# Reapor®

Sound absorber for harsh environments





**Reapor**<sup>®</sup>

Sound Absorber for Harsh Environments



Product	Dimensions (mm)	Weight (kg)
Reapor® 25/625625	25 x 625 x 625	≈ 2.6
Reapor® 25/1200625	25 x 1200 x 625	≈ 5.1
Reapor® 50/625625	50 x 625 x 625	≈ 5.3
Reapor® 50/1200625	50 x 1200 x 625	≈ 10.5
Reapor® 63/625625	62 x 625 x 625	≈ 6.6

# **Reapor® Acoustic Performance**

# Description

Reapor<sup>®</sup> is an eco-friendly sound absorber for challenging environments.

The panels are hard, lightweight and fibre-free and can be used both indoors and outdoors. The unique material absorbs noise both between and within the glass granules, resulting in exceptionally high noise reduction.

Reapor<sup>®</sup> is naturally resistant to both moisture and sunlight and requires no extra protection. If exposed to damp conditions, a sodium residue may appear on the surface, which can easily be washed off.

# Charcteristics

Reapor<sup>®</sup> does not contain binders; there are no VOCs to be released and no break down over time. No smoke or volatiles are released when exposed to fire or flames. With no organic substances for bacteria to live on, Reapor<sup>®</sup> does not support mould growth. Reapor<sup>®</sup> resists weather, water, UV exposure and is resistant to chlorides and potassium.

# **Applications**

Reapor can be used as sound absorber in numerous demanding applications such as tunnels, noise barriers, industries, ceilings, enclosures, garages, fire safety areas etc.

## Installation

Reapor<sup>®</sup> panels can be cut and drilled using standard woodworking tools enabling easy installation.

Reapor panels are bonded into place using a special adhesive that maintains the panels' non-combustible characteristics.

The adhesive provides a permanent bond between Reapor panels and a variety of common substrates.



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Apply adhesive around the edges of the tile only



Apply adhesive to the side of the tile only (625 x 208 panels)



Apply adhesive to the side of the tile only (625 x 208 panels)



RB Centre Bracket with adhesive applied

## Intallation with adhesive & mechanical fixing

## **Concealed fixing**

- Approved Pyrotek adhesive (Fixseal MS15, Fix8, Pyrogrip PU) should be used to fix RB brackets (see RB bracket drawings below) and Reapor panels to rigid substrates, such as concrete, pre-fabricated walls, block work, timber, reinforced fibre cement boards or sheet metal.
- When applying to solid surfaces (cementitious products) a Ramset / Hilti or equivalent gun with 25 mm stainless steel drive pins / nails can be used to fix RB Brackets only.
- 3. All substrates must be clean and free from laitance, curing compounds, dirt, dust, grease, oil and any other contaminants that may inhibit bond.
- 4. All substrates should be washed with clean water and throughly dry before the application of the adhesive.
- 5. 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.
- 6. Consideration should be given to the transfer of load on horizontal installation panels must not bridge expansion joints
- 7. Use a straight edge support to ensure a level plane is set for the RB Base Brackets.
- Apply 3 grams of adhesive to each RB Base Bracket and secure in place allowing the straight edge to support brackets during curing process. Allow adhesive to cure for 2-3 hours before proceeding with Reapor installation. Alternatively secure each bracket with 25 mm stainless steel drive pins / nails (cementitious substrates only)
- Two RB Base Brackets are required for each Reapor panel. Each bracket should be a minimum of 90 mm from each panel edge allowing for minimum 325 mm centre space between the brackets of each panel.
- 10. Apply 3 grams of adhesive to upward facing base of fixed bracket before placement of Reapor panel this will ensure better adhesion.
- For 625 x 625 panels apply adhesive to outter edge of panel (6 x 9 grams per blob) - ensure glue is approx 100 mm from the edges (see image 1). For 625 x 208 panels apply adhesive to outter side of panel (2 x 8 grams per blob) - ensure glue is approx 100 mm from the edges (see image 2).
- 12. Slightly angle tile to substrate with lower back edge resting on RB Base Bracket (see image 3). Secure in place pushing firmly against substrate.
- Apply 3 grams of adhesive to back and base of RB Spacer bracket, Center bracket or Top bracket and secure to top edge of panels (two brackets for each panel) - ensure adhesive is applied between bracket and panel (see image 4).
- 14. 14. Secure bracket in place by pressing into Reapor panel and gently hammering in place with small rubber mallet.
- 15. Each Reapor tile should be pierced with a total of four spikes two along the lower edge and two along the upper edge.
- 16. Stains or debris on the surface of Reapor® can be removed by lightly sanding.
- 17. Refer to Mechanically Fixing drawing for flat surfaces (below) for installation instructions using RB Brackets.

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# RB BRACKET DRAWINGS (brackets made from 316 stainless steel)

# Mechanical fixing using RB Centre Brackets



# Mechanical fixing using RB Spacer Brackets

(Example of installation for tunnels and curved surfaces)



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KEY		
0	ADHESIVE	
ل	RB SPACER BRACKET	
Δ	RB BASE BRACKET	
V	RB TOP BRACKET	
Δ	RB CENTRE BRACKET	

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2. RB Spacer Bracket





3. RB Centre Bracket

Reapor Brackets are supplied in stainless steel. Minimum order quantities apply

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Drill into the centre of the Reapor panel



Gently insert pin

## Unconcealed fixing

This method is recommended for high wind load and elevated areas. For unconcealed mechanical fixing - stainless steel or plastic pins (UV resistant) can be used.

- 1. Follow mechanical fixing steps as above for recommended adhesive and Reapor installation guide.
- Once panel has been applied to substrate, drill through the centre of the panel and approx 30 mm into the substrate using an 8 mm drill bitRefer to Mechanically Fixing drawing for flat surfaces (below) for installation instructions using RB Brackets.
- 3. Insert 8 mm x 80 mm pin into pre-drilled hole (see image 2).
- 4. Use a hammer to gently tap the pin into the substrate (see image 3)
- 5. Ensure the pin is flush with Reapor surface (see image 4)
- 6. It is recommended to paint pin heads after installation to prevent corrosion and UV oxidation caused by the elements.

This installation section is for general advice only.

If you feel your application is unique please contact Vibratec for more information



Gently hammer the pin in place



Completed overhead istallation



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Reapor resists weather, water and UV exposure



Tunnel application - Reapor installed on the wall



Regularly inspect flashing for functionality



Reapor can be routered to allow cable access

## 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 tiles.
- 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.

## Detailing

### **Cutting, Routing and Rebating**

Reapor® tiles can be easily processed, routered, 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.

#### **Treatment of Perforations**

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

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