



Insulated Plasterboard

Koolfoam Insulated Plasterboard

The Koolfoam KF range is a perfect blend of form and function. It gives specifiers and builders multiple insulation solutions to suit all budgets and spaces.

Our products combine GIB plasterboard with either a rigid expanded polystyrene (EPS) or PIR core, and are backed with aluminium foil - providing excellent thermal resistance and outstanding R values.

The KF range is strong and lightweight, and the GIB facing provides a smooth, ready-to-finish interior lining surface. Importantly, all KF products are treated for fire resistance.

Koolfoam KF range

- Rigid EPS core uses a fibre-free, closed-cell structure to provide high-performance insulation
- Can be used for insulation, drylining, and vapour control
- Suitable for interior lining applications
- Resistant to water vapour transmission
- Easy to cut, handle, and install
- Ideal for timber or steel framing, concrete or masonry, and retrofit applications
- Sheet sizes: 2400mm x 1200mm. Custom sizes and thicknesses available upon request.



Koolfoam KF22

Koolfoam KF22 uses our Koolfoam PIR Board and is our highest-performing insulation panel. Made with a polyisocyanurate rigid closed cell foam - and laminated with a low-emissivity aluminum foil - KF22 achieves superior R values and excellent fire resistance.

The PIR core includes a flame retardant that forms a char layer when exposed to fire, to slow flame spread. The PIR is also moisture-resistant and does not react with TPS electrical cabling.

KF22 thickness (excl 10mm plasterboard)	R value
KF22-40 mm	1.81
KF22-50 mm	2.27
KF22-100 mm	4.54

All R values are calculated from actual conductivity tests of Koolfoam PIR by an independent approved authority (BRANZ).

Koolfoam KF31

Koolfoam KF31 provides a more cost-effective option. KF31 has a Koolfoam Black Pearl EPS core that's infused with graphite to provide up to 30% greater thermal efficiency than normal EPS.

On top of its ability to deliver high R values within thinner products, the Black Pearl core also has high compressive strength, is easy to handle and is available in various thicknesses.

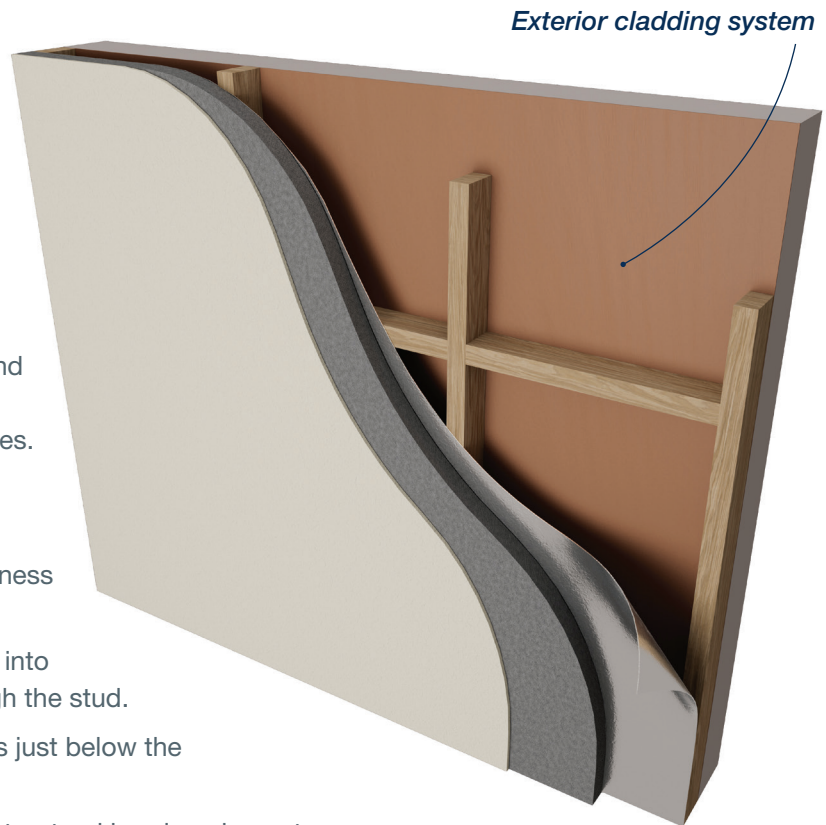
KF31 thickness (excl 10mm plasterboard)	R value
KF31-50 mm	1.61
KF31-60 mm	1.93
KF31-100 mm	3.22

All R values are calculated from actual conductivity tests of Koolfoam EPS and Black Pearl by an independent approved authority (BRANZ)

KF31's Black Pearl EPS core is made from Neopor with a flame retardant that reduces the flammability and spread of flame on the surface of the foam - and is compliant with AS 2122.1-1993.

