



TVS ABSorb Range



TVS ACOUSTICS
NOISE & VIBRATION CONTROL



TVS ACOUSTICS

NOISE & VIBRATION CONTROL

TVS Acoustics specialises in highly effective noise and vibration solutions. Its ABSorb range of acoustic products are in use across a wide range of sectors solving issues in sports halls, swimming pools and gymnasiums, classrooms and libraries, cinemas and recording studios, offices and community centres.

Working with architects, consultants and contractors, TVS Acoustics can offer a comprehensive service, everything from assistance with planning, technical advice and product choice, to supply and final installation. Some TVS ABSorb products can even be self-installed.

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SUMMARY

The TVS ABSorb Range has solutions for a variety of applications to make your project unique.

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TVS ABSorb Panel



TVS ABSorb Panels provide an aesthetically pleasing solution to control reverberation time and increase the acoustic absorption of any space. Widely used in classrooms, recording studios, offices, cinemas, reception areas and atriums, these panels can provide up to Class A absorption either as a complete wall covering or as a number of individually manufactured panels.

TVS ABSorb Panels feature a highly absorbent glass fibre core wrapped in an aesthetically pleasing, acoustically transparent fabric. The edges are reinforced to provide a perfect square edge.

Class A acoustic absorption rating can be achieved with our 50mm or 40mm panel as standard.



Physical Information

Panel Size	Bespoke Design. Max panel size – 2700mm x 1200mm
Colours	Choice of 80 colours available – Cara & Lucia ranges
Fire Resistance	TVS ABSorb Panel core has been tested and offers Class 0 fire rating to BS476: Part 6 and the fabric facing complies with class 1 to BS476: Part 7 and also complies with BS EN 1021-1 cigarette (Class 0 fabrics can be supplied on request)
Weight	Our TVS ABSorb Panels weigh in at 3.0kg/m ² for the 50mm thickness panel and 2.4kg/m ² for the 40mm thickness panel <i>Note: All weights are given as approximations</i>

