

Wincell®

Alsound®

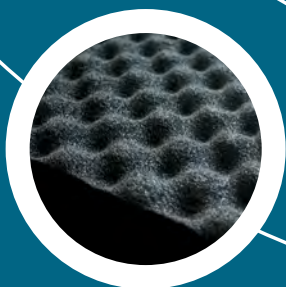
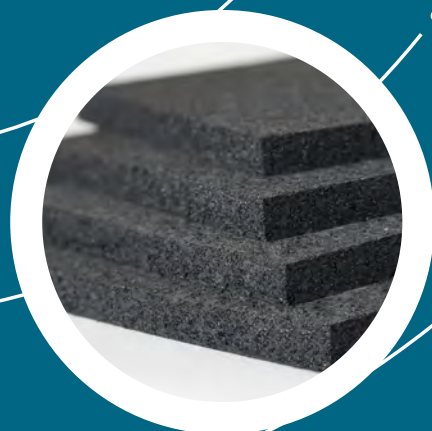
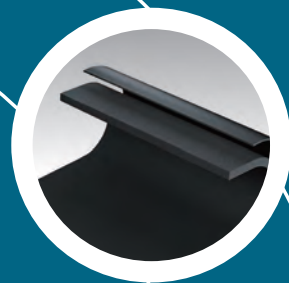
OVERVIEW OF ALSOUND ACOUSTIC SOLUTIONS

RESTORE THE NATURAL WORLD

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RESTORE THE NATURAL WORLD

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ALSOUND ACOUSTIC SOLUTION

RESTORE THE NATURAL WORLD



Alsound | Restore the natural world

WINCELL- The leader of advanced insulation material, has been pioneer of energy-saving insulation area, which cover thermal insulation and noise absorption materials.

As a national high-tech enterprise, WINCELL always focus on independent innovation, scientific and technological innovation and sustainable development. In the recent years, WINCELL has expanded its field of business by founding Alsound research institute which is composed of professional acoustics R & D team and university doctor as expert consultants. Focus on the research of noise decreasing and developing new acoustics materials, in order to create an ultra-quiet living environment.

Alsound focus on research investment and cooperations with universities to carry out scientific research development. As professional service provider, Alsound provides a system of noise prevention, control and solutions. The scope of Alsound services includes acoustic environment planning, acoustic design, acoustic consultants, acoustic products, acoustic construction, acoustic supervision, Acoustic acceptance. Its noise-absorbing and reduction products have been widely used in commercial buildings, industrial buildings, rail transportation, electric power facilities, entertainment venues, theaters, bars and so on.

Led by master & professional team keep up with international path

WINCELL Alsound team focus on R & D environmental acoustics, interior acoustics and new materials, including noise absorption, noise isolation, vibration attenuation and noise control, and concentrate on customer service by technology. Meanwhile, Alsound has developed a set of special solutions for different industries and it is adapted to national eco-friendly concept and sustainable development. With the innovative, high-efficiency and eco-friendly acoustics products, Alsound determines to restore the most beautiful and real acoustics environment for our customers.

Alsound | one stand intimate service

Available for high capacity and high quality noise absorption and noise reduction products

Alsound focus on R & D new noise absorption and noise decreasing products which can be available for different application area and needs. Exclusive patented material meet high-standard requirement of customers for living, working and housing.

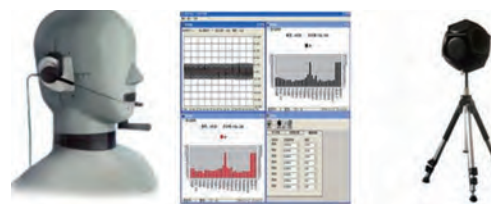


Available for high efficiency, economic and eco-friendly acoustic project design

There are many ways for noise control. In order to ensure good noise absorption effects, we decide to solve from noise source. Alsound always base on measurement results from noise resource, as well as the relevant technical data, develop corresponding program according to characteristics of the noise spectrum to obtain well effects on noise reduction. In this program, we use of a variety of acoustic materials and structure combination, take full consideration to the comfort of the environment, adopt in preference of both economic and eco-friendly noise absorbing and reduction products, to create a efficient, economical and eco-friendly sound environment.

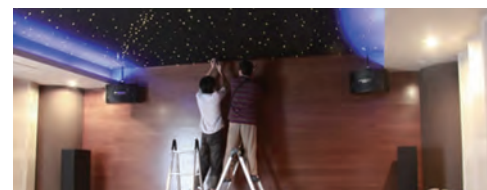
Available for noise testing and acceptance service

Submit to customer' s needs and national standards, Alsound provides noise measurement and project acceptance service and relevant solutions.



Available for guidance of acoustic project installation

Alsound has many skilled specialists of more than ten years' experience, that can provide professional construction guidance services for various projects of various industries to ensure the realization of design requirements and system effects.



