# ACOUSTIC NOISE CONTROL

Sound Absorbers & Sound Diffusers
Sound Absorbers
Noise Barriers

Inno viva Co., Ltd.

# ACOUSTIC NOISE CONTROL

Different types of acoustic materials that can be used for noise control. It describes sound absorbers, diffusers, barriers, and reflectors.

Sound absorbers are porous materials used to eliminate sound reflections and reduce reverberation. I.e. Echo PET, Wood wool acoustic panel, Acoustic foam panels and fabric wrapped panels made of materials like fiberglass, foam, or fabric. Acoustic panel Sound diffusers help disperse sound uniformly. Noise and sound barrier made of materials like MLV, concrete, wood or metal are used to block transmission of sound waves. Sound reflectors are used to redirect sound waves.

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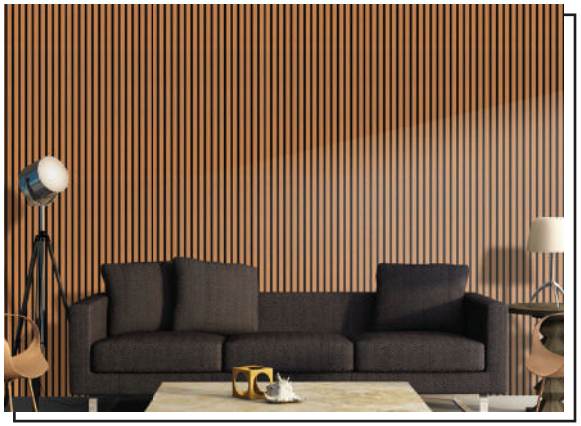
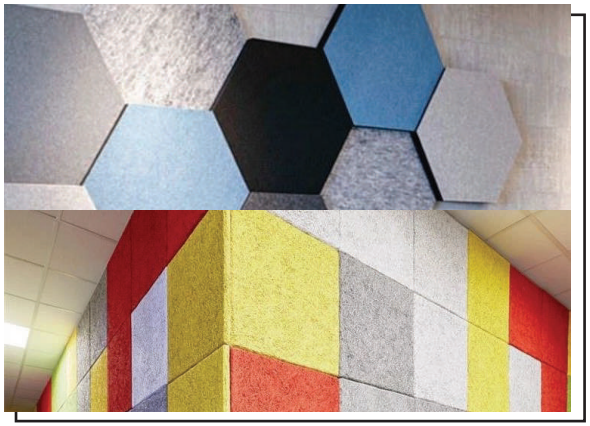
## Type of Acoustic Noise Control



*01*

### SOUND ABSORBERS & SOUND DIFFUSERS





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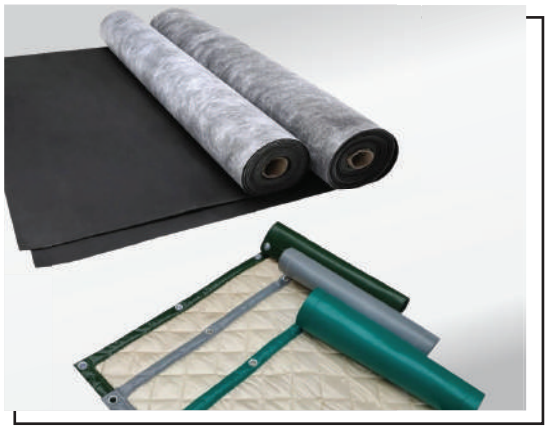
### SOUND ABSORBERS





*03*

### NOISE BARRIERS

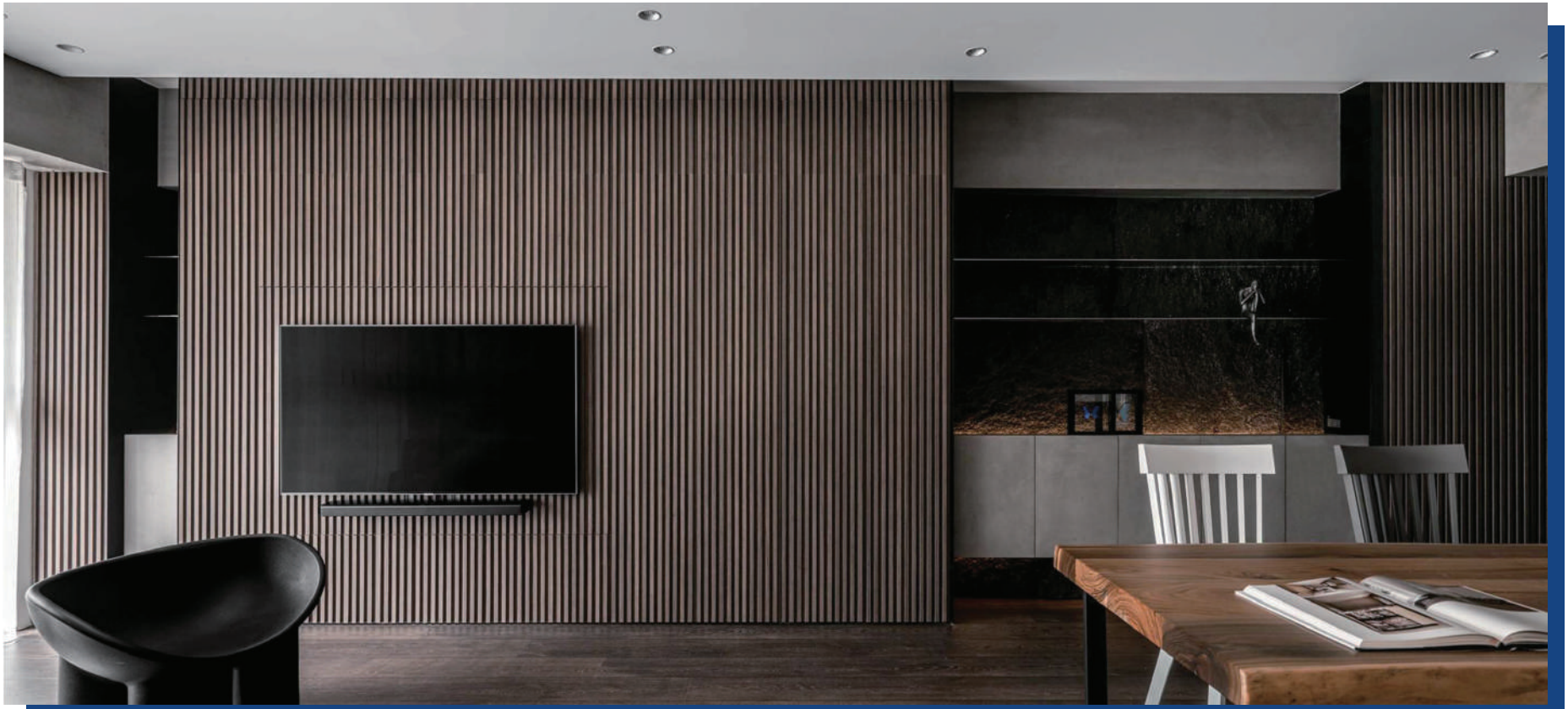
# 01

## SOUND ABSORBERS & SOUND DIFFUSERS

These devices have multi-function, by 1st wood slat layer reduce the intensity of sound by scattering it over an expanded area and absorb remaining sound by Echo PET backing material.