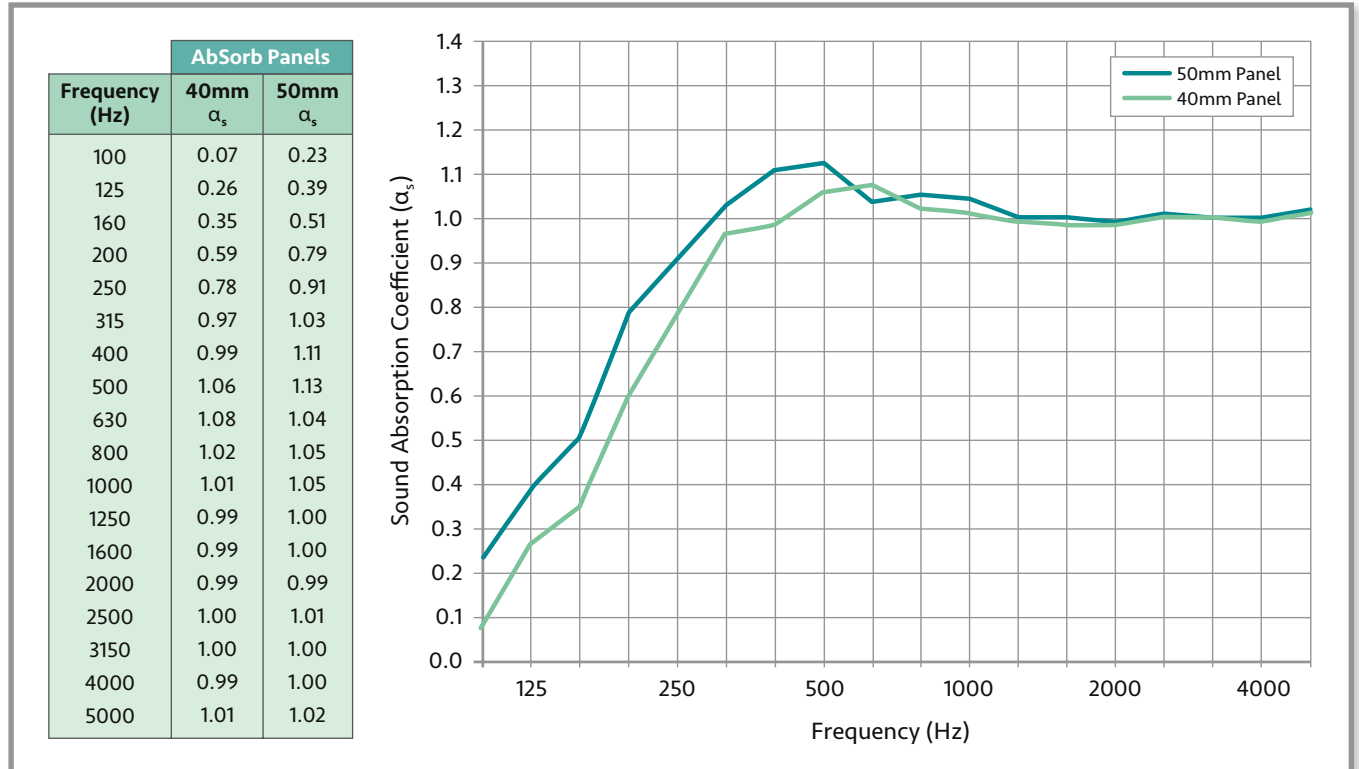
Benefits

- ▶ Class A absorption achieved in 50mm & 40mm thicknesses
- ▶ Manufactured to size and shape required
- ▶ Durable and easy to clean
- ▶ Aesthetically pleasing design
- ▶ Complete range of fixing solutions to suit project
- ▶ 80 fabric face finishes available
- ▶ TVS impaling clip and adhesive provide a quick and easy install

TVS ABSorb Panel

Acoustic Performance

ACOUSTIC PERFORMANCE BS EN ISO 354:2003



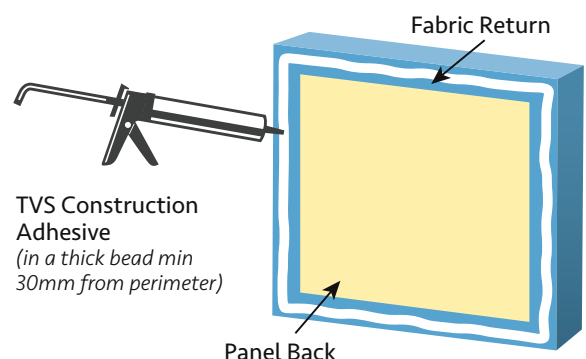
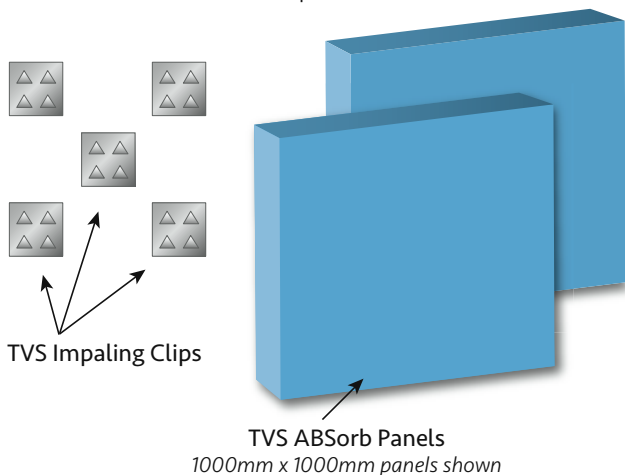
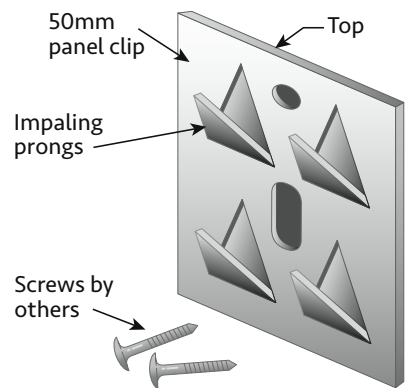
Installation & Maintenance

A wide variety of installation methods are available depending upon the project requirements. For more information contact the TVS Technical Team who will also be able to advise on the correct maintenance procedure.

TVS ABSorb Impaling Clip Install

TVS ABSorb Panel bespoke impaling clip install allows for a secure installation of the acoustic wall panels. The panel is simply bonded to the wall by using impaling clips and adhesive.

This method can only be used to achieve Class A if you choose our TVS ABSorb 50mm or 40mm panel.



Adhesive to be applied to fabric return only

TVS ABSorb Cubes



TVS ABSorb Cubes are excellent acoustic absorbers, providing a unique and attractive solution to reduce the reverberation time. Perfect for use within areas with limited available wall space and particularly useful within large, high ceilinged rooms such as a gymnasium, swimming pools and event centres. These lightweight cubes offer excellent broadband sound absorption and can be easily installed between existing services. They are available in a variety of colours and patterns and can brighten and add interest to any space.

