



## Reapor

Reapor tiles are supplied in two standard thicknesses and sizes. (Refer information page **Reapor 217IP**)

1. **25mm** thick (tile sizes 625mm x 625mm and 1200mm x 625mm)
2. **50mm** thick (tile sizes 625mm x 625mm and 1200mm x 625mm)

Reapor can be installed using two methods.

1. **Adhesive Application**
2. **Mechanical Fixing**

**Note:** *Several factors such as nature of substrates, surface preparation and application requirement need to be considered when choosing the method of installation.*

### RECOMMENDED ADHESIVES

A) **PCI Nanolight** is a cementitious-based tile adhesive, filled with specialised nano fillers for use on concrete surfaces and where an integral fire-rated system is required. (Refer information page **514IP**.)

B) **Fixseal MSP15**. Silyl Modified Polymer based adhesives have a high tack and green strength giving it strength to hold a tile without the need for additional support. These adhesives are 100% solids, chemically neutral with low VOC's. Due to their flexibility, they are highly suited to bond to metal surfaces, concrete and wooden substrates. (Refer information page **526IP**.)

#### **Other Adhesives**

If using alternative adhesives, ensure they have low shrinkage or are non-shrink and closely matching the properties of our recommended adhesives.

**Note:** *In every case, trial bond must be carried out to prove the adhesive system or when unsure of the type of substrate. The trial must be done using a full tile and left for a minimum of 2 weeks to allow for any chemical reaction, degradation of the bond or cracking of the tile if any.*

### GENERAL GUIDE ON SURFACE PREPARATION

**All substrates must be structurally sound.** It is important to ensure that substrates are clean, dry and free of contaminants (e.g. liquid, dirt, dust, oil, loose paint or any flaky materials, rust, wax, grease, fibreglass release agents).

**Masonry surfaces/Cement:** Factors like strength of concrete, flatness of surface and presence of contaminants determine choice of bonding method and surface preparation. Typical contaminants are curing compounds, laitance, sealants, grease, oil, wax or construction site dirt and dust. Formed concrete may have rough join lines due to mismatching formwork which will need to be removed. Reapor should always be bonded to surfaces that are relatively flat, clean, dry and free of contaminants. Refer adhesive manufacturer's instructions on surface preparation.

**Timber, Plywood:** Timber/Plywood swells when subjected to moisture. In applications where substrate is exposed to this possibility, we recommend a 6 - 8mm primed/ sealed fibre cement sheet be fastened with screws to the timber substrate before installing Reapor tiles. We do not recommend that Reapor be adhered directly to timber which is exposed to these elements.

**Metal substrates:** Metal surfaces must be free of any rust. In areas with high adhesion requirement due to great thermal and physical loads or under wet conditions, priming is recommended. Use flexible adhesives for bonding Reapor to metal. Refer adhesive manufacturer's recommendations. (PCI Nanolight not recommended for bonding Reapor to metal substrates)

Prepared substrates should not be left unprotected for more than a few minutes to avoid contamination.

**Please note:** *Uneven surfaces with surface variation greater than 1-2mm (typically concrete /masonry surfaces), is likely to consume excessive adhesive or lead to cracking of tiles, if not treated or installed as recommended. Inadequate or incorrect surface preparation is the most common cause of bond failure.*

### TIPS FOR WALL TILING

**Level Base:** It is important to select a level base when tiling. Determine the lowest point along the bottom of the wall. Place a single tile at this spot and mark the wall just above it. Using a spirit level, nail a batten in a horizontal position to allow the first row of tiles to be placed on the bottom, to ensure the tiles are parallel to the ground. Place a row of tiles against the horizontal batten and make any necessary adjustments to provide equal spacing and cuts in the tiles as needed. Leave the horizontal batten in place until the adhesive has set.

In wet or humid areas or outdoor applications where tiles are subjected to water, a gap should be left between the bottom layer of tiles and the concrete footing, to allow any water to flow out.