CONTENTS

ACOUSTIC SERVICE Alsound product series

Alsound acoustic products can provide people a quiet and comfortable environment for human habitation, office and livings, which is designed and produced for the solutions of the environmental noise.

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Alsound R&D center and test center

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Alsound laboratory is mainly applicable to test acoustic products and acoustic materials suction, sound insulation performance, the internal sound field characteristics in line with ISO140 series and ISO10140 series requirements. Including indoor reverberation time, indoor noise floor, sound field uniformity etc.



After years of development, Alsound has formed a professional acoustic performance testing team, the laboratory is equipped with world-advanced testing equipment, which is able to carry out laboratory material acoustic performance testing and on-site noise detection according to the relevant national standards and norms.

Alsound acoustic showroom

In order to bring intuitive feelings to customers, our company has constructed a special water pipe acoustic showroom.



Alsound enterprise qualification

WINCELL (Jiangsu) Construction Engineering Co., Ltd has earned the construction enterprise qualification certificate, our company is authorized to undertake environmental engineering construction protects.



Alphonic™ ultra-clean sound-absorbing panels



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Product introduction

Alphonic™ ultra-clean sound-absorbing panels is a specially designed general sound-absorbing material for different acoustic application situation. With excellent sound absorption performance and acoustic barrier effect (transmission loss), it can reduce fluid-structure coupling (vibration isolation) and has function for damping and vibration.

The effect will be better if compound with other materials, such as perforation plate, aluminum plate.

Product features and advantages



★ Sound absorption effect

Open pore structure design combined with compound In order to realize the effective absorption sound within the wide band;
A unique combination of physical properties makes the maximize the absorption of the key noise frequency (when frequency $\geq 1000\text{HZ}$, acoustic absorption coefficient $\alpha \geq 0.9$) .



★ Sound barrier (transmission loss)

Relatively high density and high flow resistance of acoustic provides effective sound barrier;
In a certain extent, it can replace sound barrier of multi-layer foamed composite material.



★ Vibration damping and decoupling function (Vibration isolation)

Superior viscoelastic characteristics can effectively reduce or eliminate the resonance of metal sheet structure (as sound insulation cover,The pipe wall etc). In this way, structure radiated noise is lowered.

Specifications and description

Specifications	Alphonic-M	Alphonic-H
standard bulk density (Kg/m ³)	160-200	220-280
standard width (mm)	1000	1000
standard length (mm)	1000	1000
standard thickness (mm)	5 10 15 20 25 30	
packages	200pcs/canton	100pcs/canton 67pcs/canton 50pcs/canton 40pcs/canton 33pcs/canton
description		
simple description	non-fiber, ultra-quiet, Oil resistant, Microbial resistance, Easy installation of sound-absorbing material	
product types	A hole foam elastomer material based on rubber	
color	black	
Range of application	High-frequency noisy mechanical equipment, Hvac system, Air processing systems, plants and buildings	
Special performance	Microbial resistance and easy to install	

Feature	Technical parameters	Remark
Range	max work temp : + 90°C min work temp : - 30°C	
Thermal conductivity	Alphonic-M : $\lambda \leq 0.047\text{w/ (m-k)}$ Alphonic-H : $\lambda \leq 0.045\text{w/ (m-k)}$	Tested acc. To DIN EN 12667
Fire class	S3	Tested acc. To
Smoke class	SR2	DIN 54837:2007
Drop objects class	ST2	

Alphonic-M

Acoustic data (SAC)	Thickness	125	250	500	1000	2000	4000	Tested Acc.To GB/ T20247- 2006, BS EN ISO 354 : 2003
	5mm	0	0.08	0.18	0.40	0.46	0.49	
10mm	0	0.11	0.29	0.61	0.63	0.68		
15mm	0.03	0.13	0.34	0.70	0.74	0.71		
20mm	0.04	0.14	0.43	0.81	0.85	0.89		
25mm	0.06	0.16	0.54	0.95	0.91	0.94		
30mm	0.07	0.18	0.59	0.97	0.97	0.98		
Transmission loss (TL)	Thickness	125	250	500	1000	2000	4000	Tested Acc.To GB/ T18696.2- 2002
	5mm	6.52	4.87	6.37	7.21	7.3	7.74	
10mm	8.47	7.15	8.56	9.64	9.95	11.32		
15mm	11.59	9.59	10.36	12.05	12.72	16.83		
20mm	15.66	13.33	14.87	15.81	17.19	19.38		
25mm	18.42	16.05	16.57	23.11	25.77	27.31		
30mm	20.15	17.5	18.22	24.63	26.8	31.05		
density	160-200Kg/m ³							
environment protection	dustless, no fiber pollution							
Storage	avoid direct sunshine							
Air erosion	10000FPM air flow rate,no corrosion,no crack,no tear							
Antibacterial	Built-in antimicrobial protectant,no growth of fungi and bacteria							

