



Installation

TemperTherm 100% Polyester Carpark & Soffit Insulation Panel

TemperTherm 100% Polyester is a range of thermal and acoustic insulating materials manufactured from thermally bonded polyester fibres. TemperTherm 100% Polyester Insulation is available in blanket, segment and panel form to suit a wide range of thermal and acoustic insulation requirements and framing set-outs in walls, ceilings and roofs of buildings.

TemperTherm 100% Polyester Carpark & Soffit insulation panels are designed for the thermal and acoustic insulation of masonry soffits and ceiling structures. TemperTherm Carpark & Soffit panels can also be used for thermal and acoustic insulation of steel portal commercial and industrial buildings. Our acoustic ranges utilise specialist low denier, high-volume hollow-core polyester fibres for superior sound absorption. Our TemperTherm 100% Polyester Insulation is made from minimum 45% post-consumer recycled plastics (PET), and is safe to touch and will never slump, sag, or reduce its performance. Our entire TemperTherm range carry a 50 Year Product Durability Warranty.

COMPLIANCE STATEMENTS

The total R-Value of the building system depends on the building materials, design and installation and may be less than, greater than, or equal to the declared R-Value of the insulation product.

TemperTherm 100% Polyester Insulation will meet and exceed the 50 year durability clause of the NZBC (B2.3.1(a)) when installed in accordance with these manufacturer's instructions.

TemperTherm 100% Polyester Insulation is supplied with labelling compliant with AS/NZS4859.1. The nominal thickness, net area, and nominal weight of each pack is recorded on the product bale label.

INSTALLER SAFETY

Each installation is unique so prior to installing insulation check for hazards that could cause injury. The installation of TemperTherm Carpark & Soffit panels will usually require installers to be working at height. A SSSP should be in place to ensure safety of installers and others.

Our 100% polyester insulation is completely safe and there are no precautions or specialist safety equipment required to handle our products. Our 100% Polyester Insulation is non-toxic, non-irritant and non-allergenic. We do however recommend some basic PPE when installing insulation. PPE should include dust mask, safety glasses, appropriate clothing or coveralls, and cut resistant gloves to protect from cuts.

TRANSPORTATION & STORAGE

TemperTherm Insulation must be handled with care and stored under cover and in clean and dry conditions. Heavy objects must not be stacked on the insulation panels. Panels should be stored in an orientation and manner that avoids excessive compression of the product.

Transport and store panels on a flat, clean and dry surface. Avoid abrasion and protect edges from being crushed. Avoid rubbing the face or bending panels.

Do not accept damaged product. If product or packaging arrives to you damaged, please ensure you note the condition on the freight documents and contact PIL Group Ltd without delay.

Goods signed as received in "good condition" will not be the responsibility of PIL Group Ltd.

INSTALLATION TOOLS

Installing TemperTherm Carpark & Soffit insulation panels is a specialist role and should be conducted by suitable qualified tradespeople, with the right equipment to ensure a quality finish.

Typical tools required for installation will include;

- Measuring and marking out tools
- Insulation fastening system (i.e. insulation anchors and associated equipment). We recommend using an automated fastening tool such as a Hilti or Ramset gun, and suitable for insulation anchors - Hilti X-IE 9 or Ramset Insulfast
- Appropriate tools and method to create penetrations for insulation anchors (ie. hot knife or tube/conduit to protect drilling)
- Cutting board, straight edge, wide-blade knife, and insulation saw/mechanical cutter for trimming panels
- Suitable lighting
- Contact and construction adhesive for glue fixing



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INSPECTION

Before starting the installation, check that the insulation panels are free from damage or obvious faults.

Any variations or concerns should be advised to PIL Group Ltd prior to starting the installation. No claims will be accepted where the job continues with obvious faults, and no consultation with PIL has taken place. If you cut or install the product, you have accepted the quality.

Due to batching variations, we do not recommend installing different batch lots in the same area as this could result in the appearance of colour variation. TemperTherm 100% Polyester Carpark & Soffit Insulation Panels are made using non-woven production techniques and some colour blending variation and marbling is typical batch to batch and throughout each production lot. This is an inherent feature of the product and not considered a manufacturing fault.

INSTALLATION INSTRUCTIONS

These installation instructions are of a general nature and designed to assist suitably experienced tradespeople install TemperTherm Carpark & Soffit insulation panels to a high standard in typical use situations.

Other Trades & Services

Prior to beginning the installation, we recommend you consider other trades such as HVAC, plumbing, and electrical to ensure an order of works that best suits the site is established.

Insulation Fasteners & Penetrations

TemperTherm 100% Polyester Carpark & Soffit insulation panels are recommended to be installed using mechanical fixings. These can be either shot fired insulation anchors (such as Hilti or Ramset) or the insulation pin style insulation anchors with one-way washers or domes.



Pin Style Insulation Anchors



Ramset Insulfast



Hilti X-IE

The fastener length must be equal to the declared nominal thickness of the Carpark & Soffit insulation panels to avoid compression and pillowing of the insulation panels. Use fixings in accordance with their manufacturer's technical information and instructions.

When using shot fired insulation anchors, we recommend that penetrations are created for each insulation anchor point prior to the installation of each panel. This will help ensure good take of the anchor in the substrate and a neat install.

Penetrations for the insulation anchors and fixings can be formed using a hot-knife or insulation knife. When using a battery/power drill, ensure the drill clutch is engaged to minimise the risk of wind-up of the polyester fibres.

