noise >

reapor - the sound absorber
for challenging environments

Pyrotek
noise control

reapor

www.pyroteknc.com

> acoustic absorber > non-combustible > VOC* free
> recycled > recyclable > weather, moisture resistant

reapor

> introduction

Reapor has been developed to maximise noise energy absorption. Reapor resolves issues of fire, weather aging and contamination damage. Easily maintained, constructed from recycled material, VOC* free, Reapor panels are easily fixed and worked.

> applications

- Outdoor weather affected areas
- High fire safety areas
- Tunnels, vent shafts and exits
- Machinery enclosures
- Schools, hospital, aged care
- Wet areas, car washes,
- Plant rooms, substations
- Pools, spas,
- Rail tunnels, transport depots
- Interior, plain, painted, rendered
- Exit ways, smoking areas, stairwells
- Airports, stations, parking exits
- Road barriers, exterior plant fences,
- Swimming pools

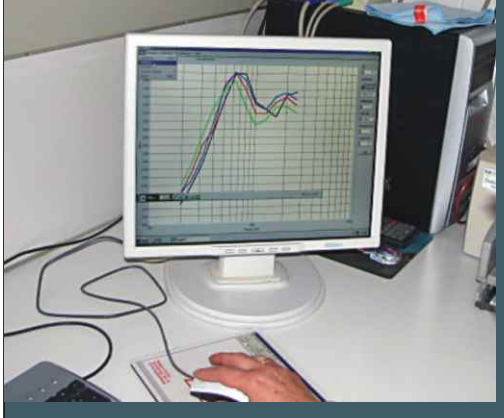
> features

Reapor provides a useful tool in the control of unwanted noise in a range of applications. Ideal for all indoor and outdoor environments

- High sound absorption
- Non-combustible
- Fibre free
- Rigid and durable
- Not affected by water
- 100% recyclable
- Easily worked
- Lightweight
- Quick and simple to install
- Non toxic, VOC free
- Simply maintained and cleaned
- Paintable
- Simple to repair
- Safe to use

> quality

Reapor's quality is monitored during manufacture to ensure consistent acoustic results while maintaining its other performance parameters.



reapor

High noise reduction, completely fire safe, VOC* free, weather, moisture and chemical resistant

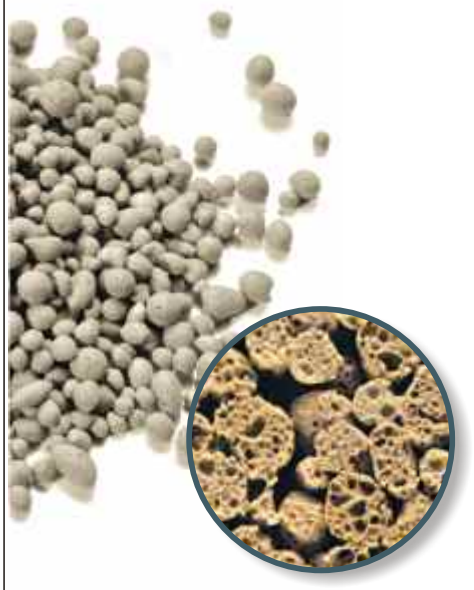
*Volatile Organic Compounds

> fire safety

Worldwide building codes have tightened as the understanding of the risk of fires to human life in buildings has grown. The addition of fire retarders, while reducing time to full ignition, often did not reduce the smoke, creating an early hazard in a fire. Critical areas and certain types of buildings have seen a change in legislation to only accept products with the highest level of fire resistance. The toughest of these legislations and the tests that go with them require the product to be virtually non-combustible. Reapor has achieved a non-combustible result making it safe and legal to use in all building areas and applications, bringing a fire safe way to control unwanted noise.

> non combustible

Tested to conform to DIN 4102 Part 1 Class A1



> product construction
> VOC* free no out-gassing, clean indoor air

Reapor, by nature, is environmentally friendly using recycled glass as its core component. During manufacturing the glass is processed to form an expanded glass granule. Each glass granule acts as an acoustic absorber in its own right. Through a heating process the granules are fused together to form a homogenous panel. This then creates a panel where the granules and the sum of the whole panel work together to create a highly efficient acoustic absorber. This process removes the need for binders leaving the product free from out-gassing any VOC's, developing smoke in a fire or breakdown through binder failure.

*Volatile Organic Compounds

> recycled
> recyclable

Products that are sensitive to the environment are important if we are to sustain our way of life and most certainly recycling must play an important part in our future. Reapor uses glass in its construction provided from a well established recycling method of the collection of glass bottles. The resulting Reapor panel is manufactured without a binder, which allows the Reapor panel to be recycled at the end of its application life, without any treatment.