## 1. ADHESIVE FIXING

### Installing Reapor on concrete walls with PCI Nanolight

Refer to information page 'PCI Nanolight 514IP' for finer details on substrate preparation, mixing of mortar, application and coverage.

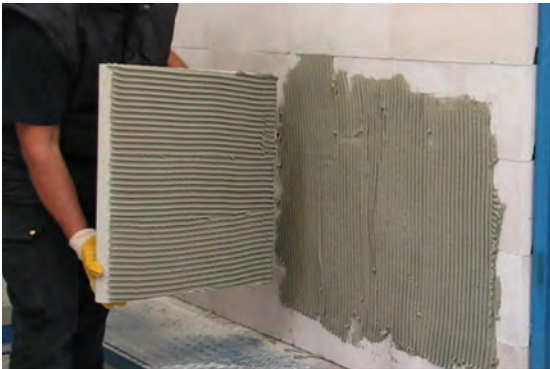
1. The adhesive is applied to the back of the tile using a notched trowel (8mm notch size for usual concrete walls; 6mm notch size can be used for smoother surfaces.)
2. Where substrate surfaces are very uneven (surface more than 3-4mm out of flat), an adhesive layer is also applied to the substrate to even out the surface. (commonly called '**Back buttering**')
3. At ambient temperatures of 23°C and above, a light spray of water can be applied to porous substrates, such as concrete. This will allow time for the correct application of adhesive, with out any danger of the PCI Nanolight curing too quickly. Ideal application temperatures are between 20-25°C. PCI Nanolight should not be applied at temperatures below 5°C or above 35°C.
4. When Reapor tiles are installed on concrete walls using PCI Nanolight, it is recommended that the concrete is lightly sprayed with water to reduce water loss from PCI Nanolight.



Apply adhesive on to the tile, with the notched edge of the trowel, preferably in one direction.



Application of PCI Nanolight



Reapor being applied on uneven surface.



Fix Reapor panel to the prepared substrate with firm pressure before adhesive skins. Gently move the tile in a side-to-side motion to lap in the adhesive. Once the tile is correctly applied to the substrate, it should not creep in a vertical plane.

### Installing Reapor on concrete walls/ceilings with Fixseal MSP15

Refer Information Page 'Fixseal MSP15 - 526IP' for greater detail on substrate preparation, adhesive application and curing times.

The adhesive is available in a cartridge or sausage, with a special plastic nozzle to provide the correct bead size. The adhesive cures using moisture present in the air and should be applied in temperatures +5°C to +35°C.

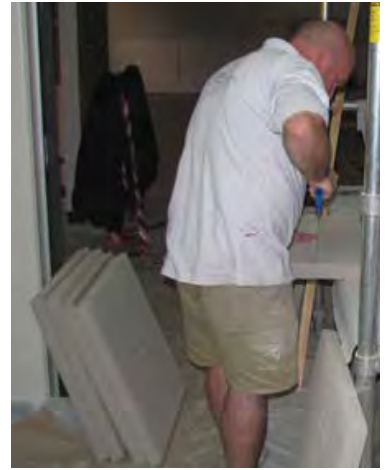
#### **Method:**

As shown in pictures below (ceiling installation), apply approx. 9 X 30 gms. of adhesive on the back of a 625mm x 625 mm tile. Apply the tile to the substrate with firm pressure. Use gentle side to side motion to flatten the beads of glue, giving good contact with the substrate. Hold in place for 30 - 60 seconds. A prop in some circumstances can be used to hold the tile in place when installing the tiles in an overhead application.



## ROUTING AND REBATING

Reapor tiles can be easily routed, rebated or hand sawn to any shape or to make grooves in tiles, using traditional wood saw. Reapor can be routed or sawn with normal woodworking equipment.



Reapor routed to allow cable access



Hole penetration to allow cable and pipe access.



