



Bord Agrément na hÉireann
Irish Agrément Board

CERTIFICATE NO. 05/0028

Quinn Lite Pac Ltd, Rathcronan, Granard,
Co Longford

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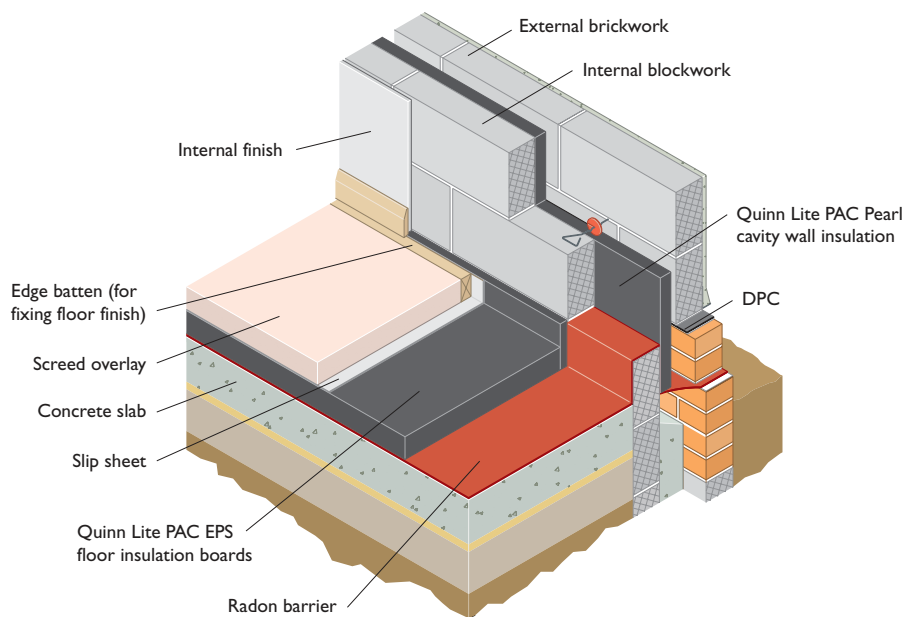
Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems

Isolant en polystyrène expansé pour planchers des res-de-chaussées
Fußboden - Warmedämmung

The Irish **Agrément Board** is designated by Government to issue European Technical Approvals.

Irish Agrément Board Certificates establish proof that the certified products are '**proper materials**' suitable for their intended use under Irish site conditions, and in accordance with the **Building Regulations 1997 to 2002**.

The Irish Agrément Board operates in association with the **National Standards Authority of Ireland (NSAI)** as the National Member of UEAtc.



PRODUCT DESCRIPTION:

This Certificate relates to the Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems.

The Quinn Lite Pac 'EPS Pearl' Under Floor Insulation System consists of plain edge boards cut from high performance, fire retardant, expanded polystyrene (**EPS**) board, manufactured to comply with I.S. EN 13163: 2001 *Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) - Specification*.

The Quinn Lite Pac EPS 'Under Floor Insulation System consists of plain edge boards cut from expanded polystyrene (**EPS**) board, manufactured to comply with I.S. EN 13163: 2001.

USE:

The product is used as thermal insulation in new or existing ground supported and suspended floors and may be installed on:

1. A hardcore base with a concrete floor slab over;
2. A concrete slab, with a cement based screed, timber, osb or particleboard floor over;
3. A suspended concrete floor (e.g. block and beam) with cement based screed, timber, osb or particleboard floor over;
4. Between the joists of a suspended timber floor.

The product also facilitates the control of surface and interstitial condensation in floors.

Readers are advised to check that this Certificate has not been withdrawn or superseded by a later issue by contacting the Irish Agrément Board, NSAI, Glasnevin, Dublin 9 or online at www.irishagrementboard.com/certs.php?no=050028

MANUFACTURE AND MARKETING

These products are manufactured and marketed by:
Quinn Lite Pac Ltd, Rathcronan, Granard, Co Longford, Ireland.
Tel: +353 (0)43 86155 Fax: +353 (0)43 86489
Email: info@quinn-litepac.com
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REVISIONS:

This Certificate has been revised to reflect current practice and specifically to address:

1. Amendments to the Building Regulations and in particular the amended requirements for conservation of fuel and energy as specified in Part L of the Second Schedule to the Building Regulations 1997 (as amended 2002);

2. Revisions to relevant standards and in particular the requirements of I.S. EN 13163: 2001 Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) – Specification, IS EN 13172: 2001 Thermal insulating products. Evaluation of conformity and other associated standards;
3. The inclusion of the Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation System;
4. Revisions to technical details to reflect current practice;
5. Amendments to the Certificate holder’s details.