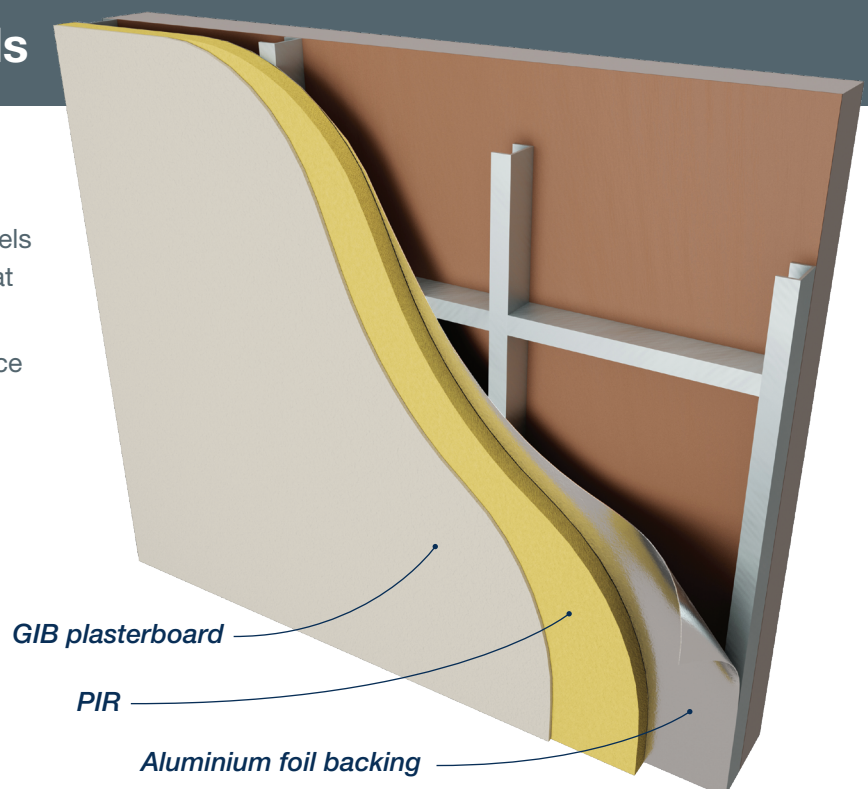
Timber-framed walls

- Cut KF sheets approximately 5mm short of floor-to-ceiling height.
- Ensure each sheet laps timber studs or nogs by at least 19mm at joints.
- Where joints are unsupported, install additional nogging.
- Lightly butt sheets with fixings no closer than 10mm from sheet edges.
- Position sheets centrally over studs and fix using screws at 300mm centres or galvanised clout nails at 150mm centres.
- Fixing to be compliant with GIB requirements based on element type.
- Fixing screw length to be the KF thickness + GIB fixing compliancy.
- Fixings must penetrate at least 25mm into timber framing without passing through the stud.
- Do not overdrive fixings; embed heads just below the plasterboard surface.
- KF22 and KF31 cannot be used as a structural bracing element.



