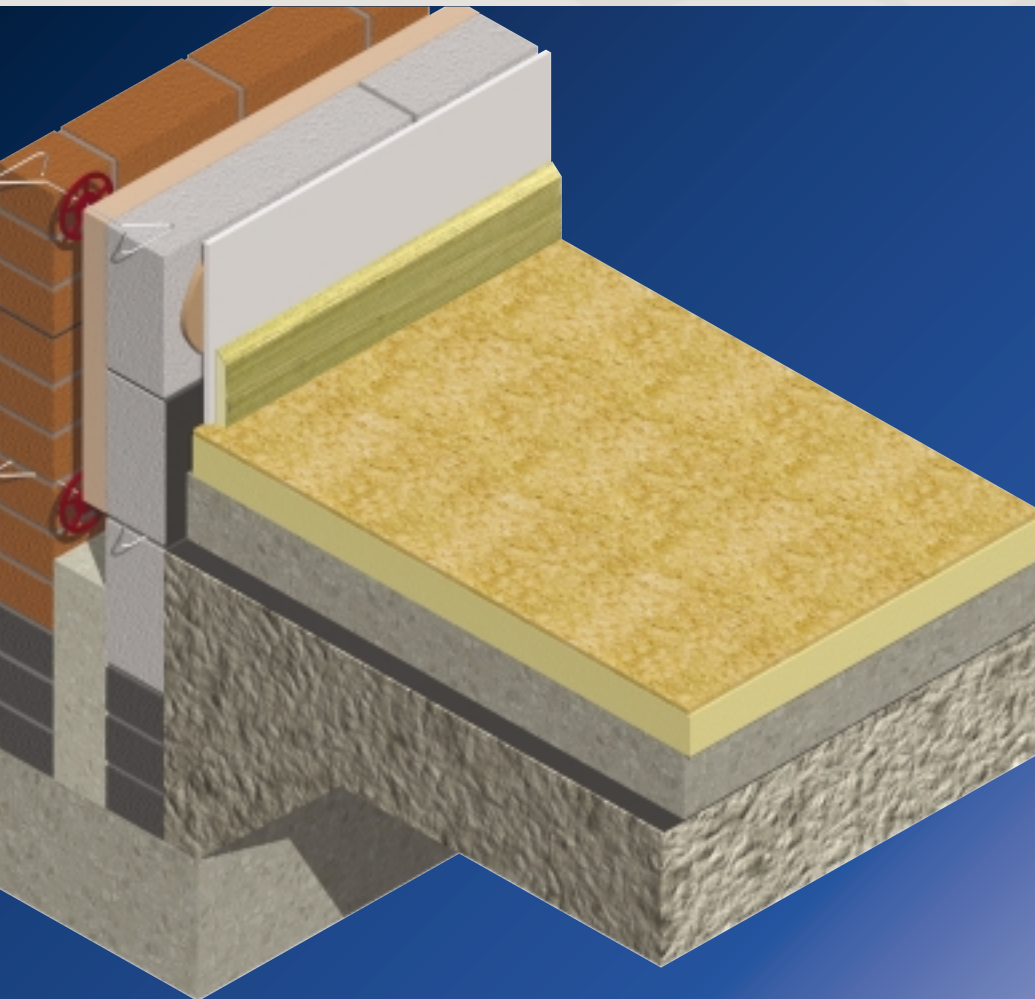


Thermafloor™ TF73

INSULATION FOR FLOATING AND SUSPENDED FLOORS



- High performance rigid extruded polystyrene insulation – thermal conductivity 0.029 W/m-K bonded to T & G chipboard
- No requirement for a vapour control layer
- Eliminates the need for wet screeds
- Excellent compressive strength
- Easy to handle and install
- Ideal for new build and refurbishment
- Non-deleterious material
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP)