# ACOUSTIC SLAT PANEL

แผ่นดูดซับเสียงสำหรับผนังและฝ้า



## FEATURES

- Sound absorption and sound insulation
- Three-Dimensional
- Keep Insulated
- Fire Protection
- Impact Resistance
- Widely used
- Water Protection
- Environmental Friendly
- Strong Decorative
- Easy To Install

# COLOR

## STANDARD COLOR


3# Teak


4# Walnut


7# Wenge


10# Oak


11# Black Walnut

## OPTIONAL COLOR


2# Washed Oak


5# Smoked oak


6# Teak


8# Slner Oak


9# Black Oak


12# Teak


13# Classic Oak


14# Light Oak


15# Grey Oak

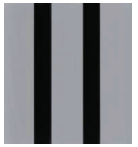

16# Olied Oak

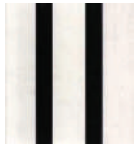

17# Deep Dark


18# -B2994


19# Black Oak


UV-Black


UV-Grey

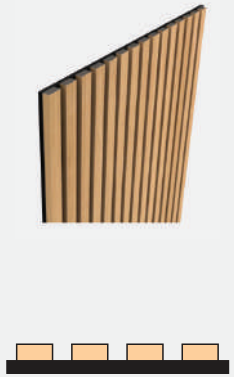

UV-White

# ACOUSTIC SLAT PANEL

01

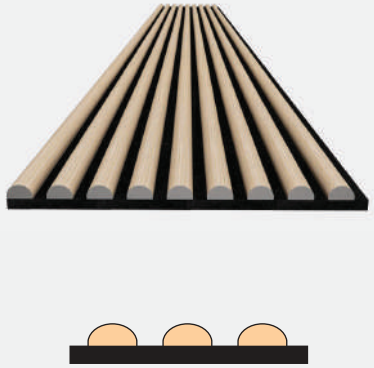
**SINGLE WOOD** VENEER
ACOUSTIC SLAT PANEL

02



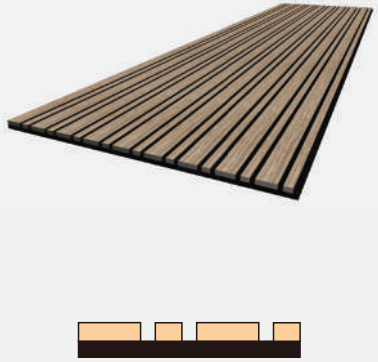
**THREE SIDES WOOD** VENEER
ACOUSTIC SLAT PANEL

03



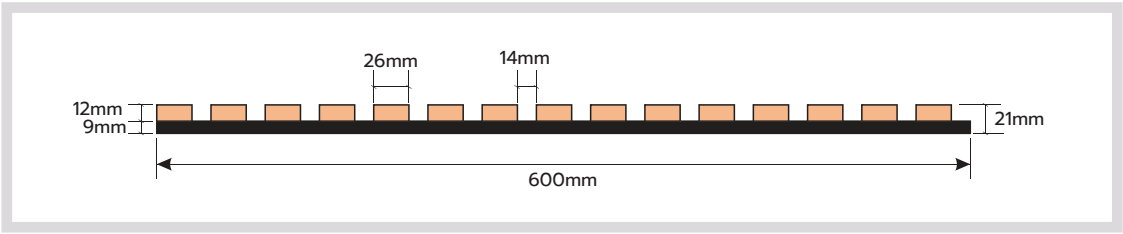
**CIRCULAR** WOODEN VENEER
ACOUSTIC SLAT PANEL

04



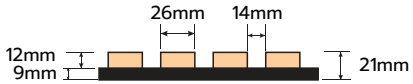
**LARGE AND SMALL**
WOODEN VENEER SLAT WIDTH
ACOUSTIC SLAT PANEL

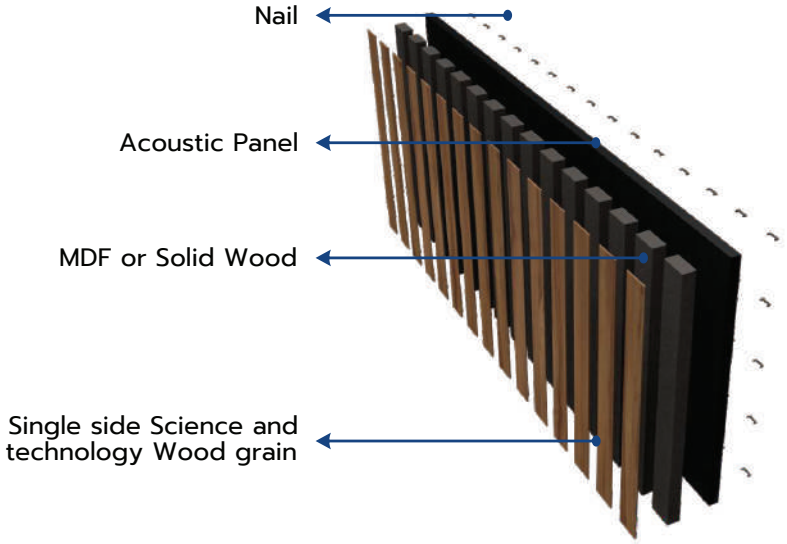
# 01 SINGLE WOOD VENEER ACOUSTIC SLAT PANEL



