

REAPOR®

This installation guide provides recommendations to maximise the service life of Reapor® applications.

KEY INSTALLATION REQUIREMENTS

To maximise the service life, acoustic performance and aesthetics in outdoor applications, Pyrotek recommends that Reapor® panels should be installed using Pyrotek CB Adhesive in accordance with AS 3958.1 to structurally sound masonry substrates (concrete, block walls, brick walls or compressed fibre cement board). AS 3958.1 requires 90% adhesive coverage for outdoor applications. This coverage can usually be achieved by applying adhesive using a 6 mm (0.2 in) notched trowel to back-butter the acoustic panels and a 10 mm (0.4 in) notched trowel for the substrate.

A thicker adhesive layer may be required depending upon the roughness of the substrate surface. Alternatively, a render or grinding of the surface should be considered in order to prepare rough surfaces.

DESIGN DETAIL

- Panels should be installed on dry walls and ceilings. Panels are not recommended for installation on retaining walls or below damp courses.
- To prevent rainwater migration to the rear of the panels, the panels should be installed with either Flashing/capping installed over the top panels/wall (eg. COLORBOND® steel) or recessing the panels into the pre-cast concrete walls. The recommended recess is 70 to 80 mm (2.8 to 3.1 in) to cater for the panel, adhesive layer and ~25 mm (1 in) soffit/drip edge above the top acoustic panel
- The bottom panels should be installed with a free drip edge to enable panels to drain freely and avoid wicking water up from pavements etc.
- In outdoor applications, Reapor® panels are quickly and easily installed to horizontal and vertical surfaces using Pyrotek CB Adhesive



WORKING WITH PYROTEK® CB ADHESIVE

Pyrotek® CB Adhesive is a cementitious-based, flexible polymer adhesive, with excellent working characteristics.

A light spray of water can be applied to porous substrates such as concrete to prevent Pyrotek® CB Adhesive from curing too quickly at ambient temperatures of 23 °C (73 °F) and above.

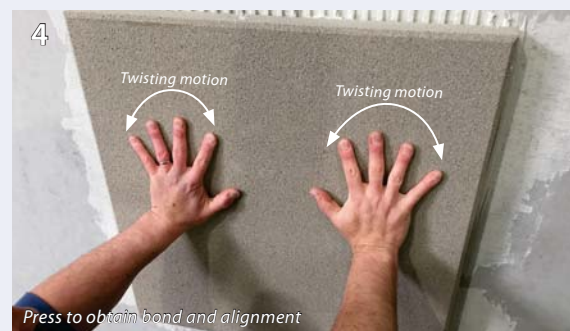
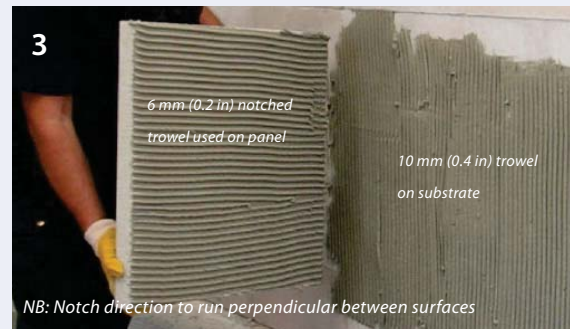
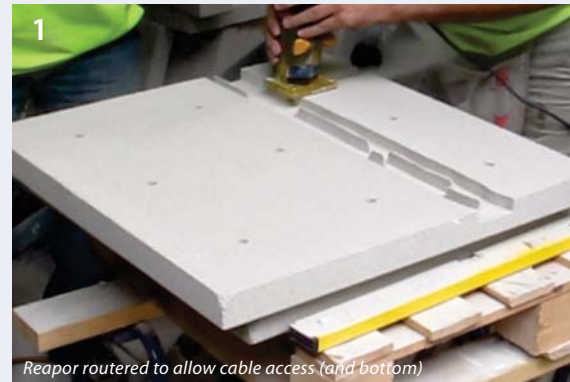
applications

- Interior walls and ceilings of offices, retail space, hospitals, schools and aged care facilities
- Walls of railway and motorway tunnels, vent shafts and exits
- Applications requiring high fire ratings
- Airports, stations, and carparks
- Machinery or industrial enclosures
- HVAC, plant rooms, and substations
- Exit ways, smoking areas, stairwells and drive-through areas
- Road barriers, exterior plant fences and sound barriers

Ensure proper installation and professional finishing in outdoor commercial applications. Reapor® should always be bonded to surfaces that are relatively flat, clean, dry and free of contaminants.