Typical Design Detail

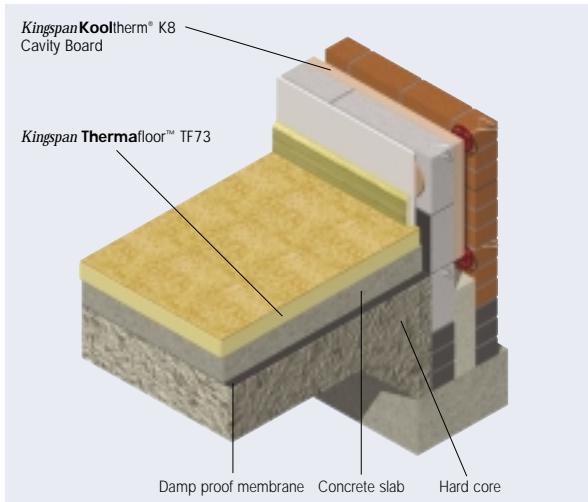


Figure 1 Solid Floating Ground Floor

Specification Clause

Kingspan Thermafloor™ TF73 should be described in specifications as:-

The floor insulation shall be *Kingspan Thermafloor™ TF73* ___mm thick CFC/HCFC-free rigid extruded polystyrene insulation bonded to an FSC approved 18 mm moisture resistant flooring grade chipboard (P5) facing, manufactured to the highest standards under quality control systems approved to BS EN ISO 9001: 2000 by Kingspan Insulation Limited and shall be applied in accordance with the instructions issued by them.

Details also available in NBSPLUS.

NBS users should refer to clause(s):
K11 295 (Standard and Intermediate)
K11 60 (Minor Works)

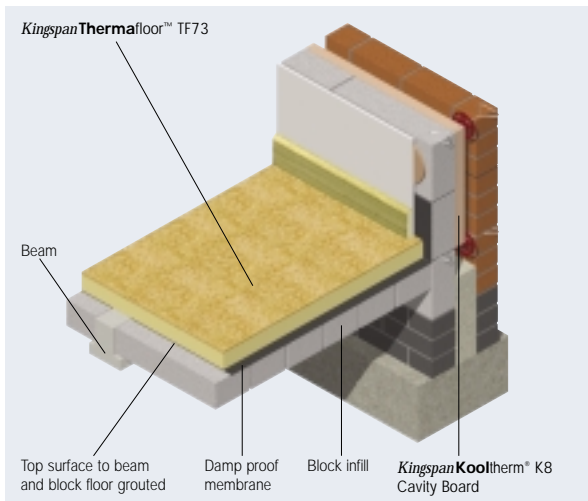


Figure 2 Beam and Block Floor

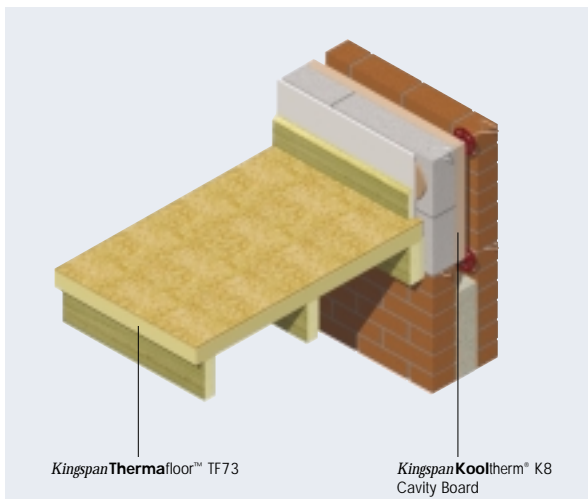


Figure 3 Suspended Timber Floor

Design Considerations

Sustainability

In the past, erroneously, the relative environmental sustainability of insulation materials has been compared on the basis of embodied energy and ozone depletion potential. It is now recognised that a much wider basket of embodied environmental impacts (including those caused by their embodied energy), rather than embodied energy alone, is the only credible tool of comparison. Time has also annulled ozone depletion potential as an issue as all insulation materials are now banned from using CFC and HCFC blowing agents by law.

For buildings designed to today's Building Regulations energy use standards it is now also known that the embodied environmental impacts of all of the materials and labour used to create a building are insignificant in comparison with the lifetime operational environmental impacts of that building, and so are of very limited importance. Since it is operational energy use that creates the vast majority of operational environmental impact, saving energy by specifying the lowest U-values possible is the most environmentally sustainable action to take.

However, one of the most neglected facts about environmentally sustainable buildings is that the longevity of their standards of operational energy use, and therefore the longevity of their operational environmental impacts, is critical. The performance of some insulants, such as mineral fibre, can deteriorate rapidly if exposed to water penetration, air movement or compression. This may increase operational energy use and hence compromise the environmental sustainability of the finished building to an alarming degree. Other insulation materials, such as rigid phenolic or rigid urethane, are not vulnerable to any of these problems.

In summary, designers should:

- (a) specify the lowest possible U-value regardless of insulation type;
- (b) design out the risk of their chosen insulant not performing as specified; and
- (c) if the latter is not possible, choose an insulant that is at low risk of failure e.g. a cellular plastic insulation material.