Part One / Certification

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1.1 ASSESSMENT

In the opinion of the Irish Agrément Board (IAB), Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems, if used in accordance with this certificate, can meet the requirements of the Building Regulations 1997 to 2002 as indicated in Section 1.2 of this Agrément Certificate.

1.2 BUILDING REGULATIONS 1997 TO 2002

REQUIREMENT

Part A – Structure

A1 - Loading

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems have adequate strength and stiffness to accept floor loads (see Section 3.2 of this certificate).

Part B – Fire Safety

B3 – Internal Fire Spread (Structure)

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation System shall be separated by solid non-combustible material not less than 200 mm thick, from any heating appliance, or from any flue pipe or opening to a heating appliance.

Part C – Site Preparation and Resistance to Moisture

C4 – Resistance to Weather and Ground Moisture

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems meet the requirements of this regulation, when installed as indicated in Section 2.4, in floors constructed in compliance with the conditions indicated in Part 3 of this Certificate.

Part D – Materials and Workmanship

D1 – Materials and workmanship

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems, as certified in this Irish Agrément Certificate, meet the requirements for workmanship.

D3 – Definitions

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems, as certified in this Irish Agrément Certificate are comprised of proper materials, fit for their intended use, as indicated in Part 4 of this Certificate.

Part L – Conservation of Fuel and Energy

L1 - Conservation of fuel and energy

Based on the measured thermal conductivity values given in Table 3, floors incorporating Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems can meet the current U-value requirements as indicated in Table 4.

2.1 PRODUCT DESCRIPTION

The Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation System consists of rigid, grey polystyrene boards cut from moulded blocks of high performance, fire retardant, expanded polystyrene, manufactured to EN 13163: 2001. The boards are plain edge and shall be laid closely butting.

The Quinn Lite Pac ‘EPS’ Under Floor Insulation System consists of rigid, white polystyrene boards cut from moulded blocks of expanded polystyrene, manufactured to EN 13163: 2001. The boards are plain edge and shall be laid closely butting. The ‘reaction to fire’ classifications are given in Table 2.

The boards do not contain CFC or HCFC gases and have zero Ozone Depletion Potential

The product range is given in Table 1.

Table 1: *Product range*

Property	Range
Length	1200 mm; 1800 mm; 2400 mm
Width	600 mm; 1200 mm
Thickness*	25mm to 100 mm
Grade	EPS Pearl, EPS 70, EPS 100, EPS 200

* floor design and insulation thickness to be checked by structural engineer as required

2.2 MANUFACTURE

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Boards are manufactured from polystyrene granules, obtained from external suppliers. The granules are expanded under a steam/pentane process, to form blocks of EPS. The blocks are cured, prior to being cut into plain edge boards of the required dimensions.

Quality Control checks include board dimensions, foam density, dimensional checks, compressive strength, bending strength and thermal conductivity, in accordance with IS EN 13163.

Quinn Lite Pac Ltd operates a quality management system in accordance with IS EN ISO 9001: 2000 *Quality Management Systems. Requirements.*

2.3 DELIVERY, STORAGE AND MARKING

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems are supplied in packs 300 mm or 600 mm in height. EPS packs are shrink wrapped in clear polyethylene and EPS pearl packs are shrink wrapped in white polyethylene, for delivery to site.

Each pack is labelled with the product description, designation code (λ values), tolerances, manufacturer’s name and brand (product) name, quantity per pack, IAB identification mark and IAB Certificate number. Installation instructions and details are included in each pack.

Boards must be protected from prolonged exposure to sunlight and should be stored under cover in their original wrapping or protected with polyethylene. Boards should be stored out of contact with ground moisture and raised above ground level.

Care must be taken to avoid contact with solvents and with materials containing volatile organic components such as coal tar, and timber newly treated with creosote.

The boards must not be exposed to a naked flame or other ignition sources. Handling and storage arrangements must comply with the recommendations of paragraph 8 of BS 6203:2003 *Guide to fire characteristics and fire performance of expanded polystyrene materials (EPS and XPS) used in building applications.*

2.4 INSTALLATION

2.4.1 General

Typical installation details are shown in Figures 1 to 4.

a) Laying below the floor slab

Where Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems are used below the floor slab, the hardcore should be laid in layers; min 150 – 225 mm; each layer should be well compacted, with the surface blinded with quarry dust or sand to provide a suitable surface for laying a damp proof membrane (dpm) and radon barrier as appropriate.