Steel-framed walls

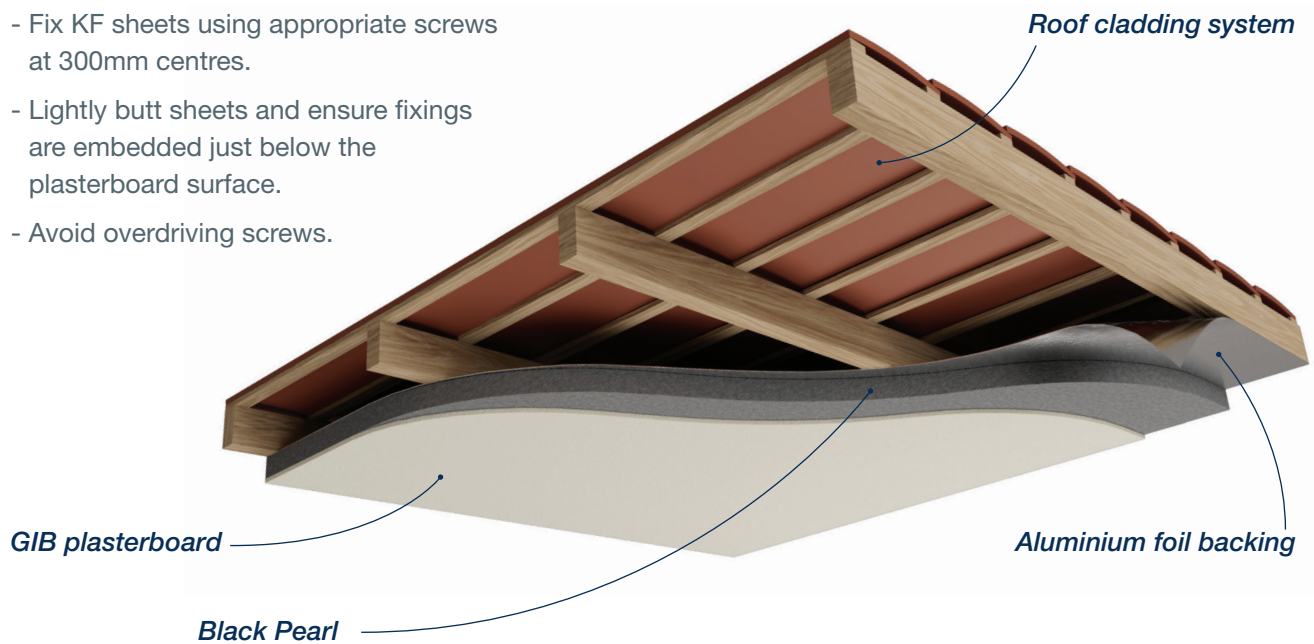
- Cut sheets 5mm short of floor-to-ceiling height.
- Position centrally over steel channels and fix using self-tapping screws at 300mm centres.
- Maintain a minimum 10mm distance from sheet edges.
- Screws must penetrate at least 10mm into the steel framing.
- Avoid overdriving screws.
- KF22 and KF31 are not suitable for structural bracing.