However, manufacturers should not rest on their laurels; it is a matter of social responsibility to be open and honest about the environmental impact of the manufacture of a product, and a full Life Cycle Analysis (LCA) based on a much wider basket of environmental impacts, rather than embodied energy alone, is recognised as the preferred tool to achieve this. Kingspan Insulation was the first insulation manufacturer to openly complete and publish independently certified Ecoprofiles (a type of LCA) on its product ranges. The Ecoprofile for the **Kingspan Therma™** range of rigid urethane insulation products was performed by Building Research Establishment (BRE). The product range comfortably achieves a BRE Green Guide A rating.



But there is far more to sustainability than whether or not a product, process or company affects the environment in a positive or a negative way. A company can, and should, demonstrate its financial viability and social responsibility, as well as ensure that its materials and methods do not add unduly to the burden placed on the planet.

Kingspan Insulation has now put the manufacture of its products at its Pembridge facility in Herefordshire through a rigorous independent appraisal of its economic, social, environmental and natural resource impacts using Arup's SPeAR® tool.

The results show a well balanced performance in terms of sustainability, and that Kingspan Insulation is already meeting legislation or best practice in most areas, even moving beyond best practice in some. Kingspan Insulation is the first and only construction material manufacturer to have taken this bold move and openly publish the results.

Thermafloor™ TF73

General

Consideration should be given to the information given in Building Research Establishment Digest numbers 145 (Heat Losses Through Ground Floors).

Where *Kingspan Thermafloor™ TF73* is to be laid over a site fabricated concrete slab, the floor slab should be allowed to dry out fully prior to the application of *Kingspan Thermafloor™ TF73*.

Kingspan Thermafloor™ TF73 is not recommended for use in direct contact with subsoil. The surface of slabs should be smooth and free of projections. Beam and block floors should have a levelling screed. Rough cast slabs should be levelled using a thin sand blinding to ensure boards are continuously supported.

Heat Loss

It has been well documented that heat loss through a ground floor consists of two components:

- (a) heat loss through the floor perimeter, which is proportional to the length of perimeter and the temperature difference between inside and outside;
- (b) heat loss through the ground which depends on the temperature difference between inside and outside and the overall floor area.

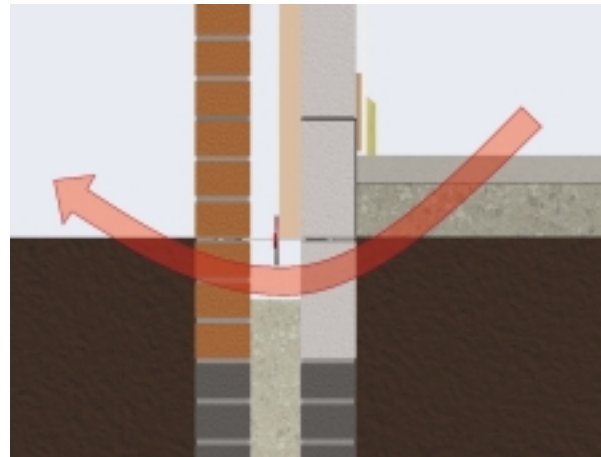


Figure 4 Heat Flow Through Slab

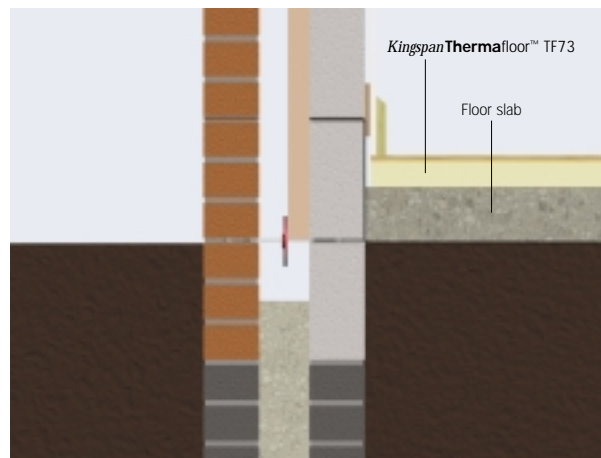


Figure 5 Edge Detail

The greatest heat loss through an uninsulated floor is from the edges (Figure 11). Insulating the floor perimeter in a 1 metre band (Figure 12), will not only provide good insulating results but will also prevent the risk of cold bridging at the junction of the floor and external wall.

The thermal performance of an uninsulated domestic floor slab, however is relatively poor. To enhance the thermal performance, complete rather than perimeter insulation may need to be adopted in domestic floor constructions.