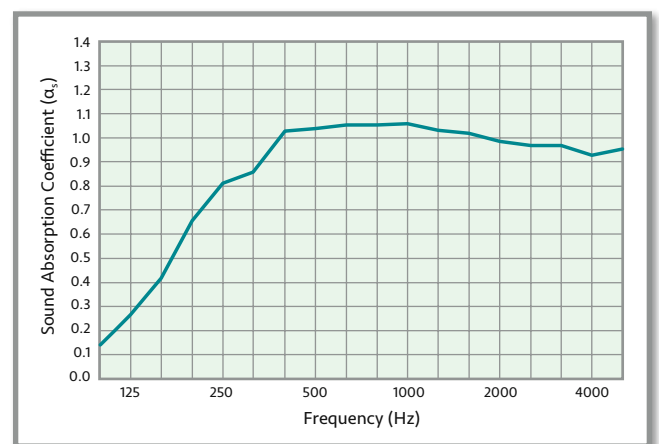
TVS ABSorb Cubes are created from Class 0 foam covered in a zipped, removable fabric cover. Available as a 400mm cube, they are easily suspended from the ceiling. With a variety of colours available and the ability to suspend the cubes at different heights, an infinite number of patterns and visual appearances are possible.

Physical Information

Standard Cube Size	400mm x 400mm x 400mm <i>(other sizes available on request)</i>
Colours	White, Blue, Green, Red, Orange, Golden Yellow <i>(other colours available on request)</i>

Benefits

- ▶ Excellent broadband sound absorption
- ▶ Perfect for sports halls, exhibition spaces, lecture theatres, factories, etc
- ▶ Fibre free
- ▶ Durable and impact resistant
- ▶ Lightweight
- ▶ Easily installed between existing services



Acoustical Performance

Sound absorption values (% absorption per cube)

Frequency (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
400mm Cubes (α _c)	0.14	0.27	0.42	0.66	0.81	0.86	1.03	1.04	1.06	1.06	1.07	1.03	1.02	0.99	0.97	0.97	0.93	0.95

TVS ABSorb Sport



An impact resistant Class A acoustic absorber for use in sports halls, five-a-side pitches, gyms and event centres.

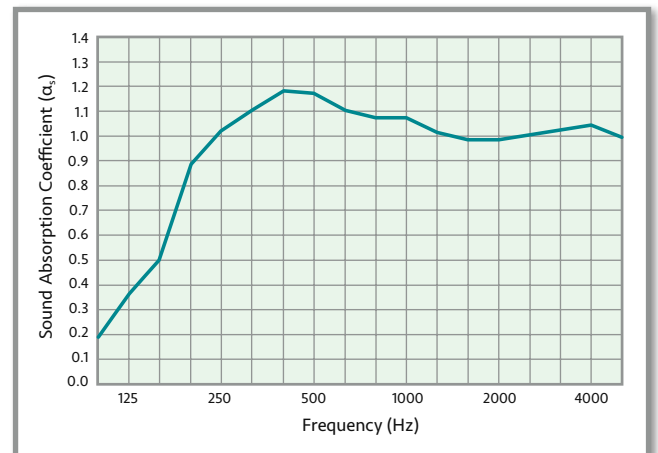
TVS ABSorb Sport Panels have undergone extensive impact testing to ensure their suitability for use within sports halls. As one of the only acoustic panels to be impact resistant to DIN 18032-3, their versatility allows them to be installed at low levels in areas where traditional acoustic panels would be susceptible to knocks and damage. Available in a variety of colours that can brighten and add interest to any space.

Benefits

- ▶ Impact resistant to DIN 18032-3
- ▶ Class A absorber
- ▶ Can be installed at low levels on walls
- ▶ Manufactured to size and shape required
- ▶ Quick and easy to install
- ▶ Specialist mounting kit available

Physical Information

Panel Size	Bespoke Design Max panel size – 2700mm x 1200mm
Colours	Choice of 80 colours available – Cara & Lucia ranges
Ball Impact Resistance	Pass (DIN 18032-3)
Fire Resistance	TVS ABSorb Sport core has been tested and offers Class 0 fire rating to BS476: Part 6 and the fabric facing complies with Class 1 to BS476: Part 7 and also complies with BS EN 1021-1 cigarette (Class 0 fabrics can be supplied on request)
Weight	Our TVS ABSorb Sport Panels weigh in at 4.4kg/m ² <i>Note: All weights are given as approximations</i>



Acoustical Performance

Sound absorption values

Frequency (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Sport panels (α _s)	0.19	0.36	0.50	0.89	1.03	1.10	1.18	1.17	1.10	1.07	1.07	1.02	0.99	0.99	1.01	1.03	1.05	1.00

TVS ABSorb Baffle



Discover the limitless design flexibility of **TVS ABSorb Baffle**; a lightweight and semi-rigid panel that has sound absorbing properties. Designed with solid colour throughout, TVS ABSorb Baffle has the potential to be used in a large array of spatial design and interior solutions.