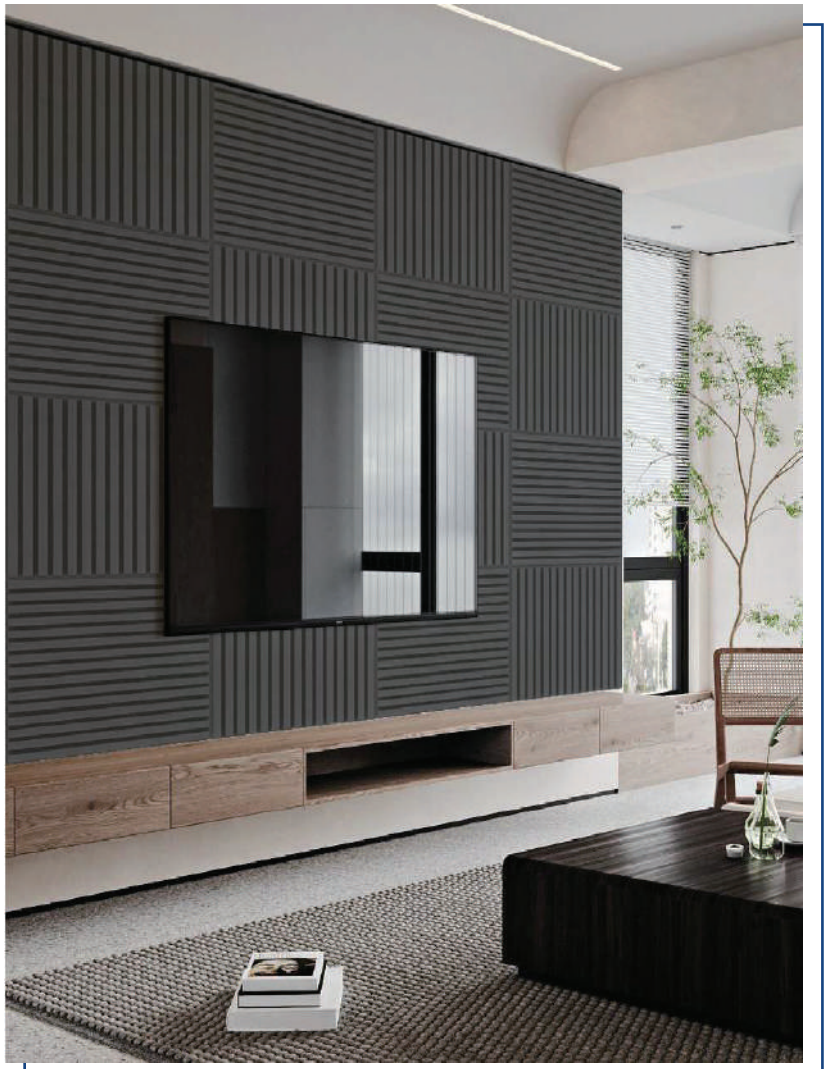

## SIZE INTRODUCTION

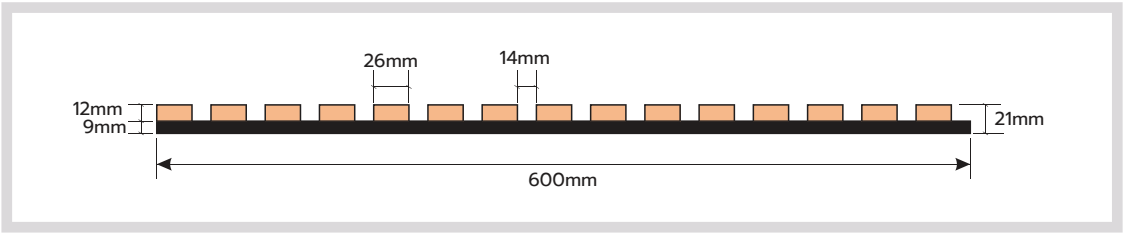
600 x 2400 x 21 mm. (standard)
600 x (Customizable) x21 mm. (optional)
Batten Width : 26 mm.



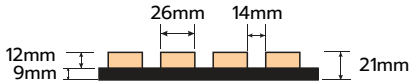
# 02 THREE SIDES WOOD VENEER ACOUSTIC SLAT PANEL

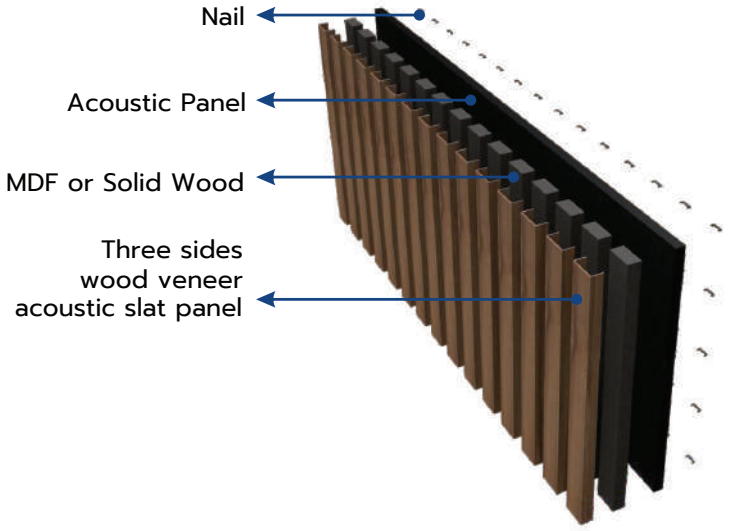




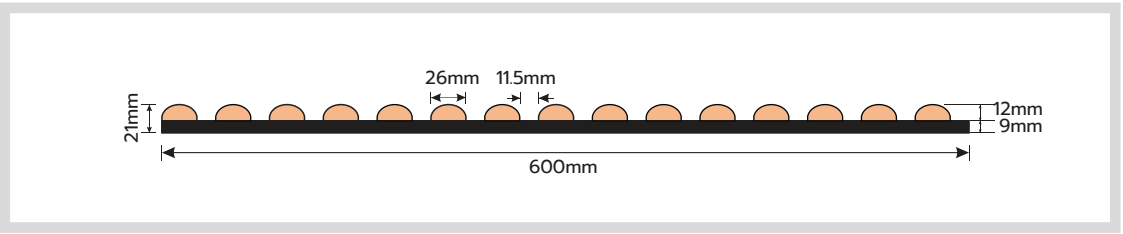

## SIZE INTRODUCTION

600 x 2400 x 21 mm. (standard)
600 x (Customizable) x21 mm. (optional)
Batten Width : 26 mm.



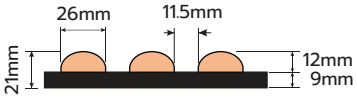



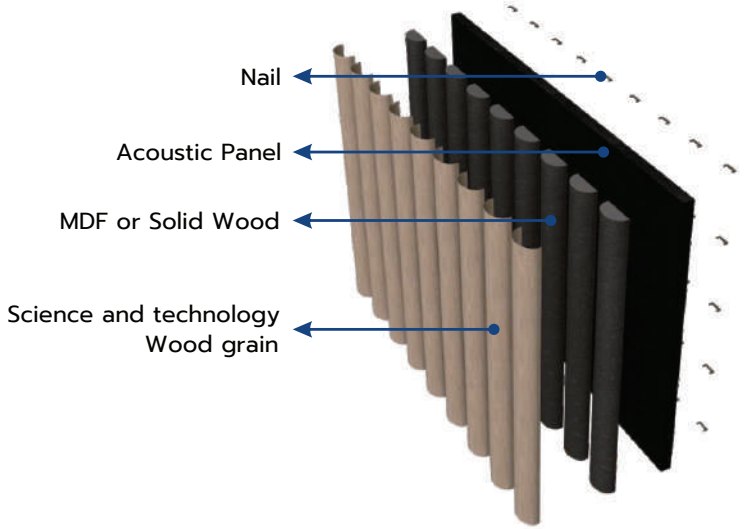
# 03 CIRCULAR WOODEN VENEER ACOUSTIC SLAT PANEL




## SIZE INTRODUCTION

600 x 2400 x 21 mm. (standard)
600 x (Customizable) x21 mm. (optional)
Batten Width : 26 mm.




## COLOR SELECTION


2# Washed Oak

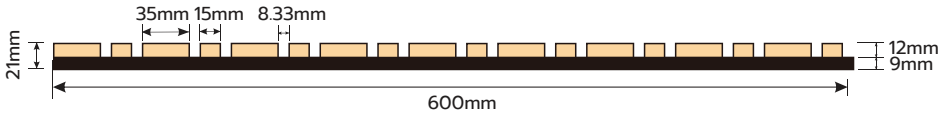

4# Walnut


13# Classic Oak


UV-White

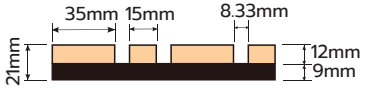

UV-Black

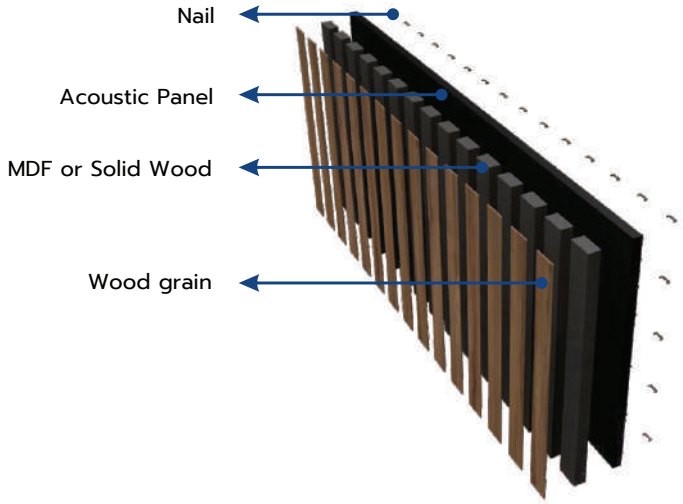
# 04 LARGE AND SMALL
## WOODEN VENEER SLAT WIDTH ACOUSTIC SLAT PANEL




## SIZE INTRODUCTION

600 x 2400 x 21 mm. (standard)
600 x (Customizable) x21 mm. (optional)
Batten Width : 35 mm./ 15 mm.