## EXPANSION JOINTS

When installing Reapor, you should always allow for expansion within the substrate. It is recommended that a minimum of 1.5mm expansion gap be allowed around each tile, to prevent the tile from cracking during any unexpected movement within the structure such as vibrations, earth works, heat induced expansion or substrate swelling.

## PAINTING INSTALLED REAPOR TILES

Reapor tiles can be spray painted using an airless spray system.

When using PCI Nanolight to install tiles, allow minimum of 5 days prior to painting. When using Fixseal MSP15, allow minimum 24 hours prior to painting. Reapor tiles can also be painted prior to installation.

**Recommended Paints:** Any water based paint can be used. Light colours like 'white' or 'beige' may require more paint consumption than darker colours to achieve full colour.

**Coverage:** Use up to 150ml/m<sup>2</sup> diluted paint without influencing its acoustic performance.

**Note:** Applying more paint to the surface of Reapor can inhibit the acoustic performance.



Reapor tiles painted for an aesthetic look

## RENDERING OF INSTALLED REAPOR TILES

**Recommended render:** 'CapaCoustic Fine Render 0.7' for the base coat and 'CapaCoustic Fine render 0.7 or CapaCoustic Fine Render 0.3' , for a finer finish - Refer Information Page '524IP' for instructions on **mixing** and **preparation** of render, coverage and drying times.

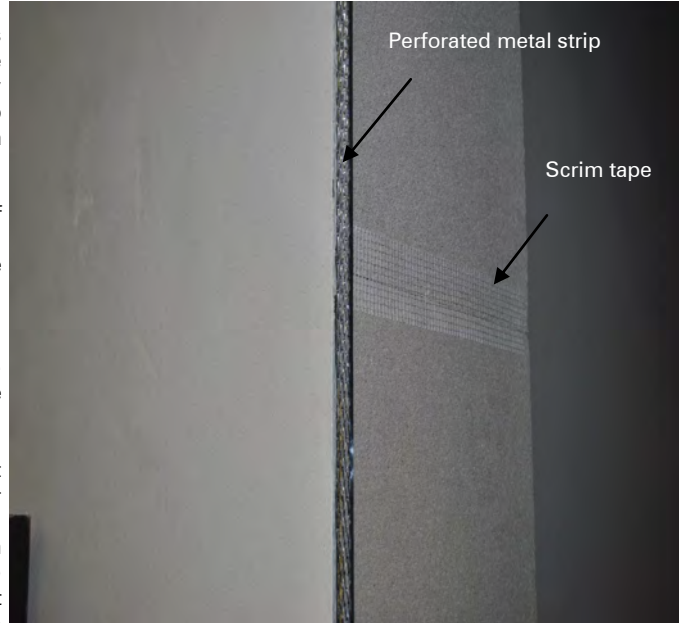
1.Preparing the Surface: Remove any paint, laitance, plaster or any other loose material that may prevent good adhesion with a steel brush. Remove any brittle mortar in the joints of brick or block walls.

2. Secure the outside corners of walls, with galvanised perforated metal edging strips. Fitting corner strips provides reinforcement besides giving a sharp, crisp edge. The corner strip should span the entire length of the outside corner. To fix the corner strips, apply manufacturer's recommended adhesive along the length of the strip and fit it over the raw edge of the tiles. Manoeuvre it until you have a nice, tight 90-degree angle on the corner.