Complete floor insulation offers significant advantages over perimeter insulation when considering the floor dimensions of typical dwellings, e.g. it provides quick response to heating.

Typical U-values

U-value Calculations

The U-values shown below are calculated using the method detailed in BS / I.S. EN ISO 13370: 1998 (Thermal performance of buildings. Heat transfer via the ground. Calculation methods) which is required for compliance with Building Regulations / Standards revised after the year 2002.

Unlike roofs, walls and intermediate floors, U-value calculations for ground floors cannot be calculated in the normal manner with reference to the construction detail alone. Heat loss from ground floors depends upon the ratio of the exposed floor perimeter to the total floor area, the thickness of the basement wall and the depth of the basement.

Floor dimensions should be measured between the finished internal surfaces of the external walls, including projections. Non-usable space such as ducts and stairwells should be included when determining the area of the floor. Unheated spaces outside of the insulated fabric, such as attached garages or porches, should be excluded when determining the area of the floor but the length of the wall between the heated building and the unheated space should be included when determining the perimeter. The floor dimensions of semi-detached, terraced or other joined premises / dwellings can be taken either as those of the premises / dwelling itself or those of the whole building. Where extensions to existing buildings are under consideration, the floor dimensions should be taken as those of the entire building, including the extension.

NB The figures below are for guidance only. A detailed U-value calculation together with a condensation risk analysis should be completed for each individual project. Please call the Kingspan Insulation Technical Service Department (see rear cover) for assistance.

NB For the purposes of these calculations using the method as detailed in BS / I.S. EN ISO 13370: 1998, the soil has been assumed to be clay or silt, the wall insulation is assumed to overlap the floor insulation by 200 mm minimum and the standard of workmanship has been assumed good and therefore the correction factor for air gaps has been ignored.

U-values of Uninsulated Slab-on-ground, Concrete Raft and Solid Floors

Perimeter / Area Ratio $\frac{P (m)}{A (m^2)}$	U-value (W/m ² ·K)
0.1	0.22
0.2	0.37
0.3	0.49
0.4	0.60
0.5	0.70
0.6	0.78
0.7	0.86
0.8	0.93
0.9	0.99
1.0	1.05

The table below applies to uninsulated suspended timber ground floors.

U-values of Uninsulated Suspended Timber Ground Floors

Perimeter / Area Ratio $\frac{P (m)}{A (m^2)}$	U-value (W/m ² ·K)
0.1	0.26
0.2	0.41
0.3	0.52
0.4	0.61
0.5	0.69
0.6	0.75
0.7	0.80
0.8	0.85
0.9	0.89
1.0	0.92

To establish the U-value for intermediate P/A ratios linear interpolation can be used as an alternative to calculation.

Should the U-value of the uninsulated floor be worse than that required, the inclusion of insulation will be necessary.

Solid Concrete Ground Floor

The calculations below are valid for all dense concrete ground based floor types with continuous *Kingspan Thermafloor™* TF73 and no thermal bridging. If your P/A ratio lies between two of the numbers shown in the table below, for a worst case scenario, please use the P/A ratio shown that is the next highest i.e. for 0.57 use 0.6. For a more precise calculation or if your construction is any different, please contact the Kingspan Insulation Technical Service Department (see rear cover).

Thickness (mm)	U-values (W/m ² ·K) for a Range of Thicknesses of <i>Kingspan Thermafloor™</i> TF73 and Floor Perimeter / Area Ratios									
	Perimeter / Area (m ⁻¹)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
43	0.16	0.25	0.31	0.36	0.40	0.43	0.45	0.47	0.49	0.50
48	0.15	0.24	0.30	0.34	0.37	0.40	0.42	0.43	0.45	0.46
58	0.14	0.22	0.27	0.30	0.33	0.35	0.36	0.37	0.39	0.40
68	0.13	0.20	0.24	0.27	0.29	0.31	0.32	0.33	0.34	0.35
78	0.13	0.19	0.22	0.25	0.26	0.28	0.29	0.30	0.31	0.31
98	0.12	0.16	0.19	0.21	0.22	0.23	0.24	0.25	0.25	0.26
108	0.11	0.16	0.18	0.19	0.21	0.22	0.22	0.23	0.23	0.24
118	0.11	0.15	0.17	0.18	0.19	0.20	0.21	0.21	0.21	0.22
138	0.10	0.13	0.15	0.16	0.17	0.18	0.18	0.18	0.19	0.19

Suspended Timber Ground Floor

The calculations below are valid for all suspended timber floor types with continuous *Kingspan Thermafloor™* TF73 and no thermal bridging. If your P/A ratio lies between two of the numbers shown in the table below, for a worst case scenario, please use the P/A ratio shown that is the next highest i.e. for 0.57 use 0.6. For a more precise calculation or if your construction is any different, please contact the Kingspan Insulation Technical Service Department (see rear cover).

