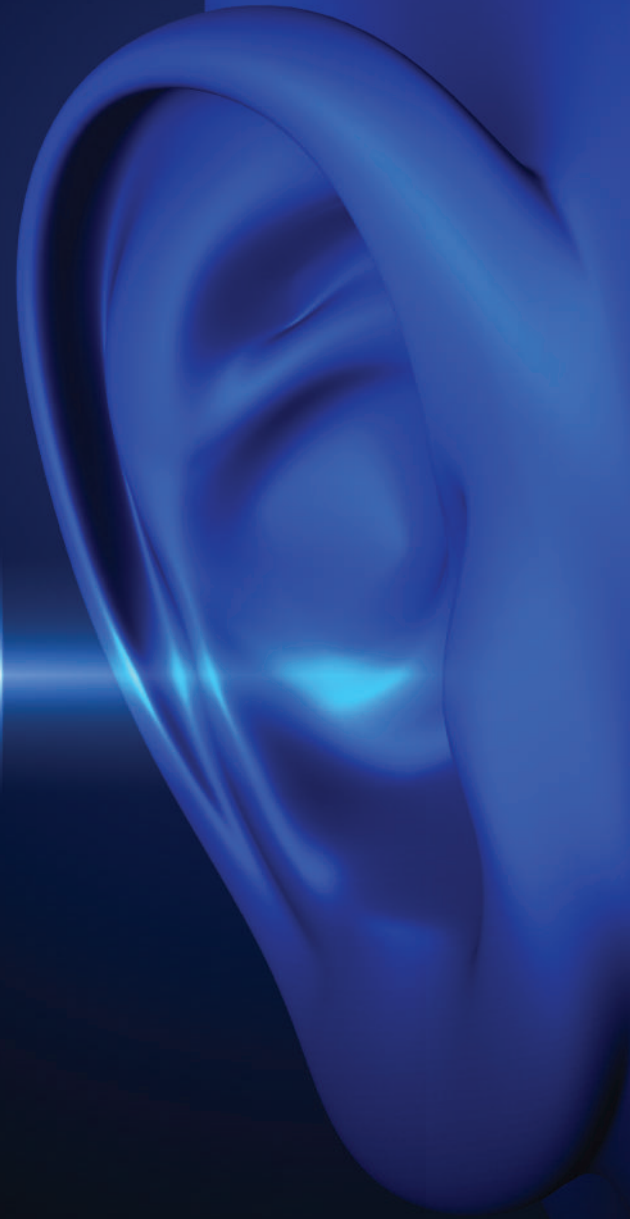


AEROSOUND[®]



Acoustic Solutions

THE BEST SOLUTIONS FOR YOUR ACOUSTIC COMFORT IN CIVIL & INDUSTRIAL CONSTRUCTION.



D.A.R.L.



 www.aerofoam.ae

AeroSound® - Acoustic Duct Liner

AeroSound® Duct Liner Technologies have been designed to improve the performance of traditional sound absorbing products that are the result of an in-depth research that aims to develop environment-friendly, fire safe, durable and hygienic products without presenting a risk to the users' health and improve IAQ.

A wide range of products have been developed to reduce noise in different applications. AeroSound® Acoustic Duct Liners are free of harmful irritants, fibers, dust and do not present any hazard to the users, making them safe to handle and install. AeroSound® Acoustic Duct Liners are highly hygienic products which do not let mold or fungi to grow, providing excellent sound absorption properties with extremely long technical life and efficient thermal properties due to the very low thermal conductivity value, resistant to all kinds of maintenance products used during the cleaning process. They are also resistant to water, steam, soaps, detergents and all kinds of cleaning chemicals dedicated to all applications where top hygienic standards are required such as medical and data centers, schools, hospitals and pharmaceutical facilities, operating cabins, silencers, decompression boxes and all kinds of casing. They can be used for partitions, decorative acoustic panels and phone cabins. Low weight of the product does not contribute additional load to the duct system.

Product Range



AeroSound® LX Acoustic Liner is a flexible semi open cell Polyolefin foam based liner with or without pressure sensitive adhesive on one side.



AeroSound® LN Acoustic Liner is a flexible semi open cell Elastomeric foam with or without pressure sensitive adhesive on one side.



AeroSound® LXF Acoustic Liner is a flexible semi open cell Polyolefin foam based liner with or without pressure sensitive adhesive on one side and aluminum foil on the other side.



AeroSound® ESA Open cell Elastomeric foam based on synthetic rubber (NBR) that combines acoustic and thermal properties.