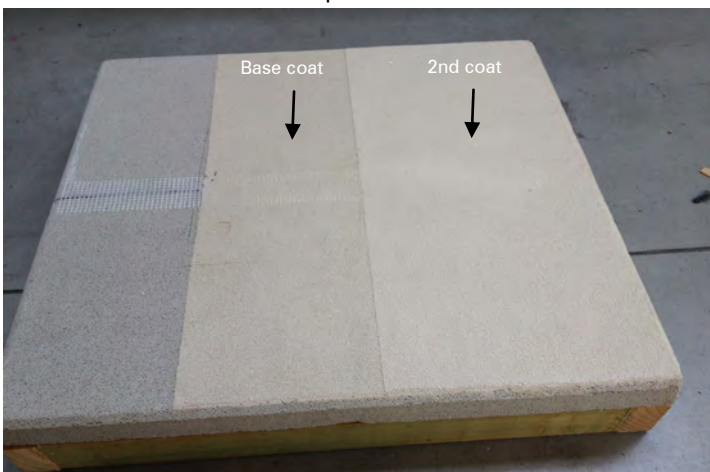
3. Cover the joints between tiles on the outside corner, with scrim self adhesive tape. Bed in the tape centrally over the joints, covering and reinforcing the joints between the tiles. Using scrim tapes allows for safe absorption of any substrate movement and can be used where strength is not critical. (See image on right)

4.Prepare the render as per instructions given on Information page 'CapaCoustic 524IP'. Apply 'CapaCoustic Fine Render 0.7' for the base coat. Using a steel trowel, first fill in the joints and rebates. Starting from the bottom of the wall, work the render into the joints to provide a reasonably flat surface, making it easier to apply the finer subsequent coat. Hold the trowel at a slight inclined angle and apply the render using long, even spread in an upward pushing motion. Depending on the size of area to be rendered, it may be easier to put some material on the plasterer's hawk and then use the trowel to push the material onto the wall rather than loading up the trowel. Aim at achieving a consistent and even thickness, filling any holes or recesses with the render as the material is applied. Smooth the surface with a wooden trowel. Do not overwork the surface as very fine material will be brought to the surface increasing the chance of fine cracks.

5.Allow sufficient time for the material to set in, and then apply the second coat with 'CapaCoustic Fine render 0.7 or CapaCoustic Fine Render 0.3'. Finish the surface to the desired texture with a wooden trowel or polystyrene float after allowing the final coat of render to become firm.



Two coats of Render on Reapor tiles



Reapor tiles rendered for an even jointless look.

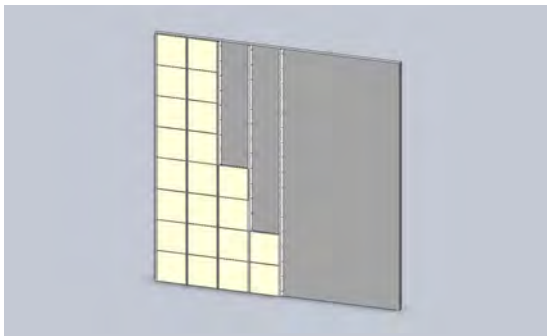
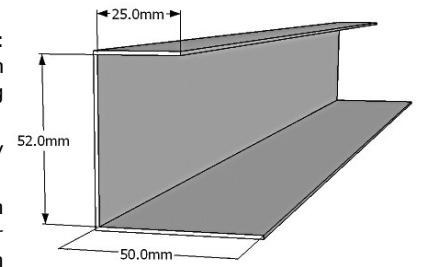


(For detailed information and assistance on installations not covered in this document, consult your local Pyrotek representative.)