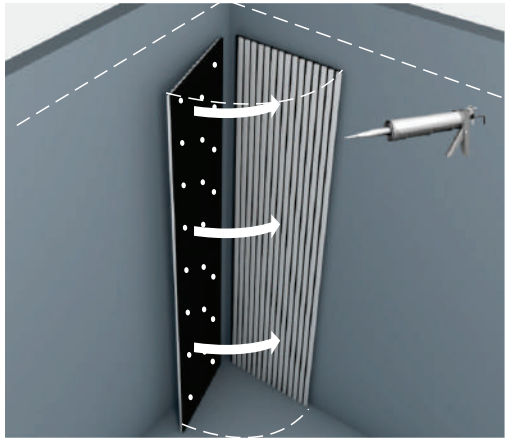


# INSTALLATION

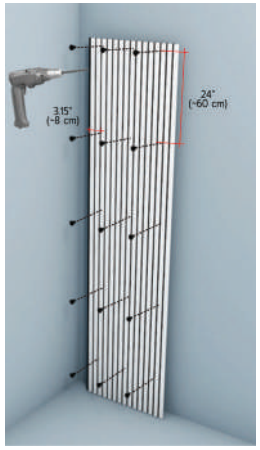
## ACOUSTIC SLAT PANEL

01



Gluing straight onto the wall:
A construction glue or grab adhesive is recommended for this

02




Screwing directly into the wall:
Using black screws for the black backing option or silver or grey screws for the grey backing, the panels can be screwed directly into the wall through the acoustic felt. We recommend a minimum of 9 screws per panel at 3.15" intervals across the width and 24" intervals down the length of the panel.If installing into ceilings, make sure they are screwed into ceiling joists.Please make sure the correct fixings are used if going into plasterboard, for example

03


Screwing the panels into 2" timber battens:
We recommend screwing 2" timber batons to the wall and then screwing the panels directly into the batons through the acoustic felt to achieve optimum sound absorption. Combined with Rockwool behind the panels between the batons, this will achieve Class A sound absorption

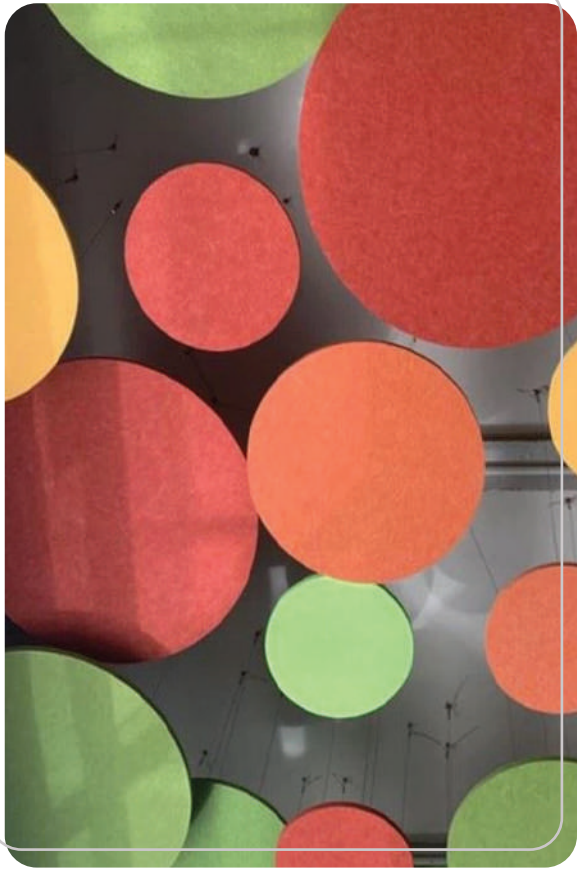
# 02

## SOUND ABSORBERS

These sound absorbing acoustical panels and soundproofing materials are used to eliminate sound reflections to improve speech intelligibility, reduce standing waves and prevent.

# ECHO PET

แผ่นดูดซับเสียงสำหรับผนังและฝ้า



## ECHO PET

## Made from recycled plastic bottles

### Features

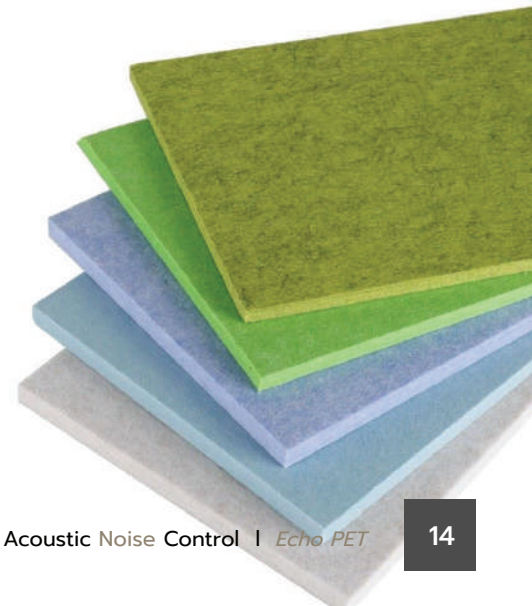
- Good sound absorption performance
- Impact resistance
- Easy to mount and process
- Various colors
- Extra thickness
- Improved acoustic effect
- Fireproof and moisture proof
- Impact-resistant

### Technical Data

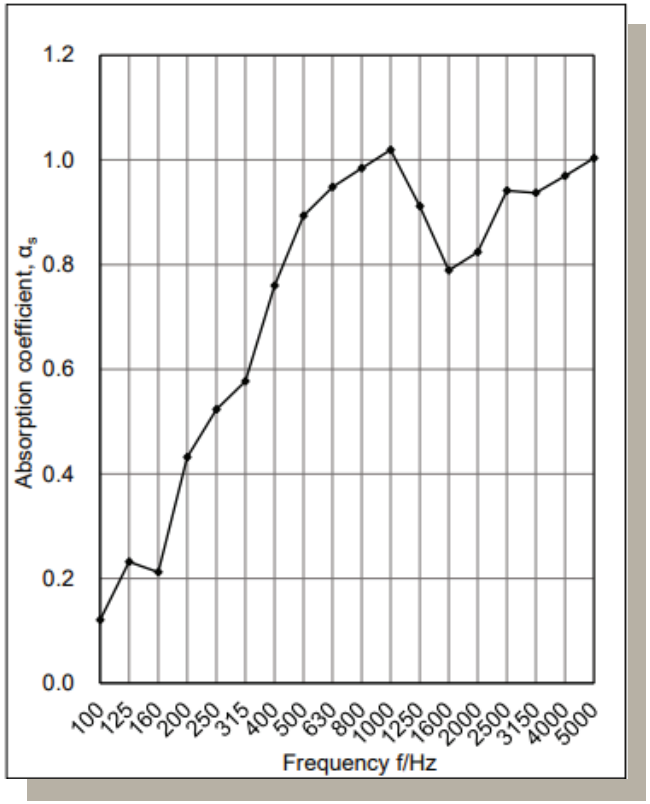
| | |
|---|---|
| **Density** | 1.9 kg/m³ |
| **Composition** | 100% Polyester(min.50% recycle PET fiber) |
| **Sound Absorption** | NRC Value 0.60-0.80 |
| **Mounting Options** | Ceiling Suspension, Rail Suspension, Sliding Track |
| **Environmenal** | Oeko-Tex Standard 100 certified, VOC freeMade from 50% recycled water bottle content |
| **Recyclability** | 100% Recyclable |