Alphonic-H

Acoustic data (SAC)	Thickness	125	250	500	1000	2000	4000	Tested Acc.To GB/ T20247- 2006, BS EN ISO 354 : 2003
	5mm	0	0.1	0.3	0.51	0.48	0.53	
10mm	0	0.12	0.35	0.66	0.6	0.72		
15mm	0.03	0.17	0.44	0.79	0.71	0.86		
20mm	0.06	0.21	0.58	0.87	0.85	0.95		
25mm	0.06	0.27	0.69	1.01	0.95	1		
30mm	0.07	0.29	0.74	1.03	0.96	1.01		
Transmission loss (TL)	Thickness	125	250	500	1000	2000	4000	Tested Acc.To GB/ T18696.2- 2002
	5mm	7.35	6.11	7.23	8.12	8.68	9.21	
10mm	11.46	9.31	11.33	12.41	13.69	16.33		
15mm	14.83	11.70	13.4	15.02	16.10	22.01		
20mm	18.19	15.32	17.99	19.21	21.51	25.31		
25mm	21.47	18.16	20.75	25.39	28.97	31.89		
30mm	23.61	19.96	21.43	27.25	30.46	35.32		
density	220-280Kg/m ³							
environment protection	dustless, no fiber pollution							
Storage	should away from sun							
Air erosion	10000FPM air flow rate,no corrosion,no crack,no tear							
Antibacterial	Built-in antimicrobial protectant,no growth of fungi and bacteria							

Typical applications



Mechanical equipment
Air compressor contour noise equipment
lined with sound-absorbing material



Indoor equipment room,workshop
Computer room acoustic wall filled
with sound-absorbing material



Duct
Duct muffer internal absorption
material



Alduct™ silent rebound rubber insulation inside liner



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Product introduction

Alduct silent rebound rubber insulation inside liner is a foam rubber product which has a double effective that is thermal insulation and sound absorption . Its characteristic as no fiber, no dust, anti-bacterial anti- Mildew and easy to install brings great convenience to users . Not only is suitable for the air duct, also applies to other equipment need to be heat insulation and sound absorption.

Product features

- ★ Easy to install: With glue paste directly, easy to laminate on duct, no need other fixed way.
- ★ Healthy and environmental: non-fiber, no dust, no formaldehyde, low VOC' S emissions.
- ★ Anti- Mildew and antibacterial: added mildew and antibacterial factor.
- ★ Excellent performance on sound absorb and Vibration reduction:Alsound Alduct silence adiabatic memory foam rubber lining of duct can reduce 5dB sound than normal materials.

Product applications

Alduct silent rebound rubber insulation inside liner can reduce the fan and the air flow duct vibration noise, especially on school, hospital, hotel, etc and the end of other Public building air conditioning duct system.

Advantages :

- ★ No fiber, no dust, longer life, benefit on improving indoor air quality ;
- ★ Mildew and antibacterial factor is added to prevent mold in the duct insulation ;
- ★ No fiber elastic rubber and plastic materials, prevent from accidental damage, don' t need special tools, safety to install ;
- ★ Mature technology of installing, don' t need sealant reduce construction cost.

