631
5.50	ES13-1055	694
6.00	ES13-1060	757
6.50	ES13-1065	820
7.00	ES13-1070	883
7.50	ES13-1075	946
8.00	ES13-1080	1009
8.50	ES13-1085	1072
9.00	ES13-1090	1135
9.50	ES13-1095	1198
10.00	ES13-10100	1261



Authorised Distributor:

Version 1.1 - April 2009 - Priced

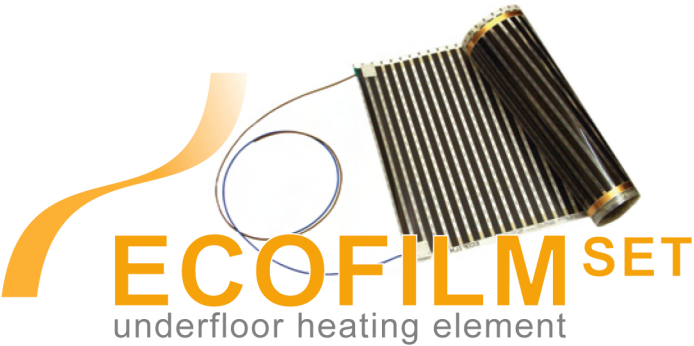
ECOFILM^{SET} is part of the Flexel Underfloor Heating Systems product range by Flexel International Ltd, Queensway Ind Est, Glenrothes, Fife, KY7 5QF, Scotland. Also available: ECOFLOOR & ECOFLEX.

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Electrical Requirements

- ECOFILM^{SET} Underfloor Heating Elements are very simple to install by following the comprehensive instruction booklet included with each element kit. The final electrical connections should be made by a qualified electrician in accordance with the current wiring regulations.
- All installations require a 30mA RCD (residual current device) for safe operation.
- The thermostat has a max load of 15Amp / 3450W at 230Vac.
- All elements require connection to the thermostat via a standard junction box.



APPROVED
to comply
with the
17th Edition
Wiring
Regulations



Electric underfloor heating
for laminate & timber floors

Underfloor heating for living areas, bedrooms, hallways & conservatories

Bringing Out The Luxury Of A Wood Floor
ECOFILM^{SET} provides the luxury of electric underfloor heating to living rooms, bedrooms, hallways, loft conversions and conservatories or almost anywhere a laminate, engineered wood or real timber floor is being laid.

Easy To lay
ECOFILM^{SET}, is supplied in 3 different widths (300mm, 500mm and 1000mm) & standard lengths between 2m & 10m in 0.5m increments. Just select the roll widths and nearest lengths to provide maximum floor coverage. Installation is completely dry with the element simply unrolled and taped into position.

Quick Installation
ECOFILM^{SET} comes pre-wired. Only a simple 2 wire electrical mains connection is required (no need for a transformer) to provide gentle and safe heating comfort. **ECOFILM^{SET}** is rated at 130W/m² for living areas and 160W/m² for conservatories .

Freedom Of Installation
ECOFILM^{SET} elements are ultra-thin and have a minimum effect on finished floor levels, an important consideration when laying floating floors. It can be laid on most sub-floors, concrete or timber, when used in conjunction with **ECOMAX-LITE** thermal insulation.

Safety
ECOFILM^{SET} is approved to the relevant International safety approval EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671:2008).

Economy
ECOFILM^{SET} produces the optimum heat distribution in any room by using the whole area of the floor to radiate heat. This means that the air temperature can be lowered by 2-3 degrees over a conventional convector system while still maintaining a comfortable environment. **ECOFILM^{SET}** can realise savings of up to 10% over conventional convector systems if the floor is well insulated

Maintenance Free
ECOFILM^{SET} is reliable, safe and manufactured to last. Being electric with no moving parts it is completely maintenance free.

Warranty
ECOFILM^{SET} comes with a 10 year guarantee against manufacturing defects.

How Effective Is Under Laminate Heating?
ECOFILM^{SET} is a highly effective direct acting radiant heating system. It can be used to substitute traditional convector radiators by providing primary heating or just be used to warm a cool floor & provide background heat.

A Primary Heat Source
Heat loss calculations should be performed before using **ECOFILM^{SET}** as the sole source of heating. Consult your Architect or heating engineer. As a guide however if your room complies with the insulation standards in current building regulations, **ECOFILM^{SET}** can be used as a primary heating source. Rooms with potentially high heat losses such as conservatories may need a supplementary heat source on very cold days.

Running Costs
The running costs associated with **ECOFILM^{SET}** can be related directly to the floor heat-up times. A well insulated sub-floor will significantly reduce heat losses, improve heat-up times & reduce running costs. Even on insulated floors (concrete or wood) a minimum of 6mm of **ECOMAX-LITE** Thermal Insulation should be used in conjunction with **ECOFILM^{SET}**.

Example:
A 6m² floor in a lounge fitted with 6mm of **ECOMAX-LITE** Thermal Insulation on top of an insulated concrete sub-floor would cost approximately 4.5p* per square metre per day to run. This is based on the heating system being on twice a day for a 2hr and 5hr period respectively. This assumes a 50% duty cycle once the floor has reached temperature and assumes a cost of 10.0p per Kwh.

*Cost estimate given is an approximation only. Running costs vary depending on heat losses in individual rooms.

Simple Control
ECOFILM^{SET} is controlled by a simple to operate timer-thermostat that offers the user maximum flexibility and control. Air and floor temperature sensors regulate heat output to maximise comfort. The unit can offer full 24 hour control, 7 days a week with simple manual override functions.

Installation
Before laying the **ECOFILM^{SET}** on either a suspended wooden floor or concrete sub-floor it is necessary to install a layer of **ECOMAX-LITE** Thermal Insulation. This will minimise heat losses and ensure quicker heat-up times for the floor. It will also act as a means of sound deadening which is required for laminate floors . Next roll out the pre-cut lengths of **ECOFILM^{SET}** taking care to locate the “cold tails” on the wall nearest the thermostat connection box. Trim to length as required and insulate trimmed ends as per instructions before taping the element into position. Always take care NOT to overlap the heating elements. Cover the total floor including non heated areas with a layer of **Flexel Polyester Vapour Barrier** before laying the chosen floor covering.

1. Laminate/Timber Floor
2. Polyester Vapour Barrier
3. **ECOFILM^{SET}** Elements
4. **ECOMAX-LITE** Thermal Insulation
5. Wood/Concrete Sub Floor

Installation Example:
A childs nursery with a laminate floor to be laid

Room dimensions measured out, including fittings

From these sizes we can calculate that we require 2 pieces of 3.5m length and 1 piece at 2m.

Product Selection: 2 x ES13-1035, 1 x ES13-520

Remember the active (heating) portions of the element MUST not overlap each other and the minimum distance from a fixed object or wall MUST not be less than 50mm.

1

After preparing a smooth surface, measure the area to be heated. Fit the **ECOMAX-LITE** Insulated Tile Backer Board (available separately) to the floor securely following the manufacturers instructions.

2

Roll out the **ECOFILM^{SET}** elements and trim to length along the cutting line as required.

3

Insulate the trimmed ends as per the instructions before taping the **ECOFILM^{SET}** elements into position.

4

Cover the total **ECOFILM^{SET}** installation with **POLYESTER VAPOUR BARRIER** (available separately).

5

Lay the floor covering as soon as possible to prevent damage to the element.