Features & Benefits

- › Fire safe
- › No corrosion risk
- › Designed to improve IAQ
- › Clean & hygienic products
- › Designed to improve IAQ
- › Excellent thermal properties
- › Excellent acoustic properties
- › Environment friendly products
- › Fiber-free & dust-free
- › Excellent acoustic properties
- › Fungus & bacteria resistant
- › Excellent acoustic properties
- › Helps to achieve LEED & BREEAM certification

Technical Data

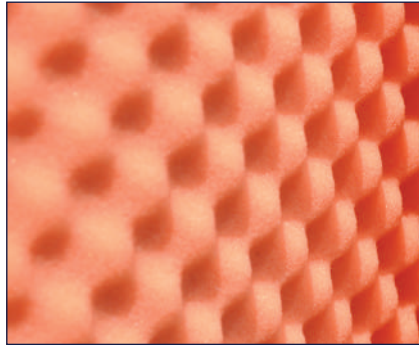
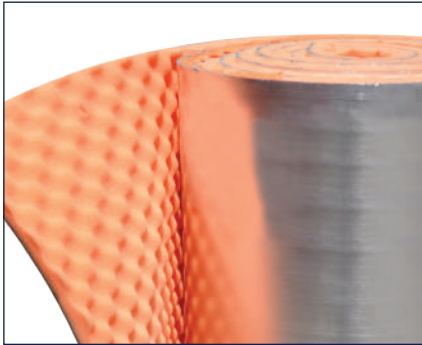
Properties	Value/Assessment										Tested acc. to:		
	AeroSound® LX XLPE Plain			AeroSound® LXF XLPE with Foil			AeroSound® LN Elastomeric			AeroSound® ESA Elastomeric			
Color	Gray			Blue-Gray			Black			Black/Gray			-
Available size	15 mm - 1.2 m x 20 m (W: ±20 mm, L: ±50 mm tolerance)			15 mm - 1.2 m x 20 m (W: ±20 mm, L: ±50 mm tolerance)			15 mm - 1 m x 12 m (W: ±20 mm, L: ±50 mm tolerance)			1 m x 1 m (±20 mm tolerance)			-
	20 mm - 1.2 m x 2.4 m (W: ±20 mm, L: ±50 mm tolerance)			20 mm - 1.2 m x 2.4 m (W: ±20 mm, L: ±50 mm tolerance)			20 mm - 1 m x 8 m (W: ±20 mm, L: ±50 mm tolerance)			-			-
	25 mm - 1.2 m x 2.4 m (W: ±20 mm, L: ±50 mm tolerance)			25 mm - 1.2 m x 2.4 m (W: ±20 mm, L: ±50 mm tolerance)			25 mm - 1 m x 8 m (W: ±20 mm, L: ±50 mm tolerance)			-			-
Thickness	15, 20, 25 mm (-1 mm +1.5 mm tolerance), other thicknesses available upon request									6,10,15,20,25,30,40,50 mm			-
Density of foam	30 kg/m³ (±10% tol.)			30 kg/m³ (±10% tol.)			60 kg/m³ (±10% tol.)			ESA 160 - above 120 kg/m³ ESA 240 - 220 to 260 kg/m³			-
Thermal conductivity	0.036 W/m·K at 23 °C			0.036 W/m·K at 23 °C			0.033 W/m·K at 23 °C			0.041 W/m·K at 23 °C			ASTM C518
Reaction to fire	-			Class 0			-			Class 1			BS 476 part 6 & 7
	-			Class A			-			-			ASTM E 84
VOC level	< 0.5 mg.m ⁻³			< 0.5 mg.m ³			-			-			ASTM D5116
Water absorption	2.03% - 2.7%			2.03% - 2.7%			0.28% - 0.99%			-			ASTM D570
Max. operating temp.	105 °C, +85 °C (adhesive)			105 °C, +85 °C (adhesive)			110 °C, +85 °C (adhesive)			105 °C, +85 °C (adhesive)			ASTM C411
Maximum air velocity	25.4 m/s (5000 fpm)											Internal test	
Antifungal	Yes											ASTM G21	
Noise Reduction Coefficient (NRC) α_w	Thickness	NRC	α_w	Thickness	NRC	α_w	Thickness	NRC	α_w	Thickness	NRC	α_w	ISO 354
	15 mm	0.35	0.20	15 mm	0.25	0.20	13 mm	0.35	0.30	10 mm	0.35	0.25	
	25 mm	0.35	0.30	25 mm	0.45	0.40	15 mm	0.45	0.40	15 mm	0.55	0.35	
							25 mm	0.45	0.40	25 mm	0.70	0.50	

AeroSound® SLM - Sound Lagging Material

AeroSound® SLM is a convoluted PU foam bonded to a flexible MLV (mass loaded vinyl) acoustic barrier with pure aluminum foil for aesthetic finishing. It has been specially designed for covering wastewater or drainage pipes, garbage pipes, walls, engine compartments and air duct sound insulation (outer surface) along with ventilation fans covering, compressor units covering and all types of partitions.