Thickness (mm)	U-values (W/m ² ·K) for a Range of Thicknesses of <i>Kingspan Thermafloor™</i> TF73 and Floor Perimeter / Area Ratios									
	Perimeter / Area (m ⁻¹)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
43	0.22	0.31	0.37	0.40	0.43	0.45	0.47	0.48	0.49	0.50
48	0.22	0.30	0.35	0.38	0.40	0.42	0.44	0.45	0.46	0.47
58	0.21	0.27	0.31	0.34	0.36	0.37	0.38	0.39	0.40	0.41
68	0.19	0.25	0.29	0.31	0.32	0.33	0.34	0.35	0.36	0.36
78	0.18	0.24	0.26	0.28	0.29	0.30	0.31	0.32	0.32	0.33
98	0.17	0.21	0.23	0.24	0.25	0.26	0.26	0.27	0.27	0.27
108	0.16	0.20	0.21	0.23	0.23	0.24	0.24	0.25	0.25	0.25
118	0.15	0.19	0.20	0.21	0.22	0.22	0.23	0.23	0.23	0.23
138	0.14	0.17	0.18	0.19	0.19	0.20	0.20	0.20	0.21	0.21

Beam and Dense Block Floor

The calculations below are valid for all beam and dense block ground based floor types with continuous *Kingspan Thermafloor™* TF73 and no thermal bridging. If your P/A ratio lies between two of the numbers shown in the table below, for a worst case scenario, please use the P/A ratio shown that is the next highest i.e. for 0.57 use 0.6. For a more precise calculation or if your construction is any different, please contact the Kingspan Insulation Technical Service Department (see rear cover).

Thickness (mm)	U-values (W/m ² ·K) for a Range of Thicknesses of <i>Kingspan Thermafloor™</i> TF73 and Floor Perimeter / Area Ratios									
	Perimeter / Area (m ⁻¹)									
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
43	0.21	0.30	0.36	0.40	0.43	0.45	0.47	0.49	0.50	0.51
48	0.20	0.29	0.34	0.37	0.40	0.42	0.44	0.45	0.46	0.47
58	0.19	0.26	0.30	0.33	0.35	0.37	0.38	0.39	0.40	0.40
68	0.18	0.24	0.27	0.30	0.31	0.33	0.34	0.34	0.35	0.35
78	0.17	0.22	0.25	0.27	0.28	0.29	0.30	0.31	0.31	0.32
98	0.15	0.19	0.21	0.23	0.24	0.24	0.25	0.25	0.26	0.26
108	0.14	0.18	0.20	0.21	0.22	0.22	0.23	0.23	0.24	0.24
118	0.14	0.17	0.19	0.20	0.20	0.21	0.21	0.22	0.22	0.22
138	0.12	0.15	0.17	0.17	0.18	0.18	0.19	0.19	0.19	0.19

Sitework

Before Installation

The building should be weathertight before fixing floors incorporating *Kingspan Thermafloor™* TF73.

Boards should be allowed to reach equilibrium by storing them under the atmospheric conditions in which they are to be used, for a minimum of 48 hours prior to laying.

Concrete Floors

The surface of the floor should be smooth and flat. In accordance with BRE good building guide 28 part 1 (Domestic floors: construction insulation and damp-proofing) irregularities should not exceed 5 mm when measured with a 3 metre straight edge. A thin layer of cement / sand mortar can be used to achieve a level surface which should be allowed to set, harden and dry before proceeding further.

Boards should be laid loose with all joints glued utilising a waterproof, wood grade PVA adhesive applied continuously to the top and bottom of the chipboard joints. The board joints are then butted together. Boards should be positioned to ensure cross joints are staggered to produce a brick bond pattern.