A dpm e.g. 1200 gauge polythene, or a Radon Barrier, should be laid over the blinding with joints taped to prevent the passage of ground moisture. The dpm should be carried up the wall until it meets and is sealed with the damp proof course.

Quinn Lite Pac ‘EPS’ and Quinn Lite Pac ‘EPS Pearl’ Under Floor Insulation Systems should be laid with closely butted joints, laid staggered with a break-bonded pattern and fitted tightly at the edges and around any service penetrations.

Vertical strips of insulation, 25 mm thick, should be placed at the floor perimeter, party walls and internal rising walls to separate the screed and slab from the wall and minimise thermal bridging.

Care should be taken to avoid damage to the insulation, damp proof membranes and/or radon barriers as the slab is being poured. Operatives should make use of barrow runs and walkways during installation.

b) Laying below the floor screed

Where Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems are used below the floor screed, the same procedure should be followed ensuring that the floor slab onto which the insulation is being laid is level.

Electrical conduits, gas and water pipes, or other services should, where possible, be accommodated by ducting, or by forming channels within the slab. If any cold water pipes have to be placed within the insulation, they must be securely fixed to the concrete slab. There must not be any direct contact between insulation and hot pipes.

If a liquid type dpm is applied to the slab, it should be of a type compatible with the insulation and should be allowed to dry completely before laying the insulation.

The concrete floor over which the insulation is to be laid, should be left as long as possible to maximise drying out in accordance with the relevant recommendations of BS 8203: 2001, Code of practice for the installation of resilient floor coverings.

A properly compacted screed, of at least 65 mm for domestic construction, and 75 mm for most other buildings, is laid in accordance with the architect's/engineer's specifications and the relevant clauses of BS 8204-1:2003 *Screeds, bases and in-situ floorings. Concrete bases and cement sand levelling screeds to receive floorings. Code of practice.*

c) Particleboard Overlay

Before laying insulation, preservative treated battens are fixed at doorways and to support partitions (See Figures 1 to 4). Insulation boards are cut to size, if necessary and laid with closely butted joints.

A vapour check consisting of 1000 gauge polyethylene is laid over them. The polyethylene sheet has 150 mm overlaps taped at the joints and turned up at the walls.

Appropriate 19 mm thick tongued and groove particleboard Type 11 or Type C4 or C5 to BS 5669 Part 2:1989 *Particleboard – specification for wood particleboard* is laid with staggered cross joints, leaving a 10 mm to 12 mm gap at all abutments, between walls and particleboard.

Joints are glued and temporary wedges are used around the perimeter until the glue has set. The floor is then held in position by the skirting board. Where there are long lengths of uninterrupted floor, e.g. corridors, expansion gaps (2 mm/run) may be used at intervals, instead of large gaps at each end. Expansion joints should be supported on battens.

The recommendations in BS 5669, for the protection of particleboard from water spillage in bathrooms and kitchens, must be followed i.e.: it should be protected by continuous flexible vinyl flooring, turned up at abutments.

d) Laying on precast block and beam floor

The floor surface should be smooth and flat and any irregularities removed. The damp proof membrane (dpm) should be laid such that it is correctly positioned and turned up to meet the seal with the dpc.

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems should be laid with tightly butted and staggered joints. During construction the Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation System boards must be protected from damage by moisture sources, water spillage, plaster droppings etc. Use scaffold boards to prevent wheelbarrow and other traffic damage to the boards.

As in the case with solid ground floors, attention should be given to detailing to avoid thermal bridging.

All surfaces should be level to accept the Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation System. Uneven surfaces should be levelled prior to the laying of the floor.

e) Suspended timber floor

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems should be cut to fit between the timber joists and supported by carriers. These may be nails part driven into the side of the joists at selected level, timber battens or proprietary saddle clips.

Where services need to be accommodated below the floor, Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems can be lowered to provide an insulated duct.

Install flooring grade particleboard, ply or softwood timber flooring directly onto the joists fixing in the normal manner.

Ensure that the void below the insulated suspended floor is well ventilated and that sleeper walls do not restrict the airflow.