### Specifications

| | |
|---|---|
| **Material** | PET Felt |
| **Standard Size** | 2400/2800/3000 x 1200 mm |
| **Thickness** | 8/9/12/18/24 mm Customization |
| **Weight** | 4/5/5.5/6/6.5/7 kg |
| **Reaction to fire** | B-s1, d0 |



## Band Values of Sound Absorption Coefficient

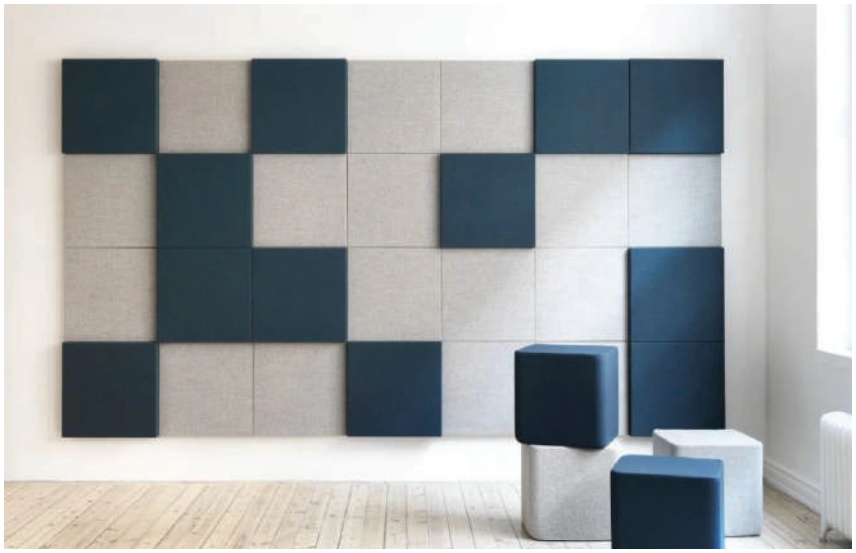


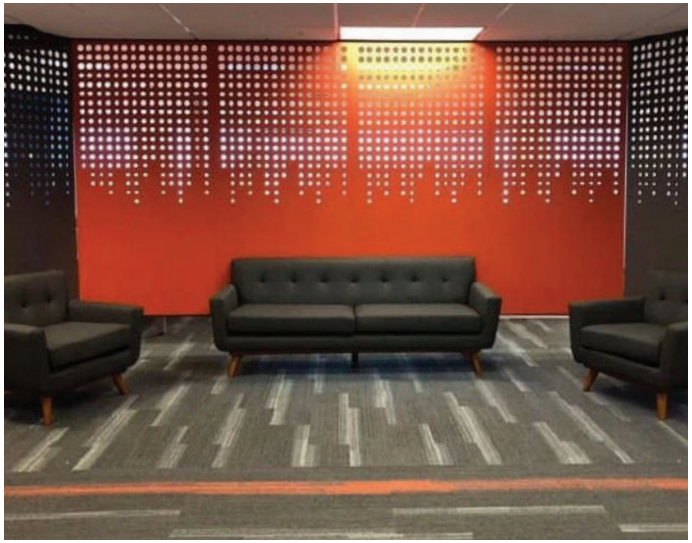

### Certifications

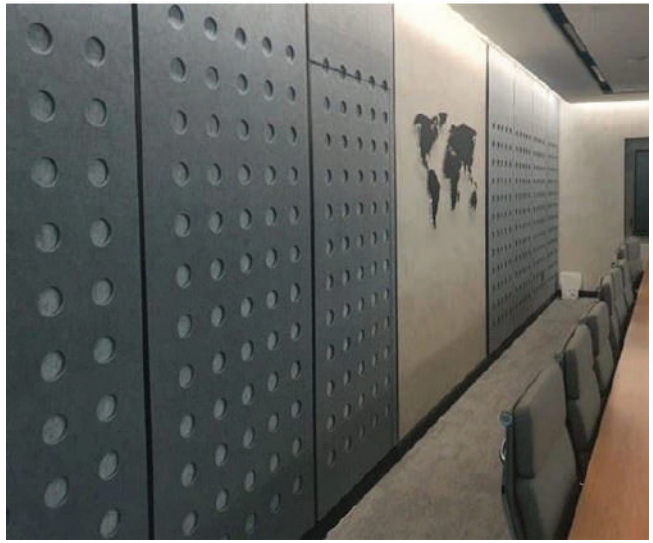
| | |
|---|---|
| **ISO 354** | Sound Absorption Coefficient |
| **EN 13501-1:2018** | Fire classification of construction products and building elements (tested on panels with fire retardant treatment) |
| **ASTM E 84** | Surface Burning Characteristics (tested on panels with fire retardant treatment) |

**Sound Absorption : NRC Value 0.60-0.80**

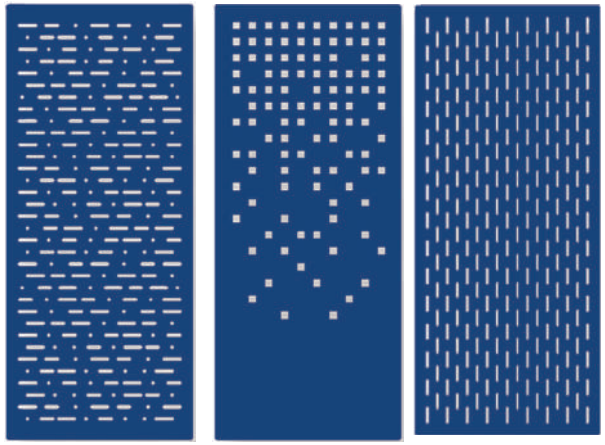
## PATTERN & REFFERANCE







## PATTERN & REFFERANCE



# WOOD WOOL ACOUSTIC PANEL

แผ่นดูดซับเสียงสำหรับผนังและฝ้า

## 100% Natural Ingredients


Wood Wool


Inorganic Cement


Liquid Glass

## Features

- Good sound absorption performance
- Fireproof and moisture proof
- Various colors
- Impact resistance

## Specifications

| | |
|---|---|
| **Standard Size** | 600x2400 mm, 1220x2440 mm |
| **Thickness** | 15mm, 20mm, 25mm, 30mm, 38mm |
| **Color** | Natural wood, Natural grey, color painted |
| **Fiber Width** | 1.0mm, 1.5mm, 2mm, 3mm |