AeroSound® SLM can be used in combination with absorbing materials such as AeroSound® LN, LX, LXF or ESA to create acoustic wall barriers for equipment enclosures, generator rooms and fan rooms among others. This is also useful to support LEED and BREEAM certification.

For wastewater pipes, it is required that Aerofoam® Adhesives and Aerofoam® Aluminum Tapes cover the joints and for wall acoustic solution, Aerofoam® Acoustic Foam Tape must be used for better results. Please refer to the installation guidelines for further information or contact our technical team or local representative.



Benefits

- Easy to install
- Low VOC emissions complying with Green Building Standards
- Highly effective sound & vapor barrier
- Fiber-free & non-irritant product requiring no special protective equipment

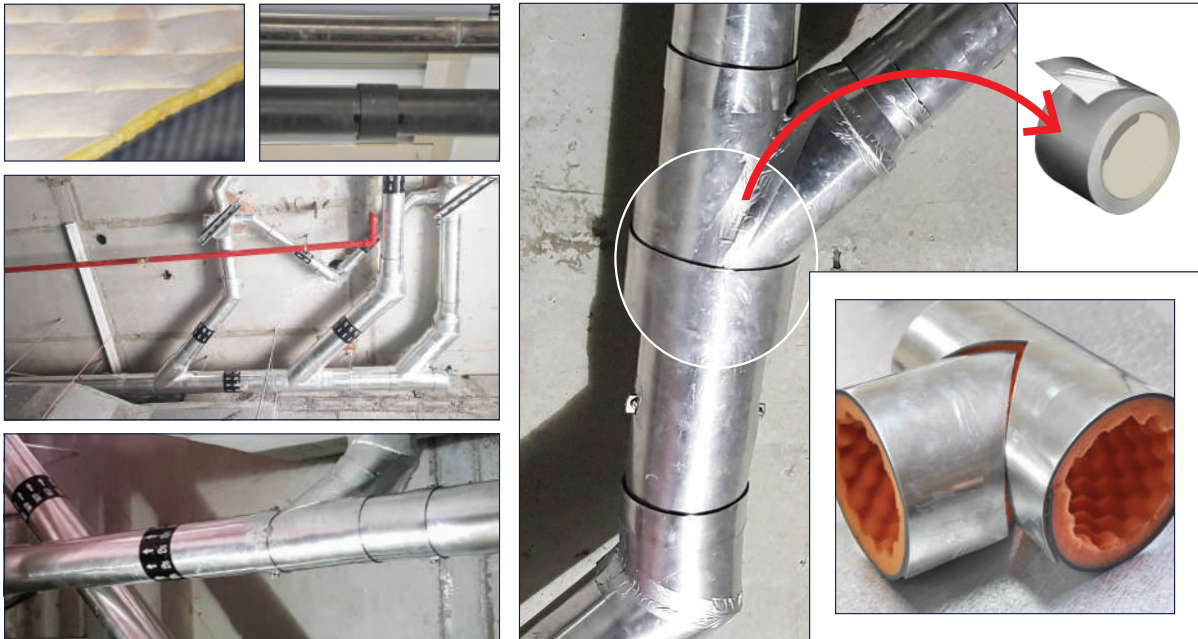
Technical Data

Properties	Value/ Assessment	Tested acc. to:
Reaction to fire	Class 0	BS 476 part 6 & part 7
	Class A	ASTM E84
	Ignitability: 0, Flame propagation: 0, Heat release: 0, Smoke developed index: 1	AS1530.3
Sound Transmission Class (STC)	30 dB	ASTM E90, ASTM E413
Sound Reduction Index R_w	(C; Ctr) = 30 dB (-1; -4) dB	EN ISO 10140-2
Wastewater sound reduction	12 dB to 17 dB	EN ISO 14366
Color	Silver/Orange	-
Thermal conductivity	0.042 W/m•K at 23 °C	ASTM C518
Total Volatile Organic Compound (VOC) emission rate	<0.5 mg/m ² /hr	ASTM D5116
Operating temperature range (°C)	-40 °C to +100 °C	-
Odor emission	Free from odor	ASTM C1304
Size	W: 1350 mm (±20 mm tolerance) L: 2.5 m & 5 m (±50 mm tolerance)	-
Weight	5 kg/m ² (-10% / +5%)	-
Thickness	25 mm (±5 mm)	-
Note: Product does not contain any fiber, asbestos, mercury or lead.		-