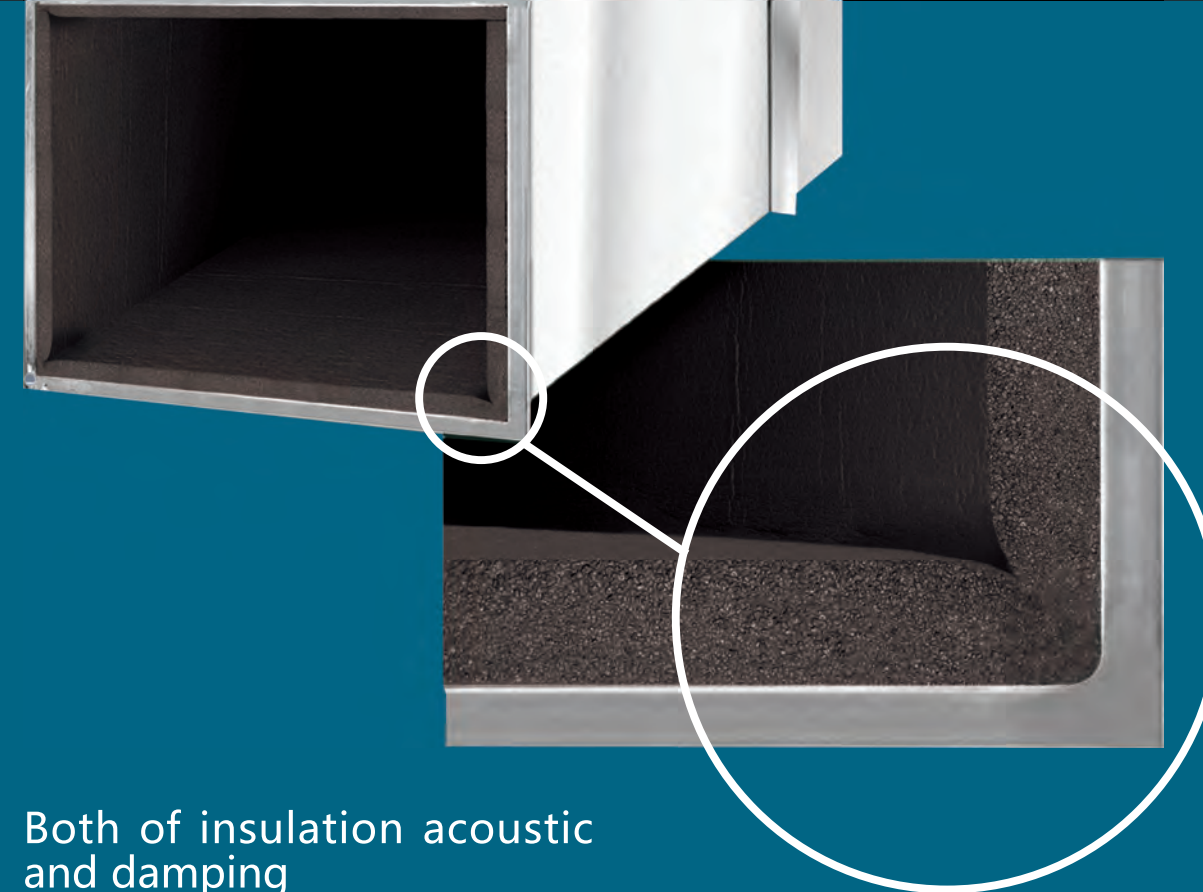
Specifications and performance

Properties	parameter	standard
color (Kg/m³)	black	
Service temperature	-40°C ~80°C	Tested Acc.To ASTM D 746
THK	19mm, 25mm, 32mm	
Width	1000mm	
Density	40-70kg/m³	
Fire performance	B1	Tested Acc.To GB 8624-2012
Thermal conductivity	≤ 0.036W/ (m·k) (Normal temp)	Tested Acc.To DIN EN 12667
Insertion loss value (400*400 Galvanized duct, paste the 25mm Alduct material on the inner surface)		
Frequency	63Hz 125Hz 250Hz 500Hz 1KHz 2KHz 4KHz 8KHz	
Insertion loss value	11 3 8 7 14 11 19 25	

specification	thk	length	width	packages
Alduct-19	19mm	2m	1m	20m²/canton , 10pcs/canton
Alduct-25	25mm	2m	1m	16m²/canton , 8pcs/canton
Alduct-32	32mm	2m	1m	12m²/canton , 6pcs/canton

Install

Alsound Alduct uses WINCELL special glue to fix. Because of the excellent fit and product features of Alduct, it can paste on the metal sheet before we bend the sheet, In this way, we can prevent compression deformation.We can Cut and paste to the duct wall at the scene and we also can paste it on the steel sheet before we bend the sheet.



Both of insulation acoustic and damping



Duct silent rebound inside liner

Alboard™ vibration attenuation sound insulation pad

ALB

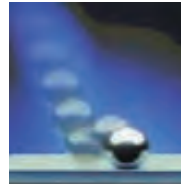
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Product introduction

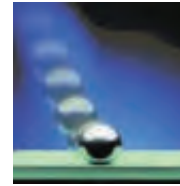
It's a new type of elastic material with excellent environmental and physical properties, and has the very significant damping vibration reduction function, which raw material is nature rubber. This kind of product is mainly used on the building floor for the sound absorb of impact, to satisfy the green building or high-end residential and hotel indoor comfort requirements.



Non damping
Continuous rebound until a steel ball hitting the ground



With damping
A certain rebound until a steel ball hitting the ground



With strong damping
A little rebound until a steel ball hitting the ground

Main features and advantages

- ★ High density foam damping materials, Can effectively absorb vibration and noise of each frequency, improve 15-30 Db for building floor, make household building floor impact sound insulation effect beyond the current green building standards, is better than five star hotel.
- ★ Due to the material's surface friction coefficient is big, after the shop it is not easy to shift. Very benefit for wind protection and the finished product.
- ★ Service temperature: -30°C ~90°C, under this temperature, has no effect on properties.
- ★ Can fight the growth of mold or fungus.
- ★ Construction process is simple and fast installation, low comprehensive cost.