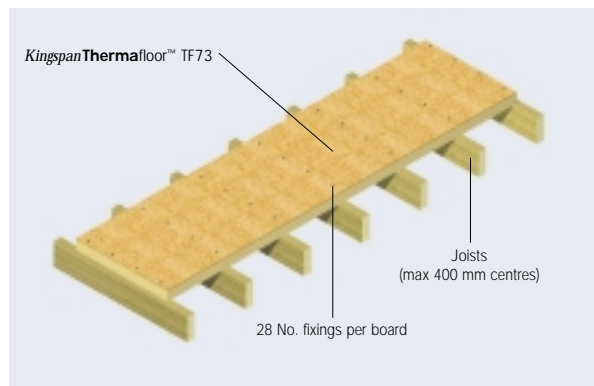
Once the floor has been laid, temporary wedges are inserted between the walls and the floor until the adhesive has set. Once wedges are removed, they are replaced with pieces of rigid insulation to act as a compressible filler and to help prevent a cold bridge. Skirtings may then be fixed.

To comply with NHBC recommendations, preservative treated battens in accordance with BS 5268-5: 1989 (1997) (Structural use of timber. Code of practice for the preservative treatment of structural timber) should be positioned at doorways, the foot of stairs and to support partitions, kitchen fittings, sanitary fittings etc. before laying *Kingspan Thermafloor™* TF73 boards (adequate time should be allowed for any harmful solvent-based preservatives to evaporate).

Suspended Floors

Kingspan Thermafloor™ TF73 should be laid at right angles to the floor joists (minimum width 50 mm), these being at maximum 400 mm centres. (Cross noggins should be provided where unsupported board edges abut a wall and at any cut board ends which overhang a joist).

Boards should be fixed with nails / screws at 400 mm centres into all joists providing a minimum 25 mm penetration into the 50 mm wide joist (28 fixings per board). Do not nail within 25 mm from board corners.



Expansion

Leave a minimum gap of 2 mm per metre run of floor (min 10 mm overall), between the perimeter wall and abutments. When a large single run is designed (over 5 metres), it is necessary to incorporate intermediate expansion gaps of 2 mm per metre run to allow for possible movement.

Note: If adequate expansion gaps are not left, when the chipboard absorbs atmospheric moisture and expands, this can cause the boards to buckle.

Thermafloor™ TF73

Availability

Kingspan Thermafloor™ TF73 is available through specialist insulation distributors and selected roofing throughout the UK, Ireland and Europe.

Packaging

Depending on quantity, the boards are supplied in labelled packs shrink-wrapped in polythene.

Storage

The packaging of *Kingspan Thermafloor™* TF73 should not be considered adequate for long term outside protection.

Kingspan Thermafloor™ TF73 should be stored flat in a ventilated area and protected generally from accidental damage, contact with volatile solvents, flames and extended exposure to UV and sunlight. If it is stored outside for more than a few weeks, it must be covered with a pale pigmented plastic sheet.

Kingspan Thermafloor™ TF73 should not be left in the sun covered by either a transparent or a dark plastic sheet, since in both cases board temperatures can build up to a level hot enough to appreciably alter their dimensions or warp them.

Health and Safety

Kingspan Insulation products are chemically inert and safe to use. A leaflet on this topic which satisfies the requirements set out in the Control of Substances Hazardous to Health Regulations 1988 (COSHH) is available from the Kingspan Insulation Marketing Department (see rear cover).

Warning – do not stand on, or otherwise support your weight on this board, unless it is fully supported by a load-bearing surface or by minimum 50 mm wide joists at maximum 400 mm centres.

Thermal Expansion

The linear thermal expansion coefficient of *Kingspan Thermafloor™* TF73 is 0.07 mm/m·K when tested to BS 4370-3: 1988 (2002) (Methods of test for rigid cellular materials. Methods 12 and 13).

Water Vapour Resistivity

Modified to include board facings, the boards achieve a resistance greater than 350 MN·s/g when tested in accordance with BS EN 12086: 1997 (Thermal insulating products for building applications. Determination of water vapour transmission properties).

Absorption of Moisture

Kingspan Thermafloor™ TF73 is not sensitive to moisture of any kind. Its surface is water-repellent and there is no capillary suction. The material is not hygroscopic. Over a 28 day cycle with temperature fluctuating 20 / 40°C its water absorption is < 0.5% when tested to BS EN 12087: 1997 (Thermal insulating products for building applications. Determination of long term water absorption by immersion).

Durability

If correctly applied, *Kingspan Thermafloor™* TF73 has an indefinite life. Its durability depends on the supporting structure and the conditions of its use.

Resistance to Solvents, Fungi & Rodents

The insulation core is resistant to short-term contact with petrol and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by the suppliers of the spilled liquid. The insulation core is not resistant to some solvent-based adhesive systems, particularly those containing methyl ethyl ketone. Adhesives containing such solvents should not be used in association with this product. Damaged boards or boards that have been in contact with harsh solvents or acids should not be used.