2.4.2 Cutting

On-site trimming of boards, where necessary to maintain continuity of insulation around openings, is easily executed using a fine tooth saw or builder's knife.

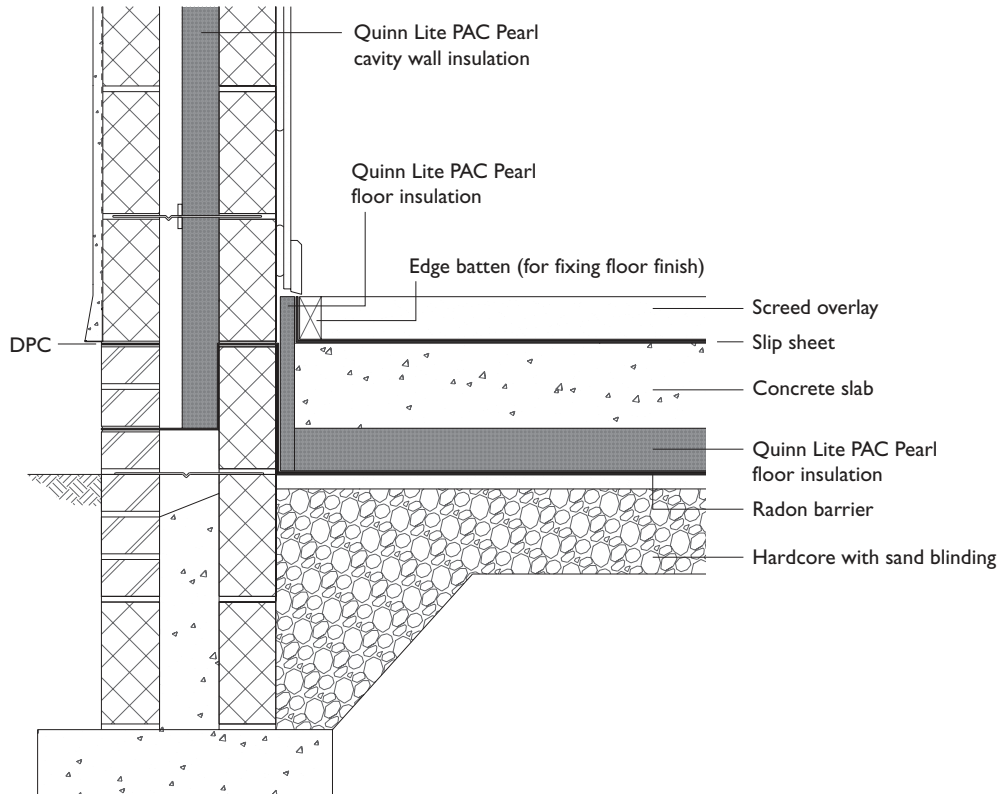


Figure 1: Typical concrete floor construction with screed overlay

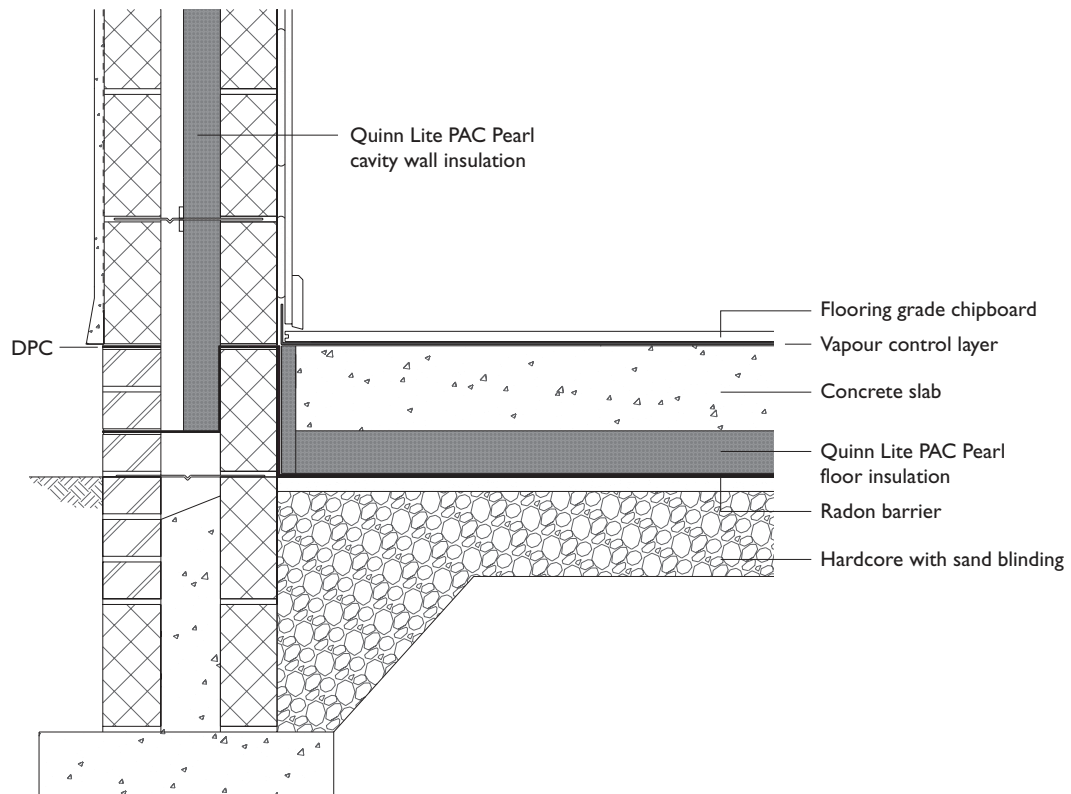


Figure 2: Typical concrete floor construction with chipboard overlay

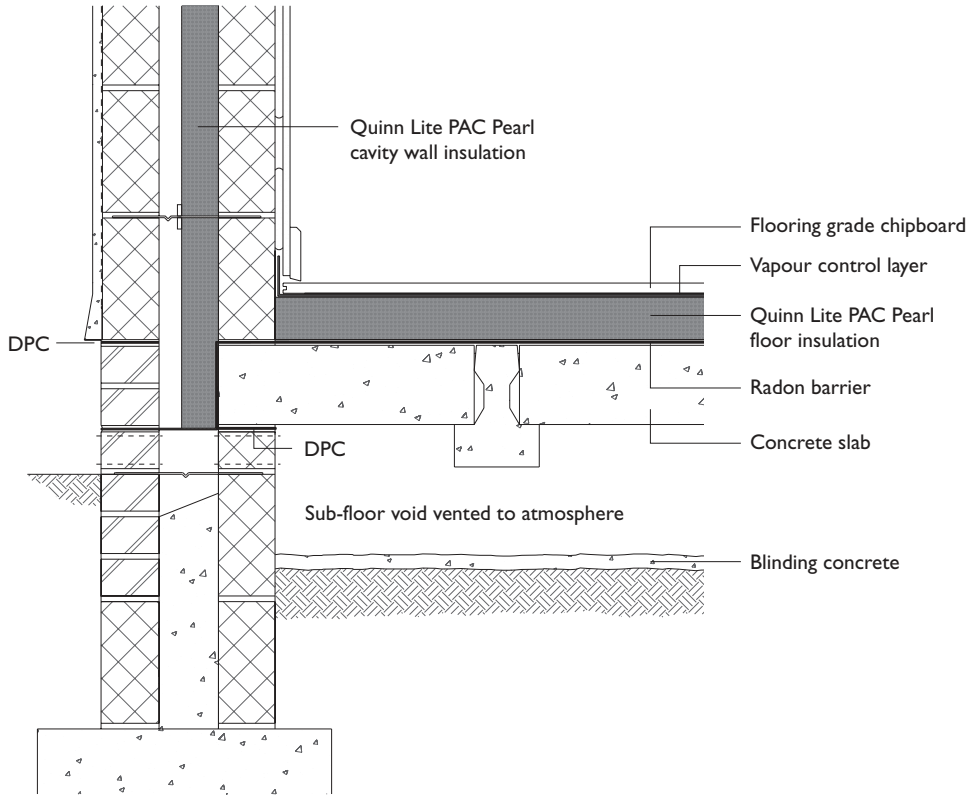


Figure 3: Typical suspended floor construction – block and beam

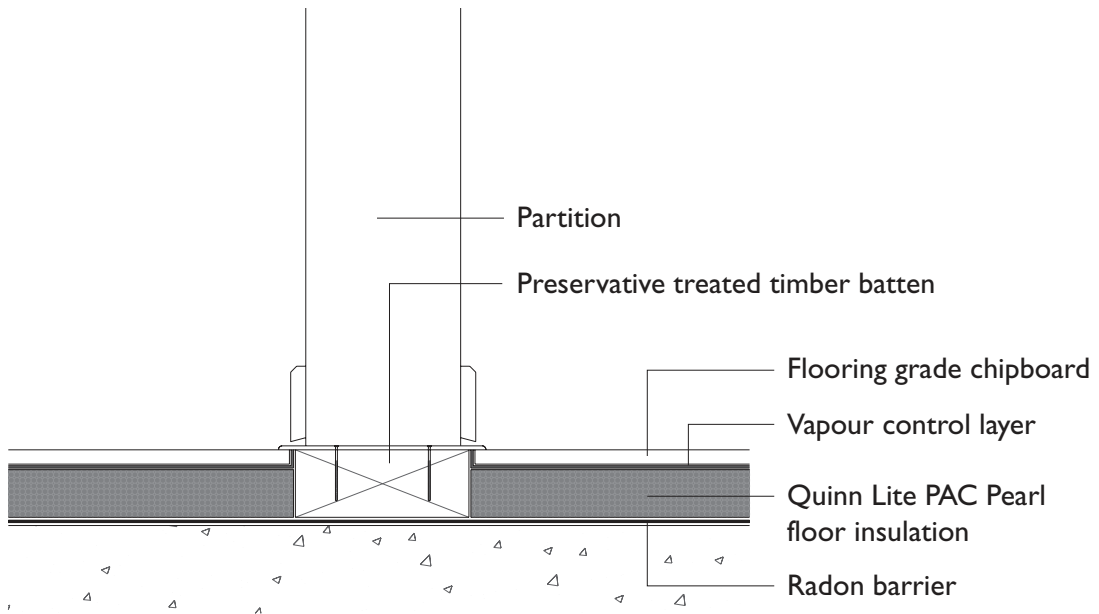


Figure 4: Typical detail of partition/floor junction

3.1 GENERAL

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems, when installed in accordance with this Certificate, are effective in reducing the 'U' value (thermal transmittance) of new and existing floor constructions.

Ground supported floors incorporating Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems must include a suitable damp proof membrane laid in accordance with BS CP 102: 1973 *Code of Practice for protection of buildings against water from the ground*.

Suspended concrete ground floors incorporating Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems must include suitable ventilation.

The overlay to Quinn Lite Pac 'EPS' or Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems should be: -

1. A cement based floor screed,
2. A concrete slab, or