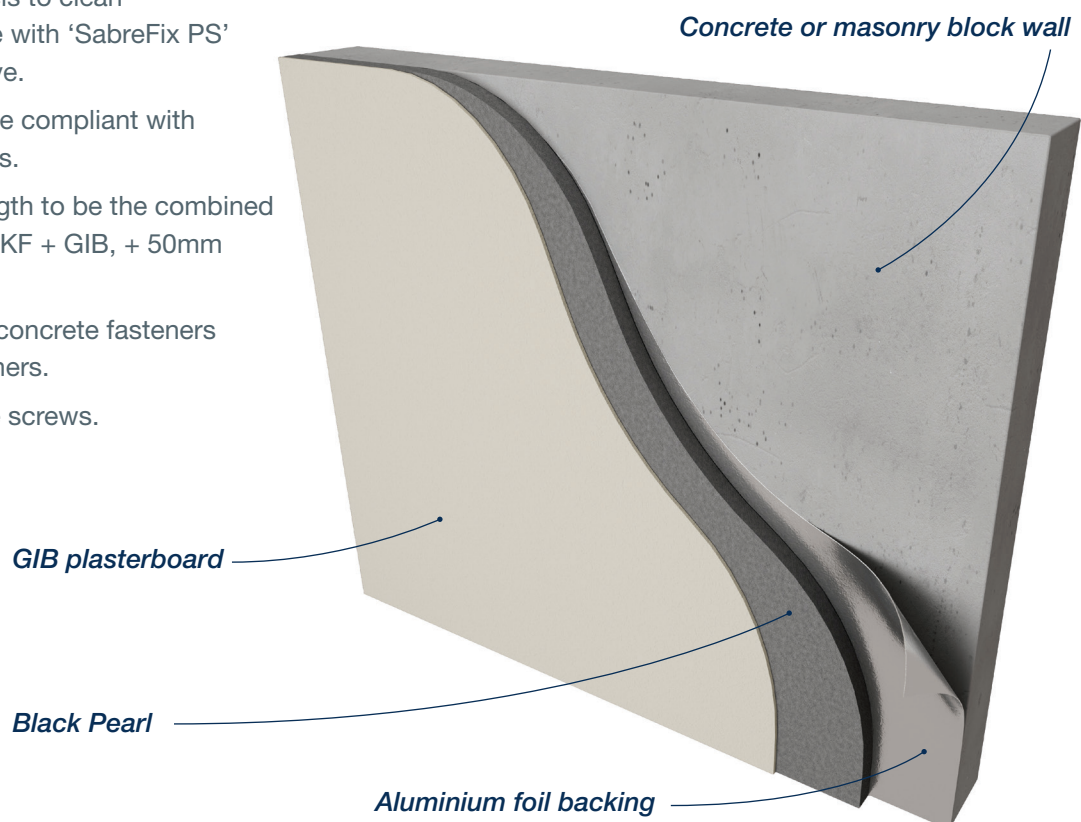
Timber or steel ceilings

- Fix KF sheets using appropriate screws at 300mm centres.
- Lightly butt sheets and ensure fixings are embedded just below the plasterboard surface.
- Avoid overdriving screws.

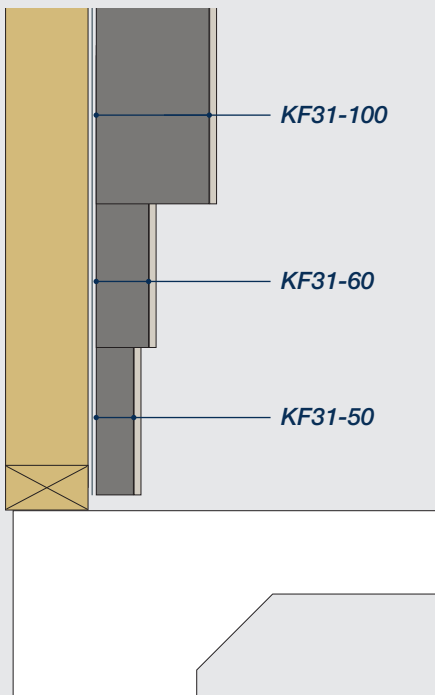


Concrete or masonry block walls

- Glue fix KF panels to clean concrete surface with 'SabreFix PS' Builders Adhesive.
- Finish fixing to be compliant with GIB requirements.
- Fixing screw length to be the combined thickness of the KF + GIB, + 50mm embedment.
- Use proprietary concrete fasteners with 30mm washers.
- Do not overdrive screws.



Construction details - KF31 (Black Pearl)



KF31 Timber fixing requirements

Fixing to be compliant with GIB requirements based on element type

Fixing screw length to be KF31 thickness + gib fixing compliancy

KF31 R values (both timber and concrete)

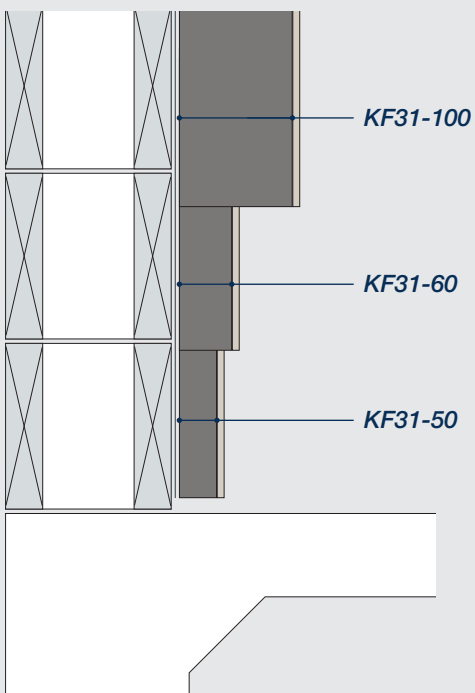
Thickness (excl 10mm Plaster Board)	R value
KF31-50 mm	1.45
KF31-60 mm	1.93
KF31-100 mm	3.22

Note: All R values are calculated from actual conductivity tests of Koolfoam EPS and Black Pearl by an independent approved authority BRANZ