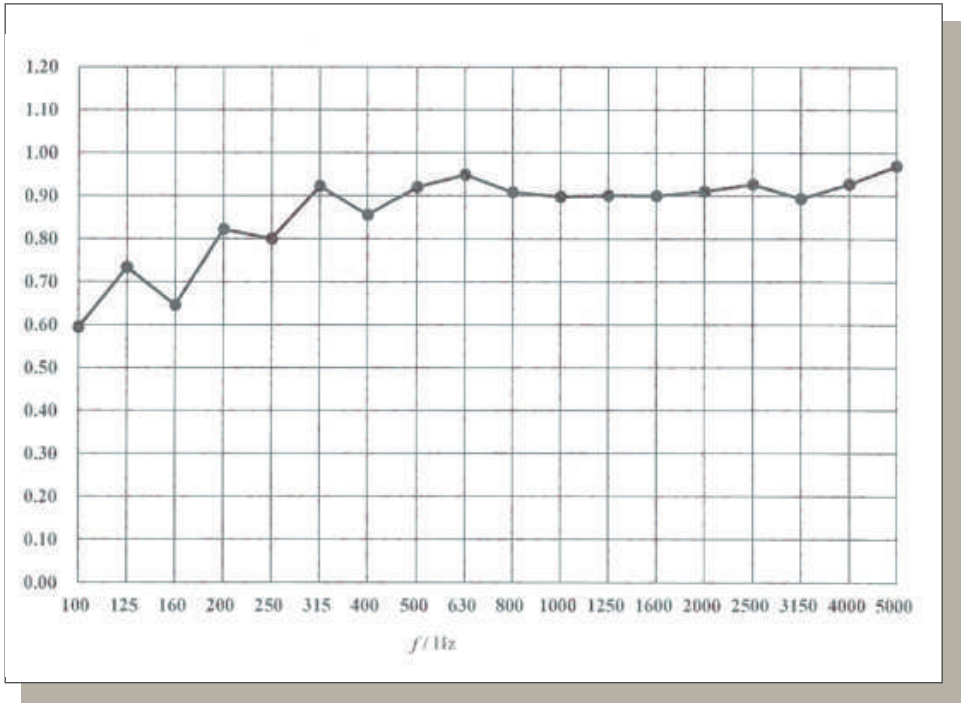
**Natural wood**


1.0 mm wood wool (Standard)
1.5 mm wood wool (Optional)
3.0 mm wood wool (Optional)

**Natural grey**


1.0 mm wood wool (Standard)
1.5 mm wood wool (Optional)
3.0 mm wood wool (Optional)

## Band Values of Sound Absorption Coefficient




### Technical Data

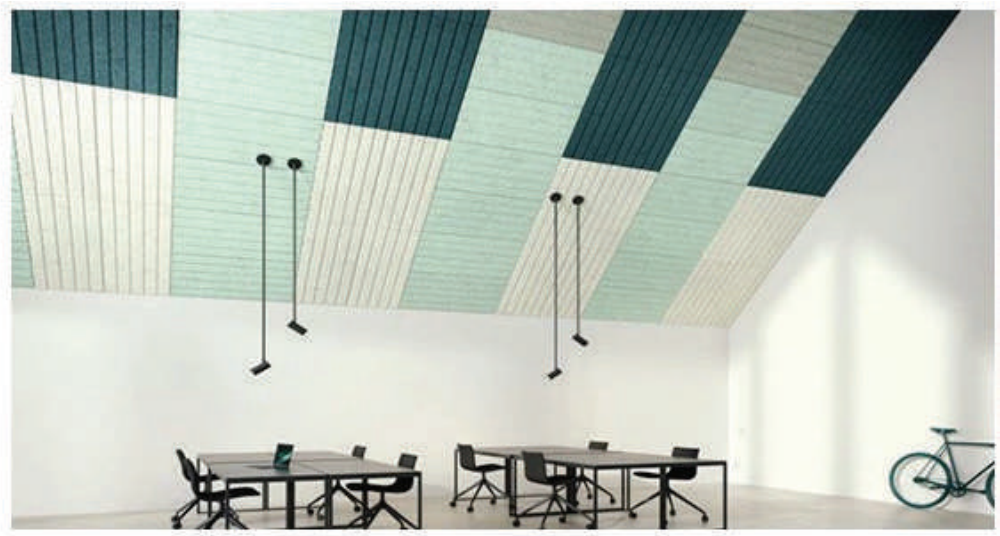
| | |
|---|---|
| **Density** | 600-630 kg/m³ |
| **Flame Retardant** | Can meet Standard Class B1 |
| **Thickness Expansion** | <2% (Immersion in water 24hrs) |
| **Thermal conductivity** | 0.108 kcal/m x r x °C |

### Certifications

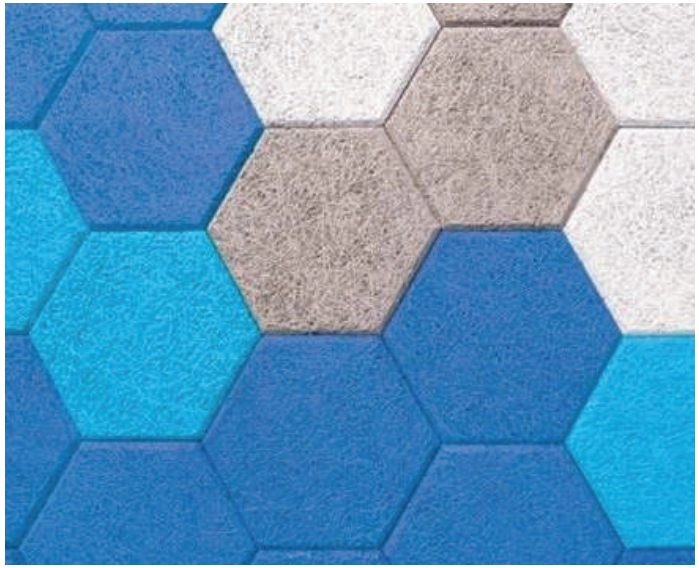
**ISO 354** Sound Absorption Coefficient

**Sound Absorption : NRC Value 0.90**

## REFFERANCE



ACOUSTIC CEILING
ACOUSTIC WALL

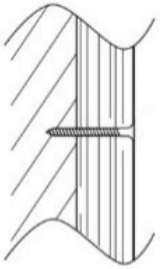


## REFFERANCE

# INSTALLATION
## WOOD WOOL ACOUSTIC PANEL

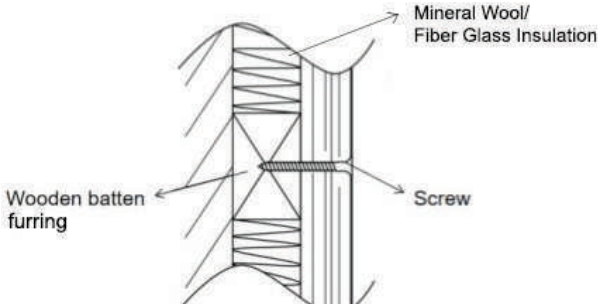
### Option 1

Screw the wood wool acoustic panel on the wall directly



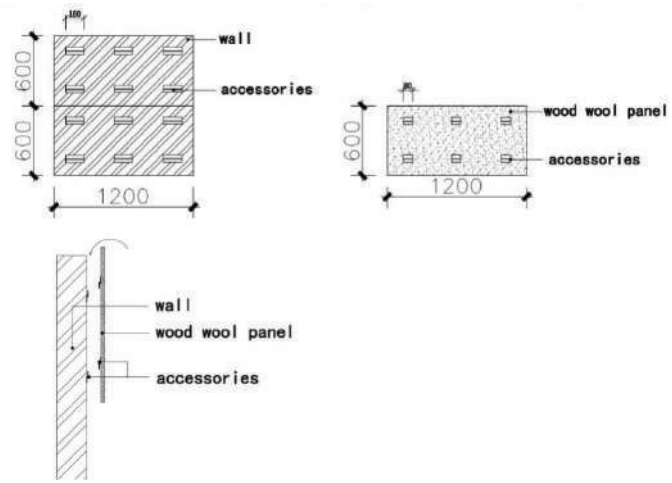
### Option 2

Screw the base wooden batten on the wall, then screw the wood wool acoustic panel on the batten