3. Timber, OSB or particleboard.

3.2 FLOOR LOADING

The design loadings for the following uses are taken from BS 6399: Part 1: 1996 *Loading for buildings – Code of practice for dead and imposed loads*, are:

Single family dwellings:

- Uniformly distributed load – 1.5 kPa.
- Concentrated loads 1.4 kPa

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems, when covered with the relevant grade of timber, particle board, OSB or similar material, or a screed, can support these design loadings without undue deflection.

The boards should not be installed beneath internal walls (see Figure 4).

When Quinn Lite Pac 'EPS' or Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems are used under a concrete slab, resistance to concentrated and distributed loads, is a function of the slab specification.

3.3 UNDERFLOOR SERVICES

The maximum continuous working temperature of EPS or EPS Pearl is 80°C. The product must not be used in contact with electrical heating cables or hot water pipes. Where under floor heating systems are to be used, the advice of the certificate holder should be sought.

3.4 WATERPROOFING

If an overlay of timber, particleboard, OSB or similar material is to be used in bathrooms or kitchens, a continuous waterproof finish (e.g. vinyl) must be provided to protect it.

3.5 REACTION TO FIRE CLASSIFICATIONS

The 'reaction to fire' classifications are given in Table 2.

Table 2: Reaction to fire

EPS 70	Class F to EN 13501-1: 2002 <i>Fire classification of construction products and building elements. Classification using test data from reaction to fire tests</i>
EPS 100	
EPS 200	
EPS Pearl	

Note: EPS 70, 100 and 200 are also available in FRA grades

4.1 BEHAVIOUR IN FIRE

- (i) Combustibility – When installed in accordance with this certificate, the systems will not prejudice the fire resisting properties of floors. The increase in fire load in the building, consequent to their use, is small. In the event of a fire, the boards will be contained within the floor, by an overlay, until the overlay itself is destroyed. Therefore it is considered that the systems will not contribute to the developmental stages of a fire or present a smoke or toxic hazard.
- (ii) Electrical cables running within the boards should be enclosed within a suitable conduit.
- (iii) The boards when in proximity to a constructional hearth must be protected by 250 mm of solid concrete or as detailed in Diagram 4 of TGD-J: Heat Producing Appliances.
- (iv) Toxicity - Negligible when used in a ground floor construction.
- (v) Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems are manufactured without the use of CFC's or HCFC's, there is no release of such gas on burning.
- (vi) 'Reaction to fire' classifications are given in Table 2.