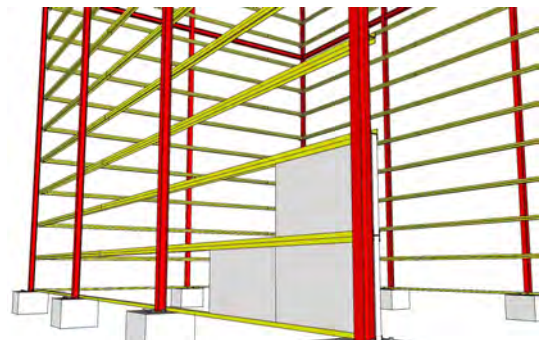
## 2. MECHANICAL FIXING

### Installing Reapor using J-Channel

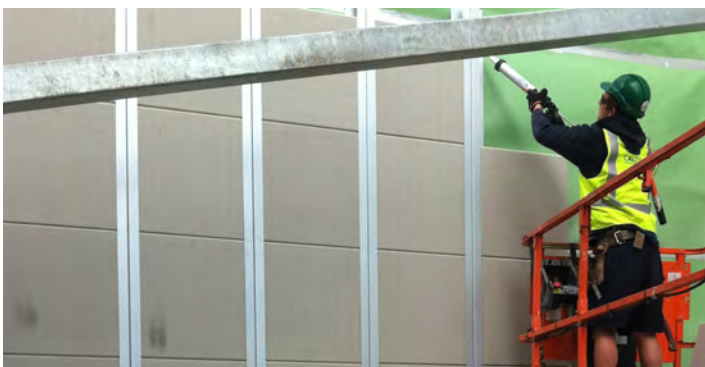
- Depending on the application requirement, standard **Reapor** tiles of 50mm thickness can be mechanically fixed to vertical surfaces using J-Channels. These channels can be used as a track system to hold the tiles in place.
- Use J-Channels fabricated from 1.2mm galvanized steel.
- Recommended dimensions of J-Channel for installing **Reapor** tiles of 50mm thickness: **Short leg** :25mm length ; **Long leg** : 50mm length; **Flange depth** : 52mm (allowing 2mm room to allow the thickness of **Reapor** tile to slide easily without damaging the tile during installation)
- Mount the J-channels on the substrate using the appropriate fastening method i.e. masonry anchors for concrete structure and screws for timber structures.
- Set out J-Channels vertically with the long leg backing the substrate. Distance between channels to be 650mm internal. Length of long leg of 50mm, will allow easy fixing of anchor holes and installation of the masonry anchors. Refer to manufacturer's specification when determining the amount of fasteners required
- Holes for the masonry anchors should be 8mm dia., at 300mm centers starting 50mm from each end.
- The channels need to be installed plum, and checked for plum for every column.
- Counter sunk masonry fixing should be used; the head of the screw should be flush with the surface of the channel to avoid damage to tiles when being installed.
- Once the J-channels are firmly mounted, apply 2 beads of **Fixseal MSP15** adhesive on long leg of the J-Channel backing the substrate and within 50mm from the edges of the channel. (See image below). Applying adhesive will hold the tiles in place and prevent them from rattling against the metal due to vibration within the structure.
- Only apply enough adhesive to install three tiles at a time. Then simply slide the **Reapor** panels between the channels and continue this process until the desired height is achieved. That is, sliding one side into the J-channel and then moving the panel across to lock into the other channel.
- Finish off by applying a top capping.
- Based on application requirement or your preferred choice of installation, the J-channel track system can be installed to build tiles either vertically or horizontally. (See images below)



Pattern showing tiles installed vertically



Framework allowing horizontal installation of tiles



Adhesive applied on J-Channel



Reapor tiles installed using J-Channels

Caveats: Specifications are subject to change without notice. The data in this document are typical of average values based on tests by independent laboratories or by the manufacturer and are indicative only. Materials must be tested under intended service conditions to determine their suitability for purpose. The conclusions drawn from acoustic test results are as interpreted by qualified independent testing authorities. Nothing here releases the purchaser/user from responsibility to determine the suitability of the product for their project needs. Always seek the opinion of your acoustic or mechanical engineer on data presented by the manufacturer. Due to the wide variety of individual projects, Pyrotek NC is not responsible for differing outcomes from using their products. Pyrotek disclaims any liability for damages or consequential loss as a result of reliance solely on the information presented. No warranty is made that the use of this information or of the products, processes or equipment to which this Information Page refers will not infringe any third party's patents or rights. DISCLAIMER: This document is covered by Pyrotek standard Disclaimer, Warranty and © Copyright clauses. See [www.pyroteknc.com/disclaimer](http://www.pyroteknc.com/disclaimer).

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