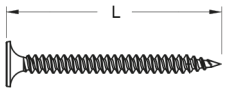

### Option 3

Fix installation accessories both on the wall and the wood wool acoustic panel,then clip the panel on the wall

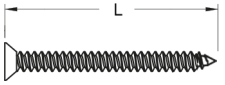



## Fastener Reference Chart

| Screw Length (L) | Panel Thickness |
|---|---|
| Drywall screws #6xL | |
| 1-5/8" | 1" Thick Panel |
| 2-1/4" | 1-1/2" Thick Panel |
| Chip-board screws #6xL | |
| 1-5/8" | 1" Thick Panel |
| 2-3/8" | 1-1/2" Thick Panel |




Drywall screws




Chip-board screws

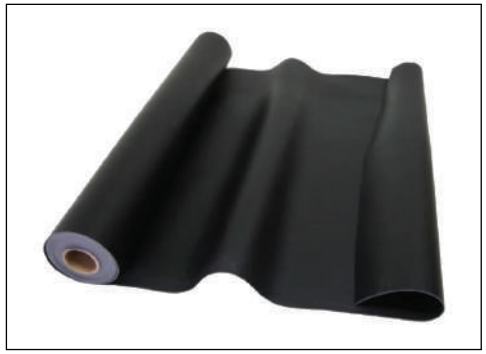
# 03

## NOISE BARRIERS

Sound energy travel either airborne or structure borne (impact) Airborne sounds are radiated from source directly to air structure borne (impact) is sound that travel through solid materials
.

# MASS LOADED VINYL

แผงกั้นเสียงไวนิล



# MASS LOADED VINYL

**Applications**

Mainly used in the construction industry, conference rooms, factories, multi-function halls, KTV rooms, pipes (water pipes/wind pipes) and offices where noise reduction is required.

## Features

- Moisture proof, Water proof
- Excellent sound blocks
- Fireproof
- Easy installation
- Mildew resistant
- Excellent for curved surfaces
- Eco-friendly
- Flame retardant, strong and soft
- Can be cut, bent, pasted, nail gun fixed, adopts dry construction method

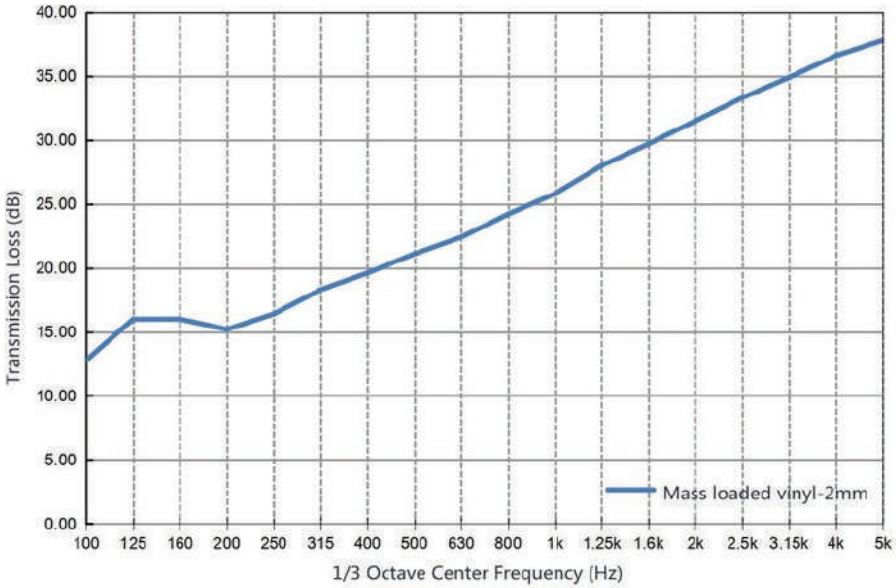
Water proof

Flame retardant

## Specifications

| | |
|---|---|
| **Material** | Polymer & Mineral powder |
| **Thickness** | 1.2mm, 2mm, 3mm |
| **Dimensions** | 1m x 10m, 1.2m x 5m/roll |
| **Weight** | 2-5kg/m2 or 10kg/m2 |
| **Customization** | Thickness: 1.2-5mm, Width: 1.3m maximum<br>Length: 10m maximum (advise) |