A piece of conduit can be inserted into the insulation panel to protect the drill bit from wind-up

Adhesives

- Some installations, or areas of installation may allow for adhesive fixing of the insulation panels. It is the installer's responsibility to ensure that any adhesive used is fit for the intended purpose and will provide long-term hold. It is also the installer's responsibility to ensure that the substrate is fit for the application of adhesives.
- Surfaces may need to be sealed prior to the application of adhesives.
- We recommend the use of two adhesives; full panel coverage of contact adhesive, along with dabs of construction adhesive. The construction adhesive is considered the long-term bond. Contact your specialist adhesive supplier for advice and options.

Cutting & Clearances

- Mechanical fabric-type cutters are ideal for cutting and trimming insulation panels. Sharp insulation knives and insulation saws can also be used to trim panels to size.
- Heavy-duty wide-blade snap-off blade knives are useful for cutting holes and slits for services. All cutting tools must be sharp to help ensure a neat and tidy cut.
- Always cut panels slightly oversize to ensure a tight friction fit.
- Cut insulation panels to fit neatly around fire collars, pipes, hangers, and penetrations. Do not cover the face of fire collars as these must be exposed to activate in a fire situation.
- Leave specified and required clearances to light fittings, ancillary equipment, and electrical accessories.

Pre-Installation Planning

- We recommend the installation is well planned before you start. Check materials and substrate of the entire area before starting and plan the layout of panels. Refer project plans and specifications for details and requirements. Seek clarification as required.
- TemperTherm Carpark & Soffit insulation panels are supplied as standard 1200mm x 2400mm full sheets to allow trimming to size on site. Other sizes may be available with minimum order quantities and on request.

Standard panel size tolerances are;

- **Width:** up to +20m/-0mm
- **Length:** up to +50mm / -0mm
- **Thickness:** up to 10%

We recommend that all panels are measured and squared-up prior to beginning the installation.

We also recommend panels are laid out on the floor to match similar panels and colouring

TemperTherm Carpark & Soffit insulation panels should be installed with all panels joining 'width to width' and 'length to length' to avoid colour and appearance variation. We recommend the insulation panels are installed with the firm textured face exposed. This is for aesthetic reasons only as it will provide a clean and uniform appearance.

Mechanical fixings should be set at no more than 600mm centres. Each fixing should be a minimum 100mm and a maximum of 200mm from the edge of each panel.

We recommend 11 fixings per standard panel (Fig. 1).

We recommend that the insulation panels are installed in staggered formation (Fig. 2).

The fastener length should be equal to the nominal thickness of Carpark & Soffit panels to avoid compression and pillowing.

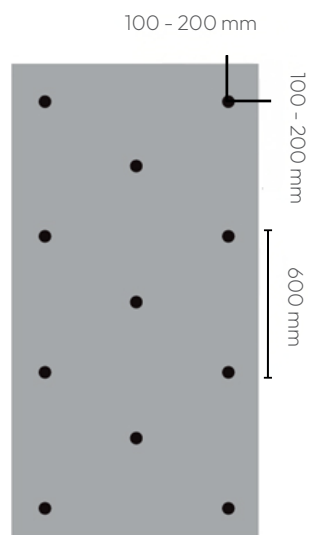


Figure 1.

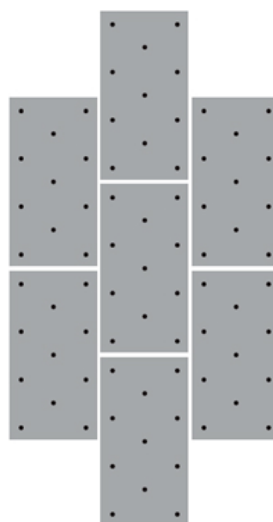


Figure 2.



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Installation of Panels – Mechanical Fixings

TemperTherm 100% Polyester Carpark & Soffit insulation panels should be installed touching the substrate, but not compressed. Panels should be installed tight to adjoining panels and surfaces to ensure complete coverage.

Avoid compression of the insulation as this will affect the thermal performance and may create the appearance of pillowing. The soft nature of the insulation panels will allow some compression and 'give' when butt joining or finishing to adjoining surfaces. Panels should be installed without visible folds and compression lines in the finish.

Prepare the first panel for installation by creating penetrations for the insulation anchors, taking account of fixing locations in the substrate. Install the panel by fixing from one corner then across the width of the panel, and then down the length of the panel to ensure a tight flat finish.

Prepare and install successive panels with tight neat joins to adjoining panels and surfaces until the install is complete. Insulate all areas as detailed on the plans and project specifications providing complete coverage to the thermal envelope.

Installation of Panels – Adhesives

Adhesives should be applied in accordance with the adhesive manufacturer's instructions. Refer to the product technical data sheet for spread rates, tack-off times, temperature and climatic requirements, application methods, and the equipment required.

We recommend that each insulation panel is prepared and installed individually. We recommend the use of contact adhesive and construction adhesive. Leave space for the construction adhesive when applying the contact adhesive; this is to ensure the construction adhesive can bond directly with the insulation panel.

The purpose of the contact adhesive is to provide immediate hold and to support the insulation panel while the construction adhesive cures for long-term bond.

Ensure the adhesive has tacked-off correctly, then fit the panel. Roll the insulation panel from the centre outwards to the edges and joins, then roll the entire panel to ensure adhesive transfer and a strong bond.

Continue installation of all insulation panels until the job is complete.

Insulate all areas as detailed on the plans and project specifications providing complete coverage to the thermal envelope.

COMPLETION

Check installed insulation is secure, tidy, and not compressed, and that all areas are insulated. Leave work area tidy and remove unused materials and waste from site.

SPECIFICATIONS & TECHNICAL SUPPORT

TemperTherm specification documents are available from our website. For specification or technical support please contact our Technical Team on 07 282 1184, or email support@tempertherm.co.nz

TemperTherm

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