INSTALLATION

- Pyrotek® CB adhesive must be mixed following the recommendations on the adhesive packaging
- All substrates must be clean and free from laitance, curing compounds, dirt, dust, grease, oil and any other contaminants that may inhibit bond
- All substrates should be washed with clean water before the application of the adhesive
- Care must be taken in the preparation of concrete tilt panels to ensure all traces of release agents and curing compounds are removed
- If in doubt, prepare the substrate using a pressure washer to expose the fine aggregates in the matrix of the concrete as this ensures a clean substrate
- Painted surfaces must be roughed or mechanically abraded, with flaking paint removed
- Painted surfaces which are not suitable for ceramic tiling must be removed
- Consideration should be given to the transfer of load on vertical installation - panels must not bridge expansion joints
- For vertical surfaces, a straight edge support is recommended to support the bottom row of panels until the adhesive cures
- 90% adhesive coverage can be achieved using a 10 mm (0.4 in) notched trowel for the substrate and 6 mm (0.2 in) notched trowel to back-butter the acoustic panels
- A thicker adhesive layer may be required depending upon the roughness of the substrate surface
- Recommended panel spacing is 2 mm (0.08 in) apart using tile spacers
- When installing, adequate pressure with a slight twisting motion is required to ensure full contact with all adhesive
- No notches of adhesive shall remain, and no voids are to occur under the tile (see image 5)
- If a flat or flush finish is required, flip the panels over and adhere the side with the chamfered edge to the substrate
- If adhesive does fall on the front surface of Reapor®, it should be allowed to dry and then removed by sanding
- Access is to be restricted to areas under tiles which have just been installed overhead until tile adhesive is fully cured



DETAILING

Cutting, Routing and Rebating

- Reapor® panels can be easily processed, routed, rebated or hand sawn to any shape such as creating grooves and channels
- A circular saw fitted with a continuous rim diamond tipped masonry blade can be used for cutting in large projects
- Consideration should always be made for proper dust control and ensure suitable PPE is equipped before work

(Please refer to the Reapor® SDS for further information)

Treatment of Perforations

- Adequate flashing should be incorporated to discourage and deflect water away when Reapor® panels are drilled for cabling and pipe access

GENERAL MAINTENANCE

Weathering

Reapor® is a porous stone-like material with a consistent colour and texture through the tile. Reapor® will weather and age naturally in the elements in a similar way to soft natural stones.

In outdoor applications, Reapor® may show signs of efflorescence, a temporary condition which can be removed by brushing or rinsing with a hose. In most cases, over time rainwater steadily removes the deposit leaving the original colour of the panel unharmed.

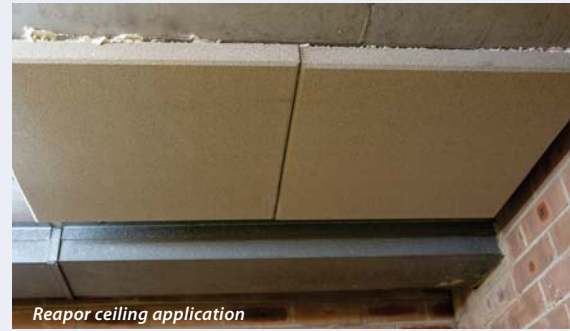
Ensure adequate drainage is present so that efflorescence deposits do not occur as a result of pooled runoff water.

Efflorescence does not affect the quality, acoustic performance or functionality of Reapor®.

Care, Repair and Maintenance

- Replace any cracked or broken panels
- Clean any debris to maintain the free drip edge and ensure the damp course is not breached
- Regularly inspect flashing to ensure it remains functional
- Clean off any efflorescence by first dry brushing off build up of deposits with brush or tools. The surface can also be sanded to remove surface stains or other marks (you can use a piece of Reapor® as a sanding block - ie Reapor on Reapor)
- If further staining is visible, consider hosing down, or using mild soapy water to rinse. Efflorescence remover is recommended only for very stubborn areas

Please contact Pyrotek® for further information or detailed advice on your specific application.



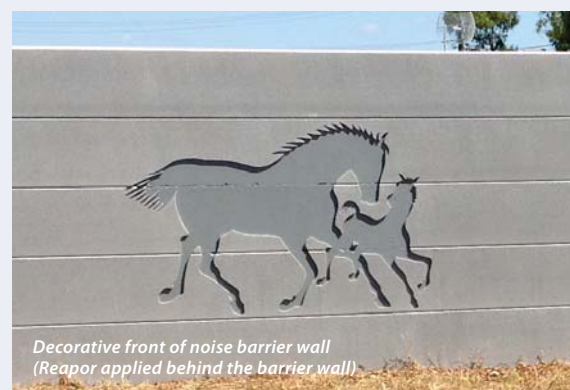
Reapor ceiling application



Regularly inspect flashing for functionality



Reapor being installed on a rail noise barrier



Decorative front of noise barrier wall (Reapor applied behind the barrier wall)