Fire behaviour

Koolfoam Black Pearl is made from Neopor with a flame retardant. The flame retardant reduces the flammability and spread of flame on the surface of the foam if an ignition source comes in direct contact with the foam. (Compliant with AS 2122.1-1993)

Timber framed construction



KF31 Concrete or masonry fixing requirements

Glue fix KF31 panels to clean concrete or masonry surface with 'SabreFix PS' Builders Adhesive

Finish fixing to be compliant with GIB requirements based on element type

Fixing screw length to be KF31 + gib combined thickness + 50mm embedment - using proprietary concrete fasteners with 30mm washers

All fixings to be slightly recessed without damaging gib board sheeting

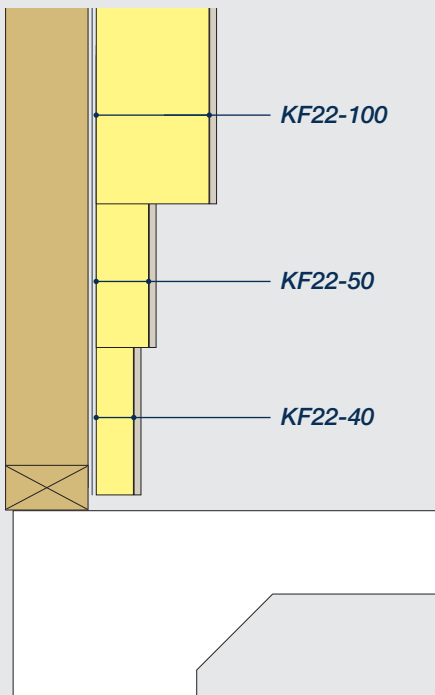
Electrical wiring

Observe the following options

- Separate PVC / TPS cables from contact with Black Pearl insulation
- Sleeve cables where contact can't be avoided
- Use polyethylene or Polypropylene tape between PVC and Black Pearl insulation
- Separate electrical cables from insulation with a 100mm wide continuous strip of waxed paper
- DO NOT USE a Staple gun for fixing

Concrete or masonry construction

Construction details - KF22 (PIR)



Timber framed construction

KF22 Timber fixing requirements

Fixing to be compliant with GIB requirements based on element type

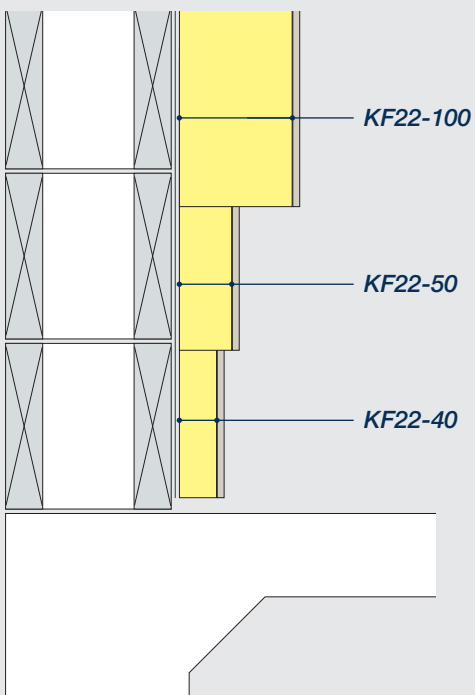
Fixing screw length to be KF22 thickness + gib fixing compliancy

All fixings to be slightly recessed without damaging gib board sheeting

KF22 R values (both timber and concrete)

Thickness (excl 10mm Plaster Board)	R value
KF22-40 mm	1.81
KF22-50 mm	2.27
KF22-100 mm	4.54

Note: All R values are calculated from actual conductivity tests of Koolfoam EPS and Black Pearl by an independent approved authority BRANZ



Concrete or masonry construction

KF22 Concrete or masonry fixing requirements

Glue fix KF22 panels to clean concrete or masonry surface with 'SabreFix PS' Builders Adhesive

Finish fixing to be compliant with GIB requirements based on element type

Fixing screw length to be KF22 + gib combined thickness + 50mm embedment - using proprietary concrete fasteners with 30mm washers

Fire behaviour

Koolfoam PIR is made from polyisocyanurate rigid closed cell foam with the back face typically laminated with a low-emissivity aluminum foil.