Main data sheet

Index name	Description	Index name	Description
Material properties	elastic rubber damping material	product type	coated non-coated
Standard thickness(mm)	3mm, 5mm, 10mm, 15mm	standard width (mm)	1000mm
Roll length(m)	10m, 15m, 20m	Size deviation	THK ±0.5mm
Density (Kg/m³)	500-570Kg/m³	compressive stress, ε=10%	≥ 0.1MPa
Friction factor	μs =0.7	thermal conductivity	0.05W/ (m·k)
Work temp	-30°C ~90°C, ultimate temperature 150°C	Oil resisting	excellent
Service life	≥ 50 years	water resisting	excellent

Main application

- ★ Green building (include 1-star, 2-star and 3-star project);
- ★ High-end residential, five-star hotels, high-end clubs;
- ★ Schools, hospitals, style facilities (The opera house, concert hall).

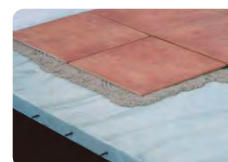
The installation diagram



Floating floor system structure diagram



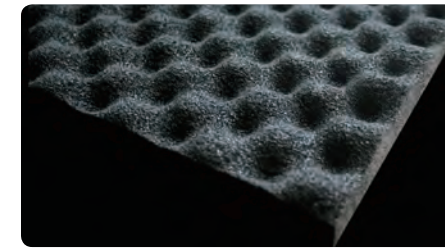
Laying carpet



Laying ceramic tile



Laying wood floor



Alwave™ rubber insulation wave wool

ALW

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Product Introduction

Wave wool, also known as egg cotton, is a kind of sound-absorbing cotton. Alwave is made from a special treatment of equipment where concave and convex wave body is formed. With a large number of internal and external connectivity of the pores and bubbles, when the sound into it, can cause air in the air vibration. As viscous resistance existed in air, when there is a friction between air and hole wall, a considerable part of the sound energy into heat energy is consumed. In addition, when the air adiabatic compression, the air and the hole between the wall heat exchange occurs, due to heat conduction, will make part of the sound energy into heat, so as to achieve the sound cushioning sound absorption effect.

Product Feature

- ★ Good inhibitory effect on low-frequency and high-frequency sound;
- ★ Good flexibility, not easy to break;
- ★ Health and environmental protection, harmless to the human body, no fiber pollution, no smell;
- ★ Good reaction to fire, Class B1;
- ★ Light weight, can be arbitrarily cut, easy for construction;
- ★ Beautiful appearance, easy to design decoration.

Product Parameter

Description	Index name
Density	15-80KG/m³
Thickness	40mm, 70mm
Width	2m
Length	1m
Reaction to fire	B1
NRC	0.65

Product Applications

Civil building interior decoration, equipment noise reduction, precision instrument protection, entertainment, factory building silencers.



Alpipe™ Pipeline Sound Insulation System

ALP

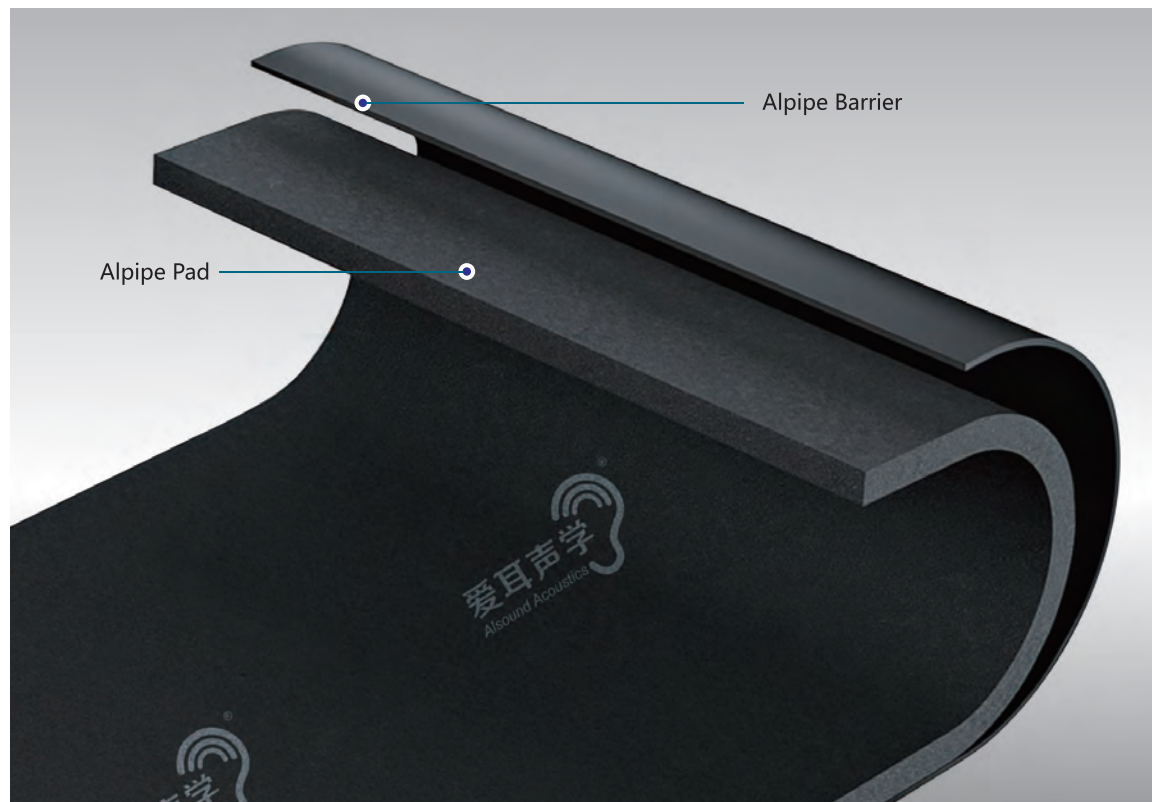
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Product Introduction