More than just a traditional interior acoustic panel, the **TVS ABSorb Baffle** can be employed as a base material for creative solutions where design and aesthetics are important.

TVS ABSorb Baffle is made from 100% polyester and manufactured in the UK. Containing a minimum of 65% post-consumer recycled material. TVS ABSorb Baffle is completely safe, non-toxic, non-allergenic and non-irritant.

Physical Information

Composition	100% Polyester Fibre (PET)
Panel Dimensions	1200mm x 2400mm (+5mm/-0mm) (+10mm/-0mm)
Thickness	12mm (+/- 6%) 24mm (+/- 6%)
Colours	Colour range available on request
Fire Rating	Fire rating ISO 9705: Classification: Group 1-S, AS ISO 9705 – 2003 Classification: Group 1, EN13501-1:2007+A1:2009: B - s2, d2
Weight	2400gsm (+/- 10%) 4800gsm (+/- 10%)
Density	200kg/m ³
Sound Absorption	12mm: Class D, NRC 0.45 – with 24mm air gap: Class C, NRC 0.70 24mm: Class D, NRC 0.65 – with 24mm air gap: Class C, NRC 0.80

Key Features & Benefits

- ▶ Design flexibility without the need for edging or capping; created with solid colour throughout
- ▶ Excellent acoustic performance
- ▶ Available in a wide range of colours
- ▶ Custom colour printing available
- ▶ Limitless branding and design possibilities with in-house custom cutting
- ▶ Lightweight and easy to handle
- ▶ Made from 100% polyester fibre without chemical binders and certified low VOC
- ▶ Manufactured using a minimum of 65% post-consumer recycled material
- ▶ Highly durable providing long-term stability and performance
- ▶ Safe, non-toxic, non-irritant and non-allergenic
- ▶ Manufactured under ISO 9001 and ISO 14001 accredited Quality and Environmental System

Specification

(Wall) treatment shall be **TVS ABSorb Baffle** from thermally bonded high-density polyester containing not less than 65% post-consumer recycled material as manufactured by TVS Acoustics. NBS Specification available on request.

TVS ABSorb Baffle



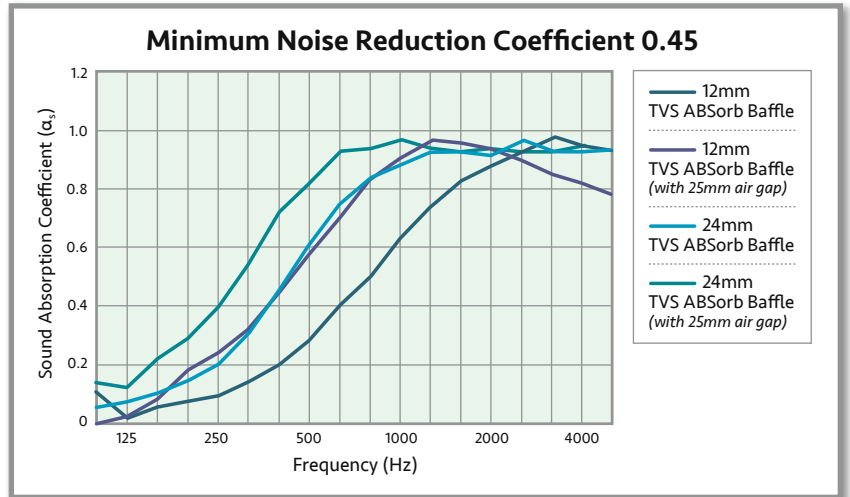
Applications

- Decorative and functional acoustic wall covering for education, retail and commercial interiors
- Media for creative solutions
- Acoustic pin-board surface for education and commercial sectors
- Modular room divider for display, privacy and sound absorption
- Acoustic Baffle ceilings



Acoustical Performance

TVS ABSorb Baffle is specifically designed to reduce and control reverberated (echo) noise in building interiors.



Sound absorption values

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
12mm TVS ABSorb Baffle (α _s)	0.05	0.10	0.30	0.65	0.90	0.95	0.45
12mm TVS ABSorb Baffle (α _s) with 25mm air gap	0.02	0.27	0.61	0.91	0.97	0.85	0.70
24mm TVS ABSorb Baffle (α _s)	0.10	0.25	0.60	0.90	0.95	0.95	0.65
24mm TVS ABSorb Baffle (α _s) with 25mm air gap	0.15	0.40	0.85	0.95	0.95	0.95	0.80

12mm TVS ABSorb Baffles at 300mm depth and placed at 100mm centres achieve Class A absorption (Class C at 300mm centres).
24mm TVS ABSorb Baffles at 300mm depth and placed at 200mm centres achieve Class A absorption (Class B at 400mm centres).