30-35 kg/m³ density

The PIR includes a flame retardant that allows the forming of a char layer, when exposed to fire which slows flame spread. The PIR is moisture resistant.

Electrical wiring

The PIR structure doesn't react with TPS cabling

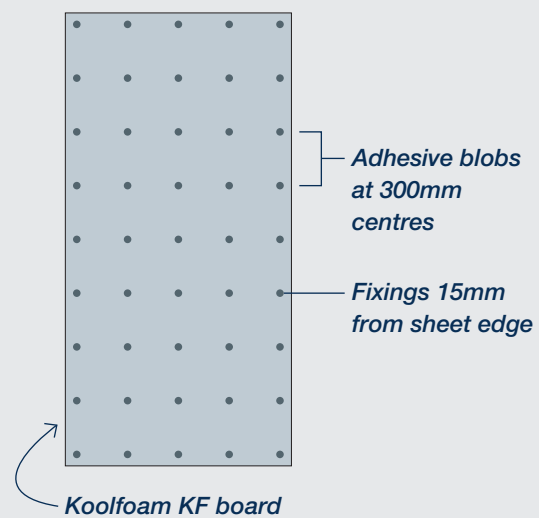
Drywall plasterboard

KF22 and KF31 can be installed using traditional or modern drylining techniques on dry, structurally sound walls. Adhesive bonding or mechanical fixing may be used depending on substrate conditions.

Adhesive bonding method

Suitable for brick, block, concrete masonry, or existing plasterboard walls that are free from moisture.

- Ensure the wall surface is clean and free from contaminants.
- Apply a continuous bead of construction adhesive around perimeters and openings.
- Apply 25mm diameter adhesive blobs at 300mm centres to the wall or board.
- Press the board firmly into place using a straightedge.
- Continue lining the wall in sequence.
- After adhesive cures, install mechanical fixings.
- Position fixings 15mm from sheet edges and at midheight.
- Fit boards tight to ceilings or joists.



Mechanical fixing method

Recommended where adhesive bonding is unsuitable or where heavy surface linings (eg. tiles) will be applied.

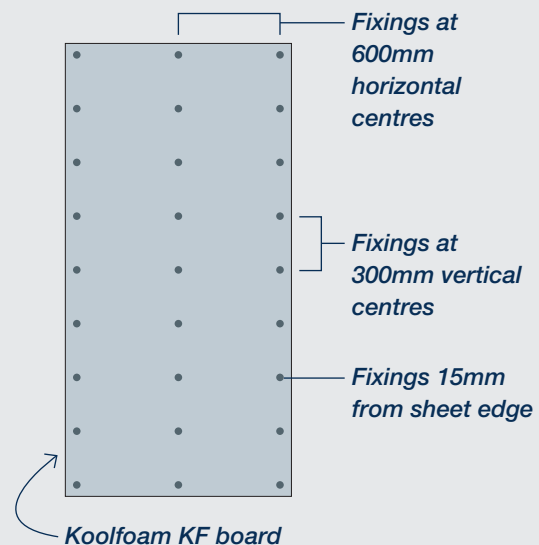
Ensure the wall is flat and free from projections.

Pre-drill holes using a masonry bit.

Insert masonry anchors with at least 25mm embedment.