The insulation core and facing used in the manufacture of *Kingspan Thermafloor™* TF73 resist attack by mould and microbial growth and do not provide any food value to vermin.

Fire Performance

When the insulation core of *Kingspan Thermafloor™* TF73 is tested in accordance with the requirements of DIN4102: 1981 – B1 is obtained – not readily ignitable.

Further details on the fire performance of Kingspan Insulation products may be obtained from the Kingspan Insulation Technical Service Department (see rear cover).

Product Description

Upper Facing

The upper facing of *Kingspan Thermafloor™* TF73 is an FSC approved 18 mm thick moisture resistant flooring grade chipboard (P5) tongue and grooved on all four edges, secondary bonded to the insulant backing.



The Core

The core of *Kingspan Thermafloor™* TF73 is a high performance rigid extruded polystyrene of typical density 30 kg/m³.

CFC/HCFC-free

Kingspan Thermafloor™ TF73 is manufactured without the use of CFCs/HCFCs and has zero Ozone Depletion Potential (ODP).



Product Data

Standards and Approvals

Kingspan Thermafloor™ TF73 is manufactured to the highest quality standards under a quality control system approved to BS EN ISO 9001: 2000 (Quality management systems. Requirements). Its use is covered by BBA Certificate 01/3813.



Manufactured to BS EN ISO 9001: 2000
Certificate No. 388



Standard Dimensions

Kingspan Thermafloor™ TF73 is available in the following standard size:

Nominal Dimension	Availability
Length (m)	2.4
Width (m)	0.6
Chipboard Thickness (mm)	18
Insulant Thickness (mm)	Refer to local distributor or Kingspan Insulation price list for current stock and non-stock sizes.

Compressive Strength

The compressive strength of *Kingspan Thermafloor™* TF73 typically exceeds 300 kPa at 10% compression when tested to BS EN 826: 1996 (Thermal insulating products for building applications. Determination of compression behaviour).

In normal use *Kingspan Thermafloor™* TF73 is suited to applications where the intended loadings are associated with domestic or similar light duty applications. Where anticipated loadings exceed this usage, separate provision should be made to accommodate them.

Thermal Properties

The λ -values and R-values quoted are in accordance with the Harmonised European Standard BS EN 13164: 2001 (Thermal insulation products for buildings – Factory made products of extruded polystyrene (XPS) – Specification) using so called 90 / 90 principles. Comparison with alternative products may not be appropriate unless the same procedures have been followed.

Thermal Conductivity

The thermal conductivity (λ -value) of the chipboard component of *Kingspan Thermafloor™ TF73* is 0.14 W/m.K.

The thermal conductivity (λ -value) of the insulation core of *Kingspan Thermafloor™ TF73* is 0.029 W/m.K.

Thermal Resistance

Thermal resistance (R-value) varies with thickness and is calculated by dividing the thickness of the board (expressed in metres) by its thermal conductivity.

Product Thickness (mm)	Thermal Resistance (m ² .K/W)
43	0.95
48	1.15
58	1.50
68	1.85
78	2.15
88	2.50
93	2.70
98	2.85
108	3.20
118	3.55
128	3.90
138	4.25

Refer to local distributor or Kingspan Insulation price list for current stock and non-stock sizes.

Kingspan Insulation

Kingspan Insulation offers an extensive range of premium and high performance insulation products, breathable membranes and pre-insulated systems for the construction industry. Following an extensive investment programme, Kingspan Insulation is continuing to lead the insulation industry by manufacturing its insulation products with zero Ozone Depletion Potential (ODP) and quoting thermal performance data in accordance with the new harmonised European Standards.

Kingspan Insulation Limited specialises in the solution of insulation problems. The Kingspan Insulation range of insulation products meet the exacting requirements of the construction industry and are produced to the highest standards, including BS EN ISO 9001: 2000 / I.S. EN ISO 9001: 2000. Each product has been designed to fulfil a specific need and has been manufactured to precise standards and tolerances.