TVS ABSorb Raft



TVS ABSorb Rafts are innovative, frameless acoustic rafts which offer new opportunities for improving acoustics while bringing a whole new aesthetic to a room.

Designed with practicality in mind, these art deco-inspired rafts will give you peace of mind while adding colour, texture and a design feature to any environment.

What is TVS ABSorb Raft?

TVS ABSorb Rafts are designed to absorb sound and enable you to achieve the optimum level of acoustic comfort, prevent echo and reverberation and ensure enhanced speech intelligibility.

The rafts can be used in many types of environments such as offices, schools, hospitals, restaurants, retail and leisure.

Our **TVS ABSorb Rafts** acoustic rafts are available in a wide variety of shapes and sizes, including custom shapes. The 25mm thick panels are fabricated in a range of fabric colours giving a flawless finish. The fabric is bonded to the face and wrapped around all edges. Alternatively our rafts can be covered with your own unique high resolution images for a personal touch.

Acoustical Performance

Sound absorption coefficient – TVS ABSorb Raft 25mm Thick (with 100mm suspension)

Frequency (Hz)	125	250	500	1000	2000	4000	NRC	Sound Absorption Class
TVS ABSorb Raft (α_w)	0.35	0.85	0.95	1.00	0.95	1.00	0.95	A

Sound absorption coefficient – TVS ABSorb Raft 40mm Thick (with 100mm suspension)

Frequency (Hz)	125	250	500	1000	2000	4000	NRC	Sound Absorption Class
TVS ABSorb Raft (α_w)	0.60	0.77	0.84	0.99	1.02	1.08	0.90	A

Physical Information

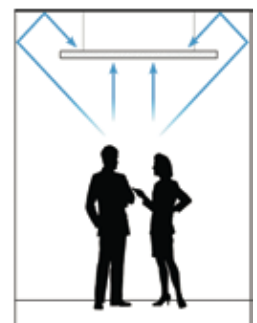
Colours	Choice of 80 colours available – Cara & Lucia ranges
Fire Resistance	TVS ABSorb Raft core board has been tested and offers Class 0 fire rating to BS476: Part 6. Fabric facing complies with Class 1 to BS476: Part 7. Class 0 fabrics can be supplied on request
Weight	Our TVS ABSorb Raft panels weigh in at 3kg/m ²
Shapes	TVS ABSorb Raft panels are available in various shapes and sizes, including custom shapes

TVS ABSorb Rafts acoustic rafts provide acoustic treatment to areas using thermal mass construction by enabling the air to flow freely in the room.

Technical & Acoustic Performance

TVS ABSorb Rafts acoustic rafts are designed to absorb sound from the front and the back surfaces which enables them to achieve the highest Class A performance in sound absorption. 40mm thick rafts are available on request.

TVS ABSorb Raft absorbs sound from the front and back surfaces. Dimensional tolerance +/- 5mm.



TVS ABSorb Raft



Installation

TVS ABSorb Rafts are quick and easy to install and don't require the skills of a specialist fitter. The acoustic rafts are simply suspended by steel cables from the soffit by means of special spiral hooks, which are fitted into the reverse of the raft by means of clockwise rotation.

Height level adjustment can be carried out by manipulating the length of each cable to suit when it is inserted into the eyelet hook. **TVS ABSorb Rafts** can be set at an angle if required to increase design and aesthetic properties.

The spiral hooks should be placed approx. 200mm in from the edge of the **TVS ABSorb Rafts**. For angled installations, we recommend the largest panels to be no more than 600mm x 600mm.

Our hanging kit includes spiral hook, 1m cable and eyelet hook.



Number of fixing kits needed

Size	No. of kits needed
Up to 1200 x 1200mm	6
1800 x 1200mm	8
Circular Rafts	4

TVS ABSORB RANGE

TVS ABSorb Photo



TVS ABSorb Photo panels are sound absorbing panels with an upholstered image applied to the face. These offer a creative, yet functional way to make your space unique. The photo is printed on to specially selected open weave fabric which allows the sound to pass through the fabric and into the sound absorbing panel.

Used in offices, restaurants, schools, community halls, etc, they make a striking feature for boardrooms or restaurants where sound issues may only be realised at a later date. The panels are easy to install with our TVS Construction Mastic and impaling clips, or as hanging rafts from the ceilings with the suspensions kits provided. The TVS ABSorb Photo can be manufactured to sizes to suit your requirements up to a maximum panel size of 2700 x 1200mm.

We provide a library of images from which you are able to choose very high definition images at www.shutterstock.com.