Alpipe is a unique Pipeline Sound Insulation System which specially designed for noise reduction of drain and sewage pipe. With 2mm thickness of outer sound absorbent pad, it provides enough sound insulation capabilities. The soft elastic material design makes it easy to be installed. The inner 13mm thickness of planar anti-coupling gasket can both absorb part of the noise and realize the function of reducing coupling by absorbing vibration.

Product Features

- ★ Effectively reduce sewer system noise;
- ★ Suitable for various sizes of PVC pipes;
- ★ Directed for special-shaped pipe fittings, easy to cut & install on site;
- ★ Elastic material, easy to install;
- ★ Superior sound absorption effect for pipeline with competitive price.



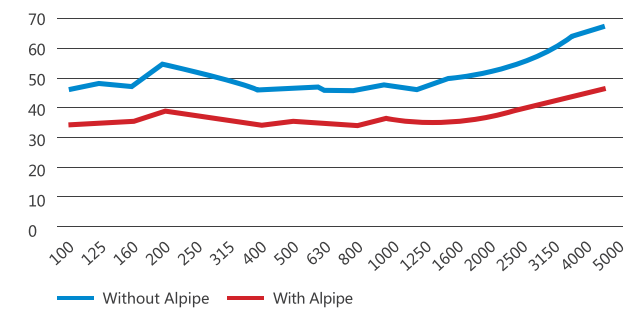
Theory of noise reduction

When Alpipe pipeline sound insulation system is installed outside of PVC pipes, its external Alpipe barrier sound insulation layer, the middle of the flat Alpipe Pad and the internal PVC water pipe, will constitute the acoustic double-layer sound insulation structure. This structure can effectively avoid the sound insulation "anastomosis effect" to prevent the presence of sound frequency in some frequency range of short board, the overall weight of the same circumstances, and effectively improve the overall sound insulation.

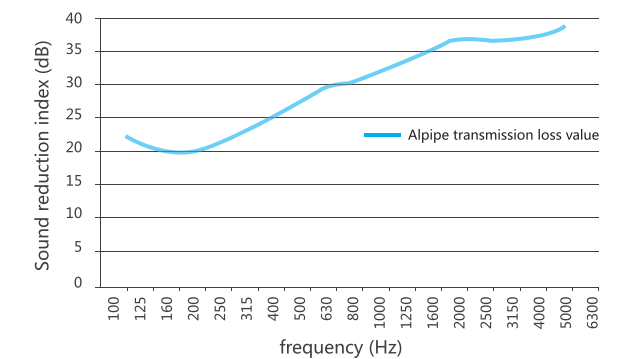
Specification

Index name	Specification	Remark
Weight of Vinyl sound insulation pad	5kg/m ²	High elasticity and easy to install
Thickness	15mm	
maximum service temperature	80°C	
Fire performance	Fire retardant	
Sound reduction index	35dB	GB/T 19889.2-2005
Product width	1.2m	Easy to cut and prefabricated

Sewer Line Comparison



Alpipe Pipeline sound insulation system—integrated sound insulation



Comparison of the PVC pipe noise from the toilet connection, noise data of not processed ordinary PVC pipe and the pipe wrapped with Alpipe pipeline sound insulation system is as shown. It's obvious that the pipeline noise reduction package system can effectively reduce the noise uttered from and spread by pipeline, a noise reduction effect as high as 17 decibels leaves people a quiet and comfortable environment.

Product Specification

Alpipe Barrier and Alpipe Pad in rolls					
Product description	Item Code	Width(m)	Length(m)	Thick-ness(mm)	Weight(kg/roll)
Alpipe Barrier	AL-BARI-201035	1.0	3.5	2	21
Alpipe Pad	AL-PAD-13/E	1.0	10.5	13	7



Aless™ Glass Wool

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ALESS

Introduction of Products

The internal fibers of Aless™ Glass Wool are fleecy and crisscross with many tiny pores, making it a typical porous sound-absorbing material with good sound absorption characteristics. When sound waves incident on the glass wool, sound waves can get into material following the internal pores and cause the vibration of air molecules in the space. Because of the air viscous resistance and the friction between air molecules and pore walls, sound energy is turned into heat energy and depletes itself.