Insulation for:

- Pitched Roofs
- Flat Roofs
- Cavity Walls
- Timber and Steel Framing
- Externally Insulated Cladding Systems
- Floors
- Soffits

Solutions:

- Insulated Dry-Lining
- Tapered Roofing Systems
- **Kingspan KoolDuct**® Pre-Insulated Ducting
- **Kingspan nilvent**® Breathable Membranes

The Kingspan Insulation Product Range

The **Kingspan Kooltherm**® **K-range**

- With a thermal conductivity of 0.021–0.024 W/m·K CFC/HCFC-free rigid phenolic insulation is the most thermally efficient insulation product commonly available.
- Utilises the thinnest possible insulation board to achieve required U-values.
- Fire performance can be equivalent to mineral fibre.
- Achieves a Class 0 fire rating to the Building Regulations and Low Risk rating for the Technical Standards in Scotland.
- Achieves the best possible rating of < 5% smoke obscuration when tested to BS 5111: Part 1: 1974.
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP).

The **Kingspan Therma**™ **Range**

- With a thermal conductivity of 0.023–0.028 W/m·K CFC/HCFC-free rigid urethane insulation is one of the most thermally efficient insulation products commonly available.
- Easily achieves required U-values with minimum board thickness.
- Achieves the required fire performance for the intended application.
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP).

The **Kingspan Styrozone**® & **Purlcrete**® **Ranges**

- Rigid extruded polystyrene insulation (XPS) has the highest compressive strength of any commonly available insulant.
- Ideal for specialist applications such as inverted roofing and heavy-duty flooring.
- Easily achieves required U-values with minimum board thickness.
- Achieves the required fire performance for the intended application.
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP).

All Products

- Their closed cell structure resists both moisture and water vapour ingress – problems which can be associated with open cell materials such as mineral fibre and which can result in reduced thermal performance.
- Unaffected by air movement – problems that can be experienced with mineral fibre and which can reduce thermal performance.
- Safe and easy to install – non-fibrous.
- Provide reliable long term thermal performance over the lifetime of the building.

Contact Details

Customer Service

For quotations, order placement and details of despatches please contact the Kingspan Insulation Customer Service Department on the numbers below:

UK – Tel: +44 (0) 870 850 8555
– Fax: +44 (0) 870 850 8666
– email: commercial.uk@insulation.kingspan.com

Ireland – Tel: +353 (0) 42 97 54200
– Fax: +353 (0) 42 97 54299
– email: commercial.ie@insulation.kingspan.com

Literature & Samples

Kingspan Insulation produces a comprehensive range of technical literature for specifiers, contractors, stockists and end users. The literature contains clear 'user friendly' advice on typical design; design considerations; thermal properties; sitework and product data.

Available as a complete Design Manual or as individual product brochures, Kingspan Insulation technical literature is an essential specification tool. For copies please contact the Kingspan Insulation Marketing Department on the numbers below:

UK – Tel: +44 (0) 870 733 8333
– Fax: +44 (0) 1544 387 299
– email: literature.uk@insulation.kingspan.com

Ireland – Tel: +353 (0) 42 97 54298
– Fax: +353 (0) 42 97 54299
– email: literature.ie@insulation.kingspan.com

Tapered Roofing

For technical guidance, quotations, order placement and details of despatches please contact the Kingspan Insulation Tapered Roofing Department on the numbers below:

UK – Tel: +44 (0) 870 761 7770
– Fax: +44 (0) 1544 387 289
– email: tapered.uk@insulation.kingspan.com

Ireland – Tel: +353 (0) 42 97 54297
– Fax: +353 (0) 42 97 54296
– email: tapered.ie@insulation.kingspan.com

Technical Advice / Design

Kingspan Insulation supports all of its products with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a computer-aided service designed to give fast, accurate technical advice. Simply phone the Kingspan Insulation Technical Service Department with your project specification. Calculations can be carried out to provide U-values, condensation / dew point risk, required insulation thicknesses etc... Thereafter any number of permutations can be provided to help you achieve your desired targets.

The Kingspan Insulation Technical Service Department can also give general application advice and advice on design detailing and fixing etc... Site surveys are also undertaken as appropriate.

Please contact the Kingspan Insulation Technical Service Department on the numbers below:

UK – Tel: +44 (0) 870 850 8333
– Fax: +44 (0) 1544 387 278
– email: techline.uk@insulation.kingspan.com

Ireland – Tel: +353 (0) 42 97 54297
– Fax: +353 (0) 42 97 54296
– email: techline.ie@insulation.kingspan.com

General Enquiries

For all other enquiries contact Kingspan Insulation on the numbers below:

UK – Tel: +44 (0) 870 850 8555
– Fax: +44 (0) 870 850 8666
– email: info.uk@insulation.kingspan.com

Ireland – Tel: +353 (0) 42 97 54200
– Fax: +353 (0) 42 97 54299
– email: info.ie@insulation.kingspan.com

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