Choose any image from this library, provide us the reference number and we will be able to print this onto the acoustic fabric, or supply your own high resolution images. The photos consist of high resolution images which do not lose clarity when enlarged. A landscape image should be selected for a landscape panel and a portrait image for a portrait panel.

Standard Sizes: (25mm or 40mm thickness)

1200 x 600mm 1200 x 2100mm
 1200 x 900mm 1200 x 2700mm
 1200 x 1200mm
 1200 x 1800mm

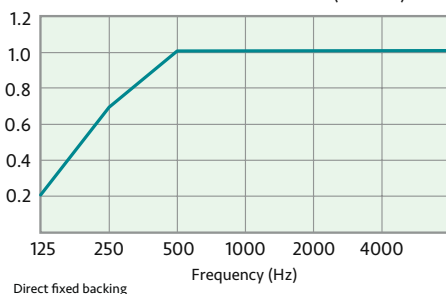
Unique printed fabric with image of your choice. Alternatively, visit www.shutterstock.com



Technical & Acoustic Performance

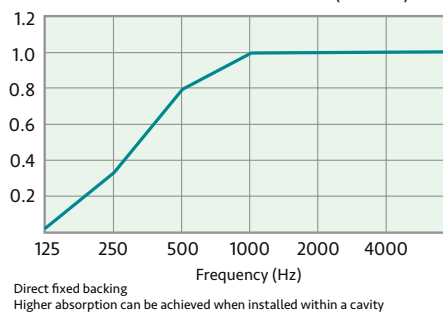
Class A – Acoustic Absorber – 40mm Thickness

Acoustic Performance BS EN ISO 354:2003
 Noise Reduction Coefficient 0.95 (i.e. 95%)



Class C – Acoustic Absorber – 25mm Thickness

Acoustic Performance BS EN ISO 354:2003
 Noise Reduction Coefficient 0.80 (i.e. 80%)



Physical Information

Fire Resistance

TVS ABSorb Photo core board has been tested and offers Class 0 fire rating to BS476: Part 6. Fabric facing meets the requirements of Class B1 for building materials according to DIN 4102, part 1 (May 1998)

Weight

TVS ABSorb Photo panels:
 3.5kg/m² – 25mm thickness panels
 4.5kg/m² – 40mm thickness panels
 Note: All weights are approximations

TVS ABSorb Shape



TVS ABSorb Shape is as much an acoustic product as it is a decorative statement to bring design and personality into any room. Its assortment of colours and unique designs make it truly versatile with endless possibilities to add texture and character where needed. Say goodbye to monotonous and transform your space with TVS ABSorb Shape.

The panels enhance any area visually and create an acoustically correct environment. The stylish and unique designs give an edge to any room and provide excellent acoustics where aesthetics are also an important factor.

What is TVS ABSorb Shape?

TVS ABSorb Shape acoustic panels help to reduce echo and reverberation as well as create a unique aesthetic feature to any wall. Various shapes and colours allow the interior designer to generate endless themes to create various configurations with a modern and contemporary appearance.

TVS ABSorb Shape acoustic panels offer unique and limitless design opportunities to any area. The panels are manufactured with rounded edges to give it a contemporary

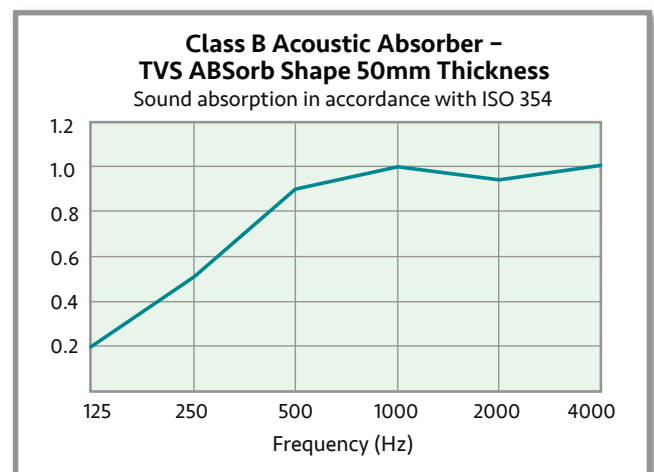
visual effect. TVS ABSorb Shape acoustic panels are extensively used in offices, restaurants, schools, reception areas, waiting rooms, etc. The various shapes can be mixed to create a feature along with combining different colours. We have assembled various themes from which you can choose, or you can select each shape to create your own design. The design can be as individual as your space.

Technical & Acoustic Performance

TVS ABSorb Shape is manufactured from polyether foam and fabricated in a range of fabric colours. The polyether acoustic foam is clad onto a backing board and then covered with fabrics from our standard fabric range.

The panels are upholstered with a felted, milled finish with a colour palette consisting of melange mixes and plain shades, as well as subtle pastels.