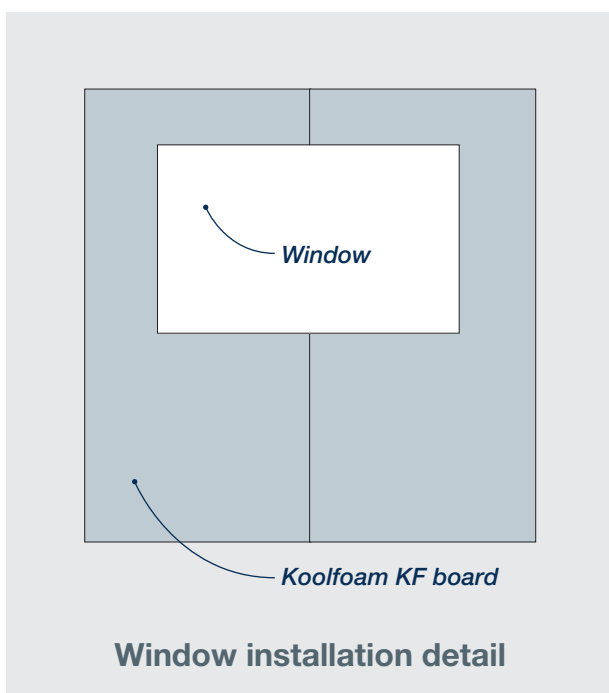
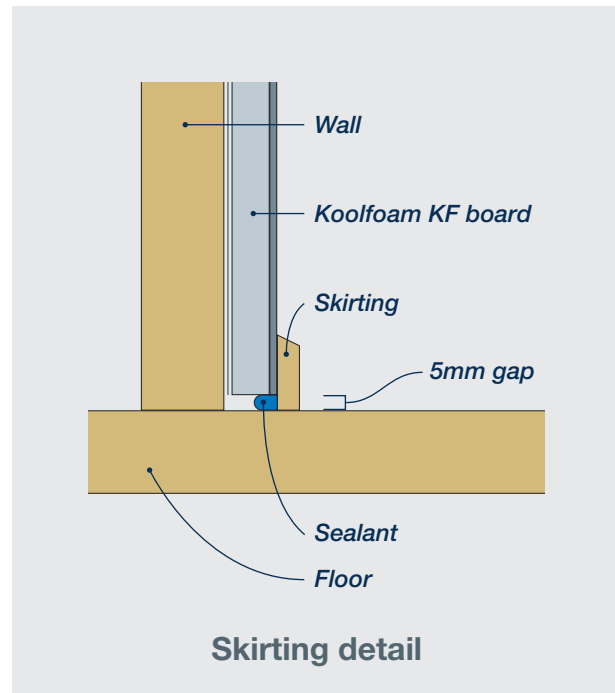
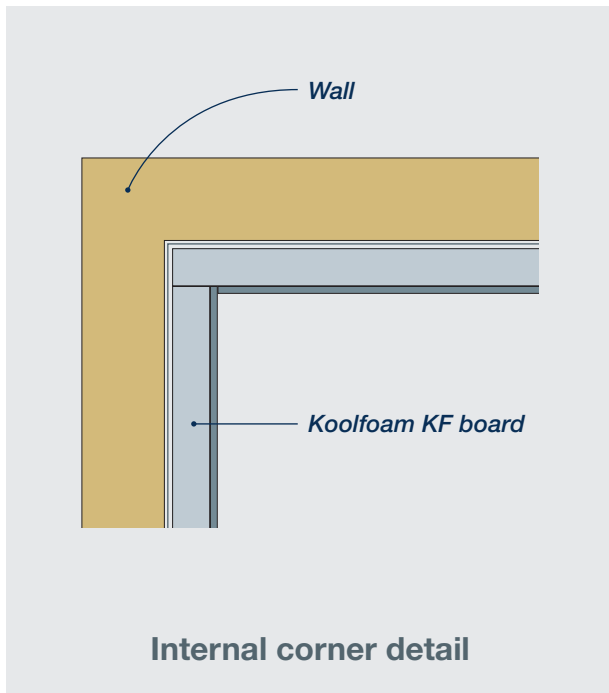
Fix screws straight and embed heads just below the plasterboard surface.

Fix at 600mm horizontal and 300mm vertical centres.



Corner, skirting, and reveal details + R values

- Cut and rebate sheets at internal and external corners to ensure tight joints and minimise cold bridging.
- Use a 5mm packer at the base of walls; replace with flexible sealant before installing skirting.
- Use thinner KF sheets at window and door reveals where required.
- Temporarily support reveal strips when using adhesive.



KF22 R values (both timber and concrete)

Thickness (excl 10mm Plaster Board)	R value
KF22-40 mm	1.81
KF22-50 mm	2.27
KF22-100 mm	4.54

KF31 R values (both timber and concrete)

Thickness (excl 10mm Plaster Board)	R value
KF31-50 mm	1.45
KF31-60 mm	1.93
KF31-70 mm	2.26
KF31-80 mm	2.58
KF31-90 mm	2.90
KF31-100 mm	3.22

Note: All R values are calculated from actual conductivity tests of Koolfoam EPS and Black Pearl by an independent approved authority BRANZ

Cutting

- Use a fine-toothed saw or the score-and-snap method.
- Support sheets during cutting to prevent breakage.
- For complex cuts (eg. around windows), segment boards to reduce movement.