Pipes / Wastewater / Sewerage / Drainage

AeroSound® SLM, SL+ and SLM/GW are designed to reduce sound propagation coming from various sources.

AeroSound® product family is an excellent sound barrier with a high sound reduction level covering wastewater or drainage, and garbage pipes.



Walls / Partitions / Enclosures

AeroSound® acoustic lagging can be used as a single product or in combination with other products installed inside the partitions; ideal for hotels, offices and residential facilities, reducing the sound transmission between rooms. These products are also ideal for machinery/plant rooms.



Universal solution for different acoustic applications such as drain service and waste pipes, vehicle and automotive industries, machinery business, and construction industries providing a high acoustic performance, durability, flexibility, hygienic properties and long technical life. Acoustic Foam Tape should be applied in between the frame of the partition and walls/floors.

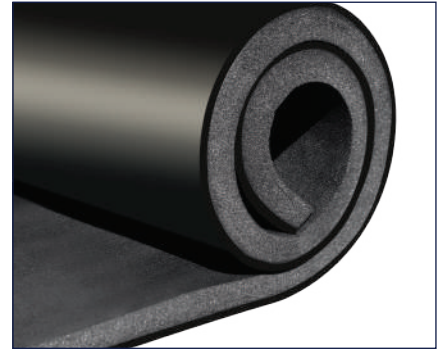
- Fire safe
- Environment friendly products
- Clean & hygienic products
- Cost saving
- Excellent acoustic properties
- Excellent thermal properties
- Long technical life
- Sound barrier & sound absorber
- Wide product range & solutions

AeroSound® SL+ - Acousting Lagging

AeroSound® SL+ is a semi open cell flexible elastomeric foam with solid high mass rubber. Both layers are integrated during the production process. The product is designed to reduce sound propagation coming from various sources. It can be an excellent sound barrier as it is or as an additional layer on existing partition. AeroSound® SL+ can be used as a single product or in combination with other Aerofoam® products. Moreover, AeroSound® SL+ can be used when thermal and acoustic insulation are required at the same time. AeroSound® SL+ helps to achieve LEED and BREEAM certification.

Thickness (8, 13, 20, 25* mm) + Size (1 x 1 m, 1 x 2 m)

*25 mm thickness is available upon request.



Technical Data

Properties	Value/ Assessment	Tested acc. to:
Color	Black	-
Available size	1 m x 1 m or 1 m x 2 m (W: ±20 mm, L: ±50 mm tolerance)	-
Thickness	8, 13, 20, 25 mm (±1.5 mm tolerance)	
Reaction to fire	Class 0	BS 476 part 6 & part 7
Density of elastomeric foam	45-65 kg/m³	-
Density of solid rubber	1560-2000 kg/m³	-
Weight	08 mm (5.27 kg/m² -5.32 kg/m²) 13 mm (5.45 kg/m² -5.75 kg/m²) 20 mm (6.00 kg/m² -6.2 kg/m²) 25 mm (6.12 kg/m² -6.3 kg/m²)	-
Sound Reduction Index R_w	(C; Ctr) = 30 dB (-1; -4) dB (13 mm)	EN ISO 10140-2
Sound Transmission Class (STC)	30 dB	ASTM E90, ASTM E413
Sound reduction (wastewater system)	12-17 dB	EN ISO 14366

AeroSound® SLM/GW

Material: Sewn glass wool quilt bonded to a flexible MLV (mass loaded vinyl) acoustic barrier with scrim foil.