Physical Information	
Colours	Choice of 80 colours available – Cara & Lucia ranges
Fire Resistance	Fabrics are Class 1 rating to BS476 Part 7. TVS ABSorb Shape polyether foam offers BS 5853: Part 2: 1982 – Ignition source 5 (Crib 5)
Weight	TVS ABSorb Shape tiles weigh approximately 25kg per m ³
Shapes	TVS ABSorb Shape panels are available in various shapes and sizes that range from simple forms to complex shapes



TVS ABSorb Switch



TVS ABSorb Switch are white painted fiberglass acoustic baffles and rafts.

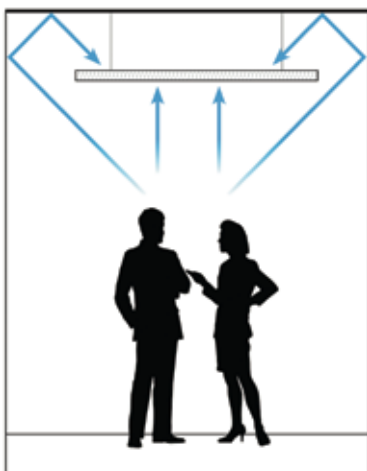
The paints are high-pressure sprayed to the surface, with a high adhesion and sealed edges. They are very effective against airborne dust absorption so that the products maintain a clean indoor environment.

TVS ABSorb Switch baffles and rafts offer a Class A absorption rating and are designed to be suspended vertically or horizontally from the soffit or they can be fixed directly to a surface.

They are ideal for use in commercial or education environments where Class A absorption is required or where an exposed concrete soffit is being used instead of suspended ceilings – such as offices, board rooms, classrooms, halls and atrium areas.

They are available in the below sizes:

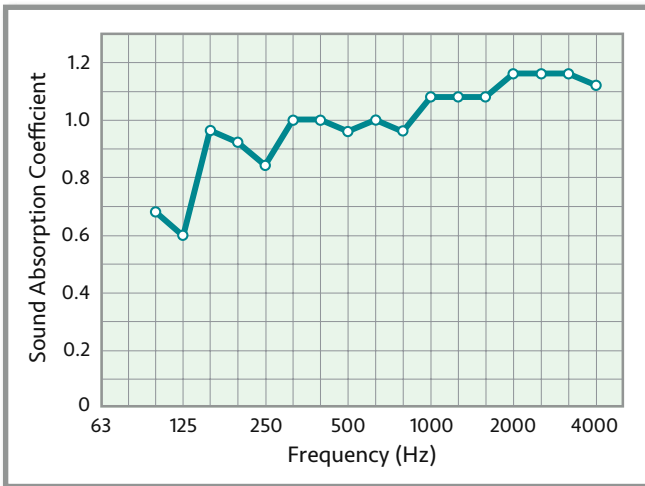
Switch - Baffles	Switch - Rafts
1200 x 300 x 40mm	1200 x 600 x 40mm
1200 x 600 x 40mm	2400 x 1200 x 40mm



TVS ABSorb Switch



Acoustic Performance



Noise Reduction Coefficient = 1.00

In accordance with EN ISO 11654:1997

Weighted Absorption Coefficient, $\alpha_w = 1.00$

Sound absorption class is A.

Sound absorption coefficient – TVS ABSorb Switch 40mm Thick

Frequency (Hz)	125	250	500	1000	2000	4000	NRC	Sound Absorption Class
TVS ABSorb Swift (α_s)	0.60	0.84	0.96	1.00	1.00	1.00	1.00	A

Physical Information

Fire Resistance	TVS ABSorb Switch provide a Class 0 Surface Spread of Flame rating (B2-s1,d0 – BS EN 13501-1)
Environmental	TVS ABSorb Switch are fungi and stain resistant, do not contain any harmful substances and can be recycled
Light Reflectance	TVS ABSorb Switch can achieve 0.90 which is regarded as a high light reflectance (according to ATSM E1477-98)
Thermal Conductivity	TR>0.4 (SQM.K/W)
Cleaning	With a special painted surface, TVS ABSorb Switch have a long life span and seldom absorb dust, they are cleanable with a damp sponge or cloth and light vacuuming

TVS ABSorb Classroom



Reduce reverberated noise and add a vibrant feature to your environment with **TVS ABSorb Classroom**.

An acoustic and decorative wall fabric, **TVS ABSorb Classroom** is the simple choice for managing echo and creating a durable interior solution.

Made from fabric laminated to an acoustic, needle-punched and thermally bonded 100% polyester backing, **TVS ABSorb Classroom** reduces the need for extensive wall preparation and painting.