4.2 STRENGTH

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems, when installed in accordance with the manufacturer's instructions, and this Certificate, will resist the loads likely to be met during installation and in service. For strength classifications see Table 5.

4.3 RESISTANCE TO MOISTURE

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems will not allow moisture to cross the floor construction provided it is installed in accordance with this Certificate. See section 2.4 and Table 5.

The closed cell structure does not allow water uptake by capillary action.

4.4 WATER VAPOUR PENETRATION AND CONDENSATION RISK

For water vapour diffusion resistance factors see Table 5. The Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems have significant resistance to the passage of water vapour, when used in ground floor construction with a suitable dpm. This obviates the risk of surface condensation and presents no significant risk of damage from interstitial condensation.

4.5 THERMAL INSULATION

The declared design thermal conductivity 'λ' values are given in Table 3.

Table 3: Thermal conductivity

Grade	λ value* Wm ⁻¹ k ⁻¹
EPS 70	0.037
EPS 100	0.035
EPS 200	0.033
EPS Pearl	0.031

**measured in accordance with IS EN 12667: 2000 Thermal performance of building materials and products – Determination of thermal resistance by means of guarded hot plate and heat flow meters method – Products of high and medium thermal resistance*

The U-values for ground floors can be obtained with Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems, in accordance with the requirements of the Building Regulations Technical Guidance Document Part L 2002.

Examples of insulation thicknesses required, for Quinn Lite Pac 'EPS Pearl', are given in Table 4, for a range of floor constructions. These values are indicative only. For each design case, values should be determined, by a competent person, in accordance with the Building Regulations.

4.6 DURABILITY

Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation System are rot-proof, dimensionally stable and durable. As floor insulation, Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems are judged to be stable and will remain effective as insulation systems for the life of the building, so long as they are installed in accordance with this certificate.

4.7 TESTS AND ASSESSMENTS WERE CARRIED OUT TO DETERMINE THE FOLLOWING:

- density
- water vapour resistance
- long term water absorption
- dimensional accuracy
- compressive stress
- bending strength
- dimensional stability
- thermal conductivity

4.8 OTHER INVESTIGATIONS

(i) Existing data on product properties in relation to fire, toxicity, environmental impact and the effect on mechanical strength/stability and durability were assessed. Quinn Lite Pac 'EPS' and Quinn Lite Pac 'EPS Pearl' Under Floor Insulation Systems do not contain CFC gas or HCFC gas and have Zero Ozone Depletion Potential.

(ii) The manufacturing process was examined including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

(iii) Site visits were conducted to assess the practicability of installation and the history of performance in use of the product.

(iv) A condensation risk analysis was performed.

Table 4: EPS Pearl: Typical insulation thickness to achieve stated U-value, for given Perimeter/Floor Area ratio*

Pearl	Thickness (mm) (λ value = $0.031 \text{ Wm}^{-1}\text{k}^{-1}$)					
	Concrete Slab (solid)		Concrete (block and beam)		Suspended Timber Floor	
P/A Ratio	U=0.25	U=0.37	U=0.25	U=0.37	U=0.25	U=0.37
1.0	90	50	100	60	120	66
0.9	90	47	97	58	118	64
0.8	85	45	97	58	116	61
0.7	85	42	95	56	113	59
0.6	80	40	93	55	109	55
0.5	72	35	91	52	104	50
0.4	65	27	88	50	96	42
0.3	52	20	84	45	84	31
0.2	30	-	75	37	61	10
0.1	-	-	50	11	5	-

* These values are indicative only. Each design should be dealt with on a case by case basis. Design should be carried out by a competent person, in accordance with Building Regulations Technical Guidance Document Part L 2002