> weather
> moisture
> contamination

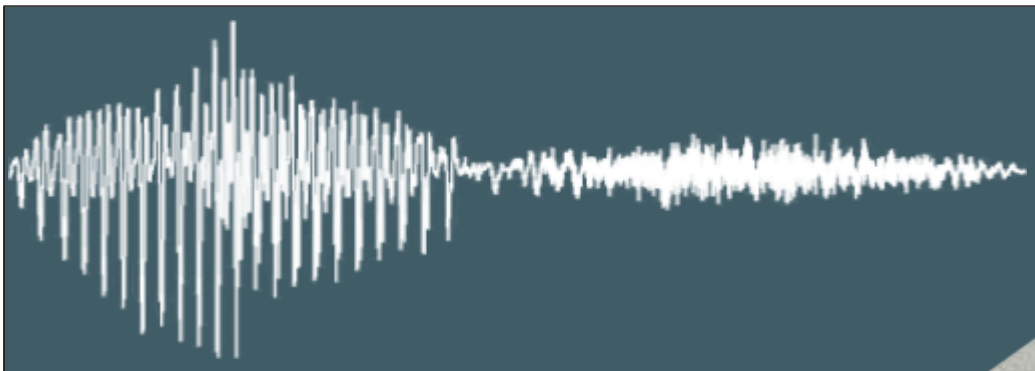
Noise control in outdoor areas or areas where products are affected by moisture or contamination have required elaborate methods of protection often reducing the acoustic performance of the noise control materials. Reapor being made of expanded glass beads fused together without binders gives the product natural resistance to environmental contamination, unaffected by water, sunlight, or other potential contaminants.

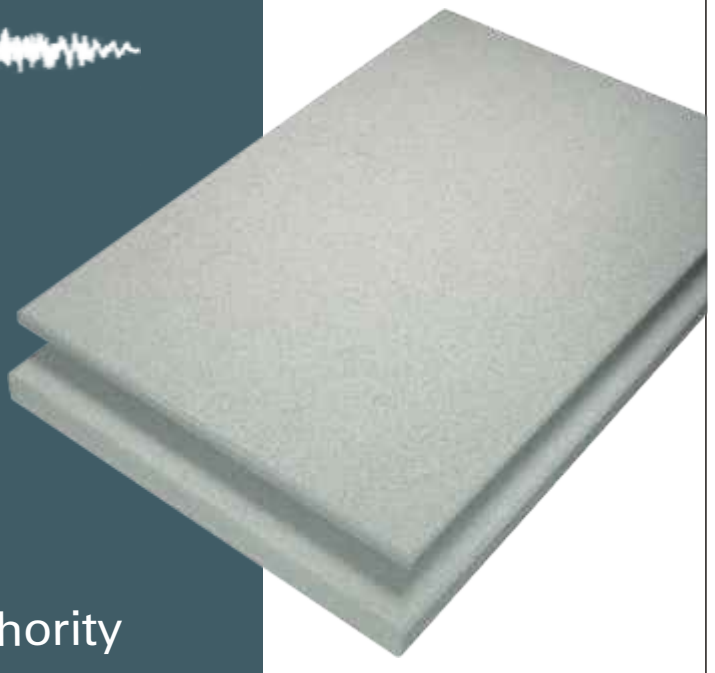
Reapor installed correctly will last indefinitely, if exposed to damp conditions a sodium residue may appear on the surface this will not affect the product performance and can be simply washed off.

> fixing
> working
> finishing

Reapor panels may be bonded using adhesive or mechanically fixed depending on the application and substrate. To maintain the non-combustible nature of a complete fitted panel system, a specialist adhesive has been developed that also has a non-combustible rating, yet is easy to use and provides a permanent bond to a range of substrates. The panels can be machined and processed using standard wood working equipment and standard dust protection: the only requirement to ensure a safe workplace and environment. Reapor panels can be easily painted with non-bridging paint, rendered for a seamless finish or routed to provide varying texture and shadowing effects.

Pyrotek noise control





reapor

> acoustic

Reapor, when tested independently to ISO standard, displays exceptional acoustic performance for its thickness. Reapor benefits from its construction with each part acting as a noise energy absorber. The high absorption properties (NRC 0.90 50mm), when combined with the product's other features, now means noise control can be introduced to areas previously difficult to treat due to limitations of fire, environmental factors or work safety (fibre free).

> tested

Reapor has been tested to
DIN EN ISO 354: 2003
Full report available on request.

>testing authority

Fraunhofer Institut Bauphysik

> product description

REAPOR, panel 50mm x 625mm x 625mm

> properties

Property	Reapor α	Test Method
Density	270 kg/m³ (±10%)	DIN 51065
Compressive Strength	1,2 N/mm² (±10%)	DIN 1164
Flexural Strength	0,5 N/mm² (±10%)	DIN 1164
Freeze-thaw Resistance	0,25 Loss in M%	DIN 12091
Elastic Modulus (Static)	760 ± 80 N/mm²	DIN 1048-5
Elastic Modulus (Dynamic)	1.020 ± 50 N/mm²	DIN 1048-5
Water Vapour Diffusion Resistance	25	DIN 52615
Thermal Conductivity	0,08 W/mK	DIN 52612
Fire Resistance	Non-Combustible	DIN 4102 A1
Length-Specific Flow Resistivity	10-20 (kPa s)/m⁴	DIN EN 29053

> sound absorption

Full tests reports are available on request

	NRC
Reapor panel thickness (50 mm), DIN EN ISO 354:2003	0.90

> reapor finishes

There are several ways Reapor can be finished. Painted, graffiti protected, or with a render finish. The test results below shows the effect on acoustic performance.

	NRC
Thickness (50 mm), adhered and painted or graffiti treated	0.90
Thickness (50 mm), adhered and rendered	0.70

> edge detail

Chamfered edge for tile finish or square edge for render finish

NOTES: Specifications are subject to change without notice. The data listed in this document is typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose. The conclusions drawn from acoustic test results are as interpreted in writing by qualified independent testing authorities or suitably qualified engineers where possible. Even so, always seek the opinion of your own engineer as to the meaning of any data presented by the manufacturer as it is applied to any given project or use.

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