Transform your walls into acoustic notice boards by taking advantage of **TVS ABSorb Classroom**'s pinnable and hook-and-loop-receptive surface. It provides the perfect solution for secondary schools, primary schools and day care, commercial offices, libraries and the hospitality industry.



Applications

- Decorative and functional acoustic wallcovering for education, retail and commercial interiors
- Minimises noise in interior environments
- Media for creative solutions
- Acoustic pinboard surface for education and commercial sectors

Key Features & Benefits

- ▶ Excellent acoustic performance
- ▶ Available in 38 colours
- ▶ Custom colour printing available
- ▶ Limitless branding and design possibilities with in-house custom cutting
- ▶ Lightweight and easy to handle
- ▶ UV stabilised and resistant to colour fade
- ▶ Pin, staple and hook-and-loop-receptive, allowing TVS ABSorb Classroom to be utilised as a display board
- ▶ Non-zip and non-fray for use with cut-ins and logo creation
- ▶ Made from 100% polyester fibre without chemical binders and certified low VOC
- ▶ Highly durable, providing long-term stability and performance
- ▶ Safe, non-toxic, non-irritant and non-allergenic
- ▶ Manufactured under ISO 9001 and ISO 14001 Quality and Environmental Management Systems

TVS ABSorb Classroom

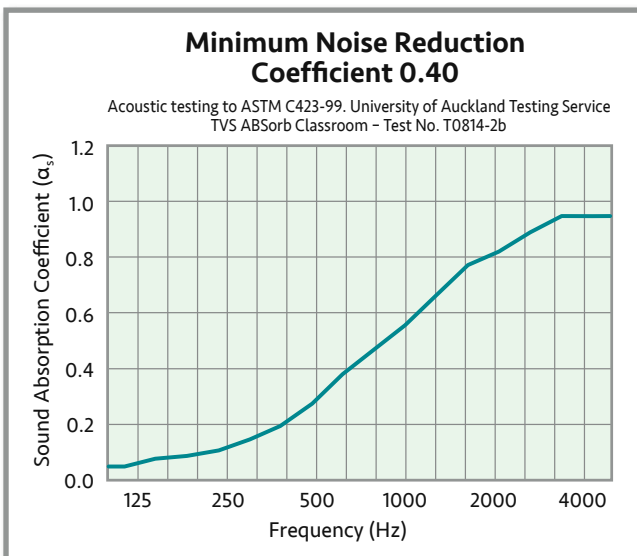


Acoustic Performance

TVS ABSorb Classroom is specifically designed to reduce and control reverberated (echo) noise in building interiors.

Sound Absorption – Class D.

TVS ABSorb Classroom has been tested to a noise reduction coefficient (NRC) of 0.4 and will typically reduce reverberated noise by approximately 40%.



Physical Information

Composition	100% Polyester Fibre (PET)
Colours	Available in a range of colours to suit many different applications. Refer to the TVS ABSorb Classroom Brochure available to download at www.tvS-acoustics.com
Roll Dimensions	10m, 15m, 20m, 25m
Thickness	10-12mm
Weight	Typically 1600gsm
Finish	Available in fine velour
Hook-and-Loop	Hook size 1.5mm or less

Sound absorption values

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
TVS ABSorb Classroom (α_s)	0.05	0.10	0.25	0.55	0.80	0.95	0.40



CASE STUDY

Barton Grange Garden Centre

Project Objective

TVS Group was tasked with helping to reduce the noise in a very busy café within Barton Grange Garden Centre. Working closely with the design team, TVS assisted with selecting the right product both acoustically and visually. To make sure business was not affected the whole project was completed outside of business hours.

The client was delighted with the end product and has noticed a big improvement in reducing the noise levels within the café since the install.

Product

TVS ABSorb Foam Panel 40mm
Supply and Install

Special Features

- ▶ Class A Absorber
- ▶ Quick & Easy Installation
- ▶ No Maintenance
- ▶ Hidden Fitting
- ▶ Lightweight

Completed

2016





CASE STUDY

Eastbrook Primary School

Project Objective

TVS Group was involved with this project throughout the design phase and was able to work with Wates and the Architects to assist with the acoustic requirements in the Sports Hall, General Classrooms, Music and Drama Rooms, which all required Class A absorption acoustic wall panels. TVS supported Wates throughout the whole project in delivering these works successfully and defect-free.

Product

789m² TVS ABSorb Panel &
TVS ABSorb Sport Panel
TVS ABSorb Fixing Kit

Special Features

- ▶ Class A Absorber
- ▶ Quick & Easy Installation
- ▶ No Maintenance

Completed

Phase 1 2016
Phase 2 2017





TVS ACOUSTICS

NOISE & VIBRATION CONTROL

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