## Sound Insulation Performance



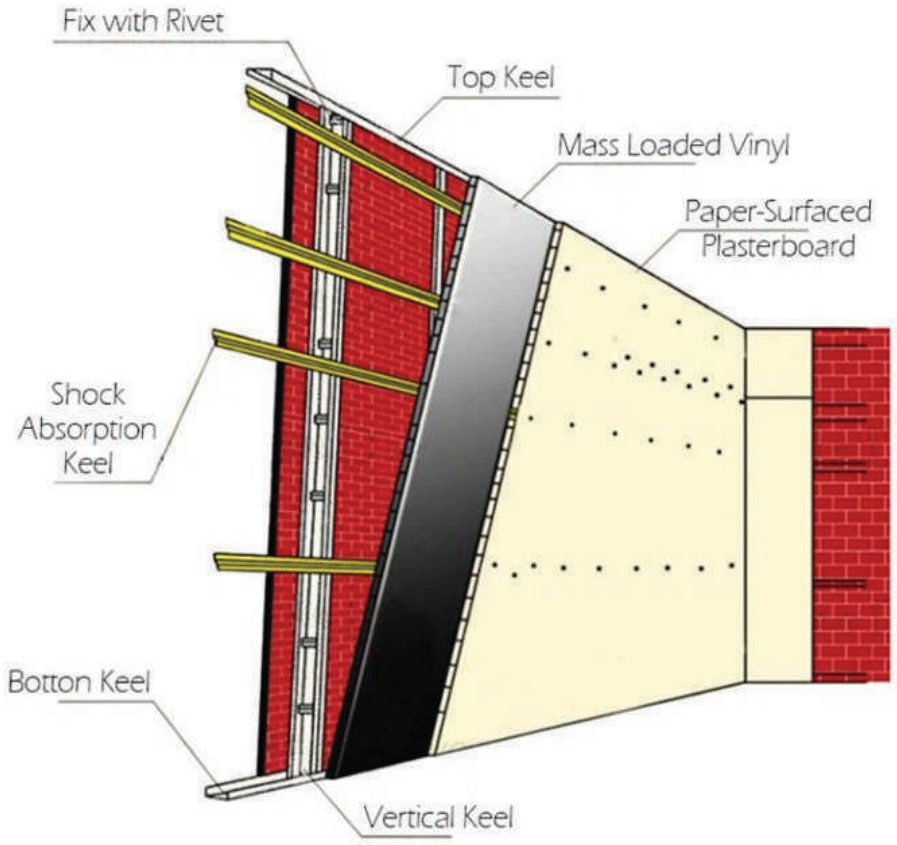

### Specifications

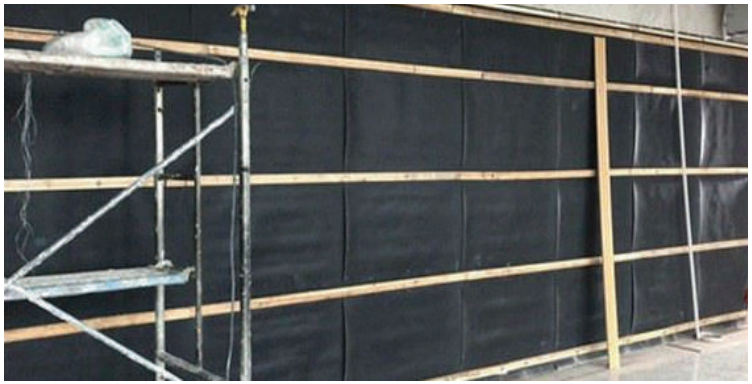
| | |
|---|---|
| **Environmental protection performance** | Class E1 |
| **Flame retardant performance** | Class B1 |
| **Acoustic performance** | A single layer of 2mmmass loaded vinyl= 27dB,<br>which has an excellent isolation effect on low and medium sounds. |

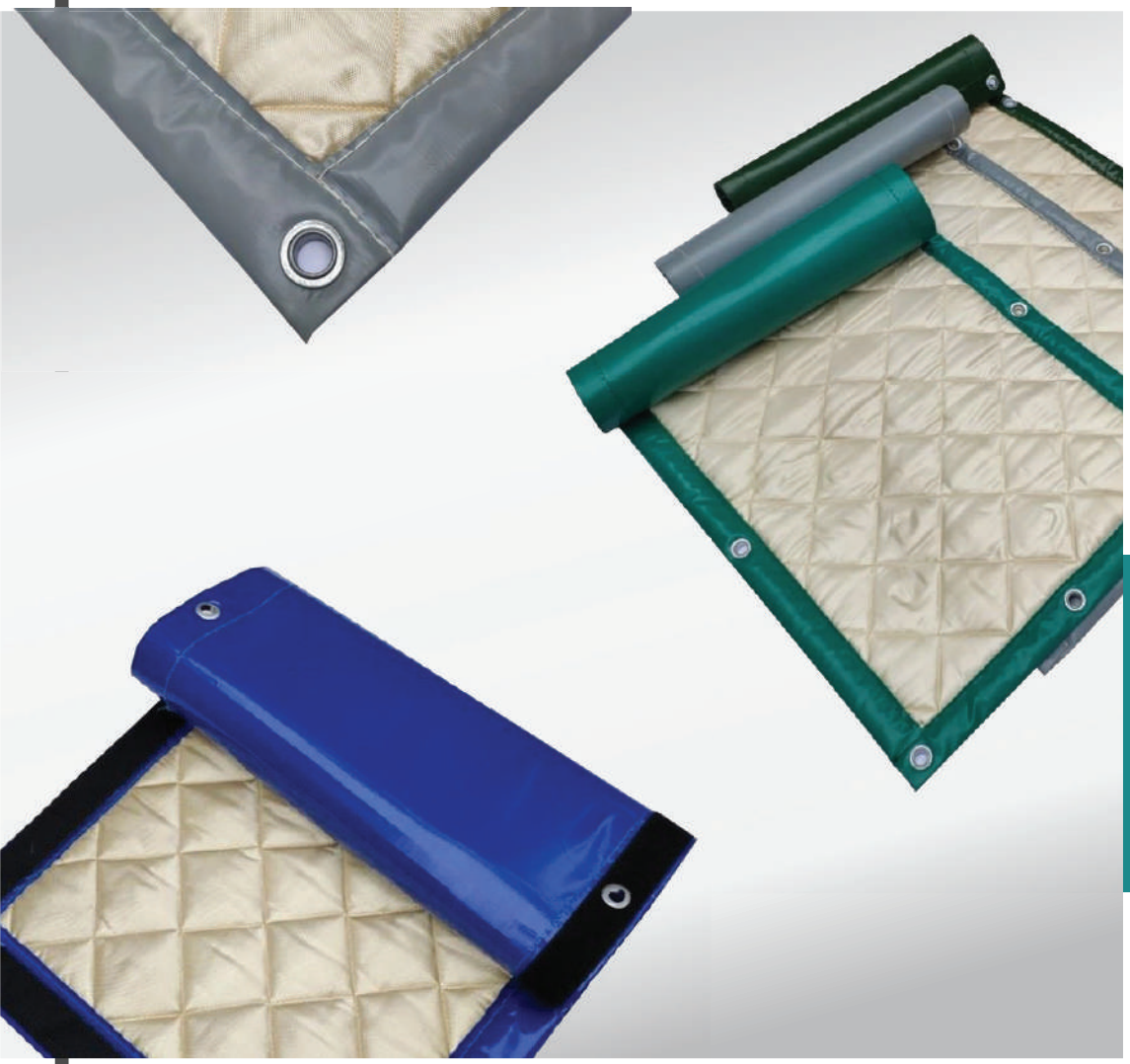
| Thickness | Dimensions(mm) | Sound insulation capacity (dB) |
|---|---|---|
| 1.2 | 1000x1000 | 24 |
| 2.0 | 1000x1000 | 27 |
| 3.0 | 5000x1000 | 30 |

# WALL INSTALLATION GUIDE

## MASS LOADED VINYL



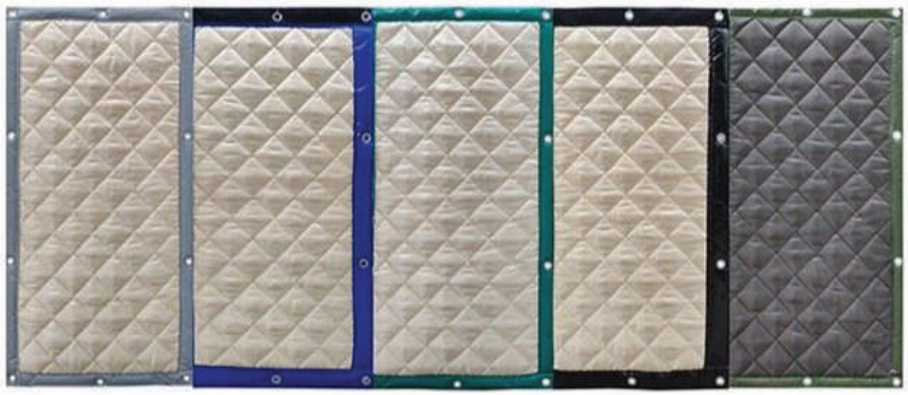





# ECHO NOISE BARRIER

# ECHO NOISE BARRIER

Consists of a reinforced 1-lb.psf loaded vinyl noise barrier bonded to a 2" fiberglass that is quilted with a vinyl-coated-fiberglass-cloth facing. Curtain panels are constructed with grommets across the top and Velcro seals along the vertical edges.



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