Product Features

★ Superior sound-absorbing performance

Aless™ Glass Wool has better sound absorption performance on the high frequency of sound. When sound waves pass the fibre porosity, under the action of countless times of reflection and friction loss etc., it resonates with tiny fibers very light in weight and constantly cuts down the energy of sound waves, making the quantity of sound wave reflection and throughput quickly reduced to minimal, acoustic absorption efficiency is higher than other sound-absorbing materials.

★ Strong Flame Retardancy

Aless™ Glass Wool is A-class non-combustible material, it keeps good performance under high temperature of 350°C. It won't produce toxic or harmful gases, no smoke, no slag, no flame spreading in case of fire.

★ Safety and Environmental Protection

Aless™ Glass Wool has longer fiber length and not easy to get broken, greatly reduced the dust produced, construction comfort significantly improved and the long term air quality in operating environment can be ensured.

Detailed Parameters

Description	Index name	
Standard Density (Kg/m ³)	24K , 48K , 96K	
Standard thickness (mm)	25mm , 50mm	
moisture content	0.4%(benchmark on 48k glass wool)	
Thermal conductivity	0.039 W/ (m·k) (benchmark on 48k glass wool)	Tested Acc.To GB/T13350-2008
Fire Rating	A1	
Average diameter of fiber	6.9µm(benchmark on 48k glass wool)	
Other Indexes	No Slag(particle diameter >0.25mm), thermal shrinkage temperature under load 380°C	
Sound absorption Data of 48K Glass Wool (SAC)	Thickness	125 250 500 1000 2000 4000
	25mm	0.17 0.19 0.43 0.77 0.91 0.99
	50mm	0.21 0.32 0.72 0.89 0.98 1.00
		Tested Acc.To GB/T20247-2006, BS EN ISO

Applications

★ Sound-absorbing wall inside computer room, acoustic absorption equipment structure, building sound insulation wall filling.



Alds™ Damping Sound Insulation Board

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ALDS

Product Introduction

By using damping restraint structures and sound insulation board made of new type polymer, wallboard mechanical vibration caused by noise can be effectively converted into heat energy, thus the amount of sound insulation of the wall are very significantly improved.

Unique Advantage of Alds™ Damping Sound Insulation Board

- ★ Alds™ Damping Sound Insulation Board is slight and thin, saving precious space for clients while providing very good sound absorption.
- ★ When sound insulation requirement for wall is 48-67 decibels, the most economical solution can be formed.
- ★ When sound insulation requirement for wall is 48-67 decibels, the needed wall is thinnest.
- ★ Very easy to install, basically same as gypsum board.
- ★ Suitable for renovation of any wall, including the new wall and the old wall.
- ★ No metal contained, will not affect wireless communication.
- ★ No organic emissions, safe and environmental protection.

Main Parameters

Damping sound insulation board type I

Description	Index name
Density	18kg/m ²
Thickness	18.5mm
Width	1.2m
Length	2.4m,3m,Customizable
Durability	Sound insulation effect will never fail
Fire rating	when formed as wall refractory time can be up to 3 hours
Strength	better than required by ASTM C1396
STC	50-65 decibel

Damping sound insulation board type II

Description	Index name
Density	16kg/m ²
Thickness	13mm
Width	1.2m
Length	2.4m,Customizable
Strength	better than required by ASTM C1396
STC	55-70 decibel

Commercial Building Noise Solution

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Commercial buildings are to provide people engaged in all kinds of business activities, including markets selling all kinds of daily necessities and the means of production, all kinds of hotels, service apartments, all kinds of clubs, etc. Commercial buildings are generally built in noisy commercial center, it is often difficult to achieve effective control of noise. However, in order to better realize its commercial building's function, the request for noise value is very high.

Source of Noise

- ★ **Environmental Noise from Outside of Building**
Mainly includes noise from traffic, factories, construction site, business and social life etc., this kind of noise are mainly radiated to commercial buildings in the form of airborne sound.
- ★ **Noise inside Building**
Mainly includes noise from various kinds of equipment room, recreation room and human activities from surrounding area, and other processing noise. These noise spread into commercial buildings mainly in the form of solid sound (building structure, pipeline transmission medium) and airborne sound.

Alsound Acoustic Treatment Solution

For building external environment noise, Al sound acoustic can provide corresponding solutions according to the actual situation, the monitoring and testing results, such as targeted treatment on the walls, doors and Windows, or noise barriers and other measures.

Acoustic problem solution for building interior noise can be divided into the following two kinds:

- ★ The noise impact problems of building equipment, measures such as water pump floating platform, equipment noise cover, equipment shock absorption material, computer room acoustic absorption as a whole, pipeline vibration reduction, branched pipe silencing etc. can be taken to solve the problem.
- ★ Improve the acoustic environmental quality of the Building's internal function area, such as clubs, theater, KTV, etc. Plan and design Al sound acoustic absorption material according to construction purpose and its size, control indoor reverberation time on the basis of assuring indoor design beautiful, improve the functional area's sensory quality.