Board orientation

KF31 may be installed horizontally or vertically, depending on the layout of the room.

Services

Recess insulation carefully to accommodate electrical or plumbing services.
Ensure compliance with AS/NZS 3008.1 for electrical cable heat dissipation.
Avoid removing excessive insulation.

Specific options for electrical wiring

- KF22 does not react with TPS electrical cabling.
- KF31 requires PVC/TPS cables to be kept separate from the Black Pearl EPS core.
- Where contact can't be avoided, cables must be sleeved.
- Use polyethylene or Polypropylene tape between PVC and Black Pearl insulation.
- Separate electrical cables from insulation with a 100mm wide continuous strip of waxed paper.
- Do NOT use a staple gun for fixing.

Handling and storage

Storage

Store indoors whenever possible.

If stored outdoors, keep boards elevated and covered with opaque polythene (do NOT use clear polythene) or a weatherproof tarp.

Do not use boards that have become wet.

Resistance to Solvents

EPS cores resist short-term contact with most dilute acids, alkalis, and mineral oils.

Clean spills promptly using safe methods.

Avoid solvent-based adhesives containing methyl ethyl ketone.

Do not use damaged or solvent-affected boards.

Product warranty

KF22 and KF31 are covered by Koolfoam's standard product warranty (refer to the Koolfoam Warranty Statement for full details). Warranty information is available upon request.

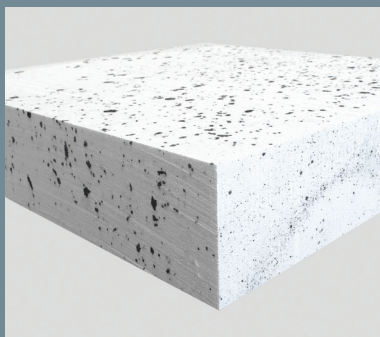
Koolfoam Industries Ltd reserves the right to amend product specifications without notice. All recommendations should be verified for compliance with project requirements and applicable regulations. Performance depends on installation quality and conditions outside Koolfoam's control.

For technical support or project-specific guidance, contact Koolfoam Industries Ltd.

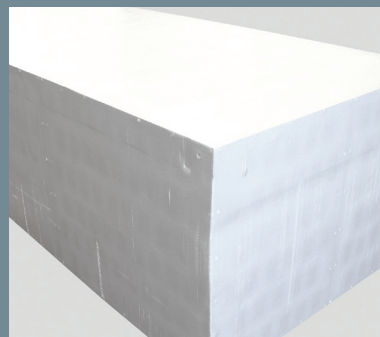
The leading manufacturer of polystyrene products



Under Slab Insulation



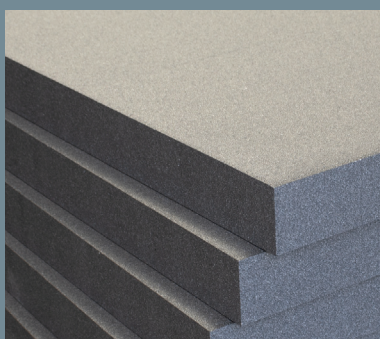
Solid Eco Pods



Geofoam / Polyrock Block



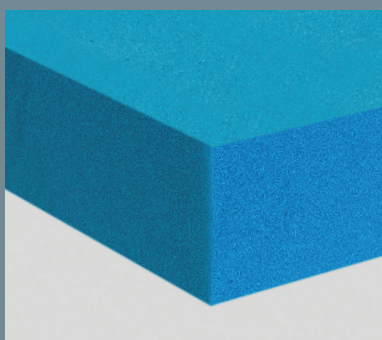
Under Floor Insulation



Black Pearl



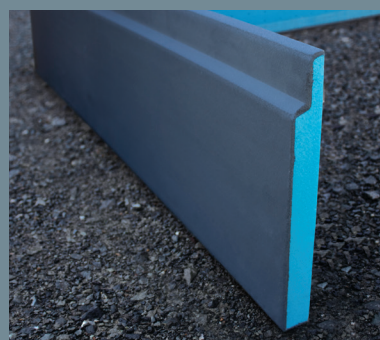
Waffle Pod



Koolfoam XPS



SlabEdge



SlabEdge Postpour/Retrofit



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