Property	Declared Value				Test Method
	EPS Pearl	EPS 70	EPS 100	EPS 200	
Long Term Water absorption by total immersion	WL (T) 05 (less than 5%)				EN 12087: 1997 <i>Thermal Insulating Products for building applications – Determination of long term water absorption</i>
Long Term Water absorption by partial immersion	less than 1%				
Dimensional Stability	DS (N) 5				EN 1604 <i>Thermal Insulating Products for building applications – Determination of dimensional stability under specified temperature and humidity conditions.</i>
Thermal conductivity 'λ' value W/mK	0.031	0.037	0.035	0.033	EN 12667; EN 12939
Thermal resistance m ² K/W					
25 mm	0.806	0.676	0.714	0.757	
50 mm	1.613	1.351	1.429	1.515	
55 mm	1.774	1.486	1.571	1.667	
75 mm	2.419	2.027	2.143	2.273	
100 mm	3.226	2.703	2.857	3.030	
Compressive stress/strength @ 10 % deformation KPa	CS(10)70	CS(10)70	CS(10)100	CS(10)200	EN 826: 1996 <i>Thermal Insulating Products for building applications – Determination of compression behaviour</i> EN 12089 <i>Thermal Insulating Products for building applications – Determination of bending behaviour</i>
Bending strength units KPa	BS 115	BS 115	BS 150	BS 25	
Water Vapour Diffusion Resistance Factor μ	20 to 40	20 to 40	30 to 70	40 to 100	Tabulated value – see EN 13163
Water Vapour Permeability δ mg/(Pa.N.M)	0.018 – 0.036	0.018 – 0.036	0.010 – 0.024	0.007 – 0.018	Tabulated value – see EN 13163

- 5.1** National Standards Authority of Ireland ("NSAI") following consultation with the Irish Agrément Board ("IAB") has assessed the performance and method of installation of the product/process and the quality of the materials used in its manufacture and certifies the product/process to be fit for the use for which it is certified provided that it is manufactured, installed, used and maintained in accordance with the descriptions and specifications set out in this Certificate and in accordance with the manufacturer's instructions and usual trade practice. This Certificate shall remain valid for five years so long as:
- (a) the specification of the product is unchanged.
 - (b) the Building Regulations 1997 to 2002 and any other regulation or standard applicable to the product/process, its use or installation remains unchanged.
 - (c) the product continues to be assessed for the quality of its manufacture and marking by NSAI.
 - (d) no new information becomes available which in the opinion of the NSAI, would preclude the granting of the Certificate.
 - (e) the product or process continues to be manufactured, installed, used and maintained in accordance with the description, specifications and safety recommendations set out in this certificate.
 - (f) the registration and/or surveillance fees due to IAB are paid.
- 5.2** The IAB mark and certification number may only be used on or in relation to product/processes in respect of which a valid Certificate exists. If the Certificate becomes invalid the Certificate holder must not use the IAB mark and certification number and must remove them from the products already marked.
- 5.3** In granting Certification, the NSAI makes no representation as to;
- (a) the absence or presence of patent rights subsisting in the product/process; or
 - (b) the legal right of the Certificate holder to market, install or maintain the product/process; or
 - (c) whether individual products have been manufactured or installed by the Certificate holder in accordance with the descriptions and specifications set out in this Certificate.
- 5.4** This Certificate does not comprise installation instructions and does not replace the manufacturer's directions or any professional or trade advice relating to use and installation which may be appropriate.
- 5.5** Any recommendations contained in this Certificate relating to the safe use of the certified product/process are preconditions to the validity of the Certificate. However the NSAI does not certify that the manufacture or installation of the certified product or process in accordance with the descriptions and specifications set out in this Certificate will satisfy the requirements of the Safety, Health and Welfare at Work Act, 1989, or of any other current or future common law duty of care owed by the manufacturer or by the Certificate holder.
- 5.6** The NSAI is not responsible to any person or body for loss or damage including personal injury arising as a direct or indirect result of the use of this product or process.
- 5.7** Where reference is made in this Certificate to any Act of the Oireachtas, Regulation made thereunder, Statutory Instrument, Code of Practice, National Standards, Manufacturer's instructions, or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certification.

The Irish Agrément Board

This Certificate No. **05/0028** is accordingly granted by the NSAI to **Quinn Lite Pac Ltd, Rathcronan, Granard, Co Longford, Ireland**, on behalf of The Irish Agrément Board.

Date of Issue: **Feb 2005**

Signed



Chief Executive, NSAI

Readers may check that the status of this Certificate has not changed by contacting the Irish Agrément Board, NSAI, Glasnevin, Dublin 9, Ireland. Telephone: (01) 807 3800. Fax: (01) 807 3842. www.nσαι.ie

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