Noise Control of Commercial Building Equipment



Noise Control of Commercial Building Equipment

Industrial System Acoustic Solution

Alsound®

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In today's society, the industrial noise is everywhere. Fans, cooling tower, generator, air compressor and all kinds of high noise pipe, great interference to the surroundings. To the governance of industrial noise, create a healthy and comfortable living and working environment based on people-oriented, harmonious society and social sustainable development.

Alsound Acoustic Solution

Industrial noise control is comprehensive noise control, and noise reduction by absorption material equipment effective combination, can obtain good noise reduction effect. Noise reduction effect depends not only on the reliability of design, but also depends on the performance of sound-absorbing material, noise reduction device, and cooperate with each other in the whole project.

Al Sound acoustic not only for business partners to provide a reasonable and efficient solution, can also according to the specific requirements of the project to provide customized noise reduction device, in order to ensure to meet the design requirements of the noise reduction effect.



Industrial Production Acoustic Solution



Industrial Equipment Acoustic Solution



Industrial Cooling Tower Acoustic Solution



Industrial Equipment Acoustic Solution



Rail Traffic Noise Solution

Alsound®

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Urban road traffic noise is the vehicle engine, exhaust and tire noise generated by the mixture, in general, the greater the traffic flow, the higher the speed, the more heavy vehicles, road surface quality is lower, the greater the traffic noise, interfere with the surrounding residents to rest and sleep, affect work efficiency; Damage hearing, visual organs; Cause such as nervous system disorders, mental disorders, endocrine disorders, etc.

Noise sources analysis

- ★ Road traffic noise :
Mainly caused by motor vehicle engine shell vibration noise, intake sound, exhaust sound, horn sound, brake sound and the noise between the tire and the road.
- ★ Railway noise :
Mainly caused by the collision between the train and the track sound and locomotive bagpipe sound.
- ★ Metro and light rail noise :
Similar as railway noise, as metro is built underground which involves serious mixed noise problem between station and the ventilation, air condition works, and the station indoor noise.

Alsound Sound Traffic Acoustic Solution

Existing road traffic noise control is mainly sound barrier technology, the technology can effectively reduce the noise of the road light rail, subway, railway, on the surrounding environment.

- ★ Highway traffic noise :
generally in urban roads and highways through rural area noise barrier shoulder.
- ★ Railway traffic noise :
normally within the city and rural area where to install sound barrier.
- ★ Subway, light rail noise :
installed on both sides of the ground line sound channel, sound barriers or enclosed underground line ventilation shaft installed shaft muffler. Within the platform for ventilation and air conditioning system equipment, sound insulation room and duct and shaft installation muffler. Sound insulation room cooling towers and other outdoor equipment installation. The installation of indoor decorative acoustic body.



Road noise barrier

Landscape of sound barrier

Railway/light rail noise barrier

Railway/light rail noise barrier



Power e-Energy Acoustic Solution

Alsound®

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Thermal power plant is one of the city's main power source, plays an important role to the urban development, but at the same time, the power equipment run time in thermal power plants that produce high noise, will bring thermal power plant operation personnel and the surrounding environment noise. The staff working in a high noise environment, can cause hearing loss and the central nervous system dysfunction, the noise of the power plant emissions could also affect the surrounding residents' daily life.

Noise sources analysis

- ★ Mechanical noise :
Low and middle-frequency noise caused by equipment operation, vibration, friction, collision.
- ★ Gas dynamic noise :
Low-medium-high frequency mixed noise caused by various types of fans, ducts, steam pipes in the high-pressure air movement, expansion, cutting, exhaust, leakage phenomenon.
- ★ Combustion noise :
Low-medium frequency noise caused by boiler combustion, vaporization, flue gas movement, convection generated process.
- ★ Electromagnetic noise :
Low-medium frequency noise caused by electromotor exciter, transformers and other electrical equipment.
- ★ Traffic noise :
High frequency noise caused by transport equipment in the plant, especially the sirens and car alarms.
- ★ Other noise :
Caused by hydrodynamic sound (such as cooling tower water), radio, human activities.

Alsound Acoustic Solution

- ★ Control Equipment Noise :
As far as possible choose low noise equipment, in the design of coal mill, such as the steam turbine set equipment enclosures, blower inlet and exhaust steam boiler installed muffler, can reduce the noise intensity of equipment.
- ★ Reasonable Layout :
The overall arrangement in the factory, the noise source is concentrated in the central factory main building layout, other main noise source as well as far as possible away from the factory bound, reduce the impact of industrial noise external environment.



Power plant noise control

Substation noise control

Power plant noise control

Noise control power plant Border



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