Weight: 5 kg/m² (-10% / +5%)

Thickness: 15 to 25 mm

Width: 1.2 m & 1 m

Length: 2.5 m & 5 m

Acoustic Performance: upto 30 dB



AeroSound® HD - Noise Barrier

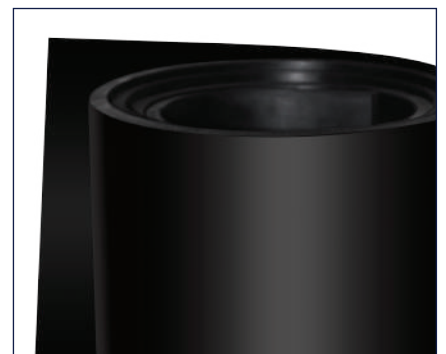
AeroSound® HD is a solid flexible rubber 4.5 - 5 kg/m² weight and 3 mm thickness rendering high performance as a sound barrier by itself or along with other Aerofoam® products. The flexible and tough structure resists sound waves reducing noise transmission. AeroSound® HD is produced and supplied considering large number of applications and market requirements.

The AeroSound® HD is ideal to use in hotels and manufacturing facilities. It can reduce road noise and noise coming from compressors and generators. It does not contain fiber, asbestos, heavy metals or bitumic components. AeroSound® HD helps to achieve LEED and BREEAM certification.

Thickness (3 mm) + Size (1 x 1 m), (1 x 2 m)

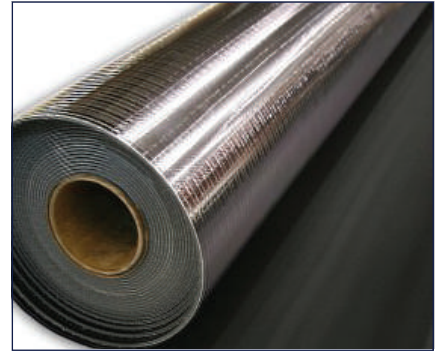
Technical Data

Properties	Value/ Assessment
Color	Black
Available size	1 m x 1 m or 1 m x 2 m (±2% tolerance)
Thickness	3 mm (-0.5 mm, +1 mm tolerance)
Weight	4.5 - 5 kg/m²
Density	1800 - 2100 kg/m³



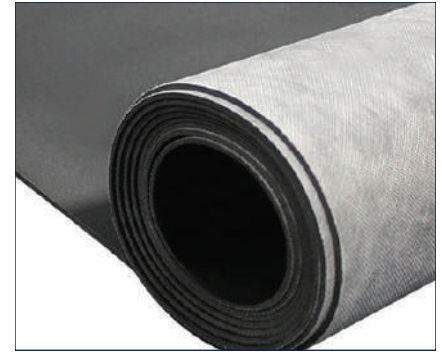
*AeroSound® ALM

Material: Flexible MLV (mass loaded vinyl) acoustic barrier with aluminum foil facing.
Weight: 5 kg/m² ± 5%
Thickness: 2 - 4 mm
Width: 1350 mm
Length: 2.5 m & 5 m
Acoustic Performance: 18 - 28 dB



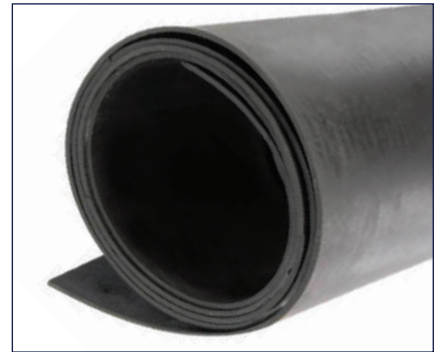
*AeroSound® RFM

Material: Flexible MLV (mass loaded vinyl) acoustic barrier reinforced with non woven fiber glass cloth.
Weight: 5 kg/m² ± 5%
Thickness: 2 - 4 mm
Width: 1350 mm
Length: 2.5 m & 5 m
Acoustic Performance: 18 - 28 dB



AeroSound® HDM

Flexible MLV (mass loaded vinyl) acoustic barrier with extra high density can increase sound barrier efficiency significantly even in a low frequency range. The product is useful in many industrial applications, including but not limited to automotive manufacturers. AeroSound® HDM can be supplied in customized sizes and thicknesses.



AeroSound® HDM - Technical Data

Properties		Value/ Assessment
Sound Reduction Index		Upto 35 dB
Color		Black
Roll size		1350 mm x 3 m or 5 m (Other sizes available on request)
Nominal thickness		4.0 mm ± 5%
Weight		8 kg/m ² ± 5%
Hardness		80 Shore A
Tensile strength	MD	≤ 2.78 N/mm ²
	TD	≤ 2.78 N/mm ²
Tear strength	MD	≤ 14.53 kN/m
	TD	≤ 14.03 kN/m
Fire properties		Self-extinguishing according to FMVSS 302

* The above listed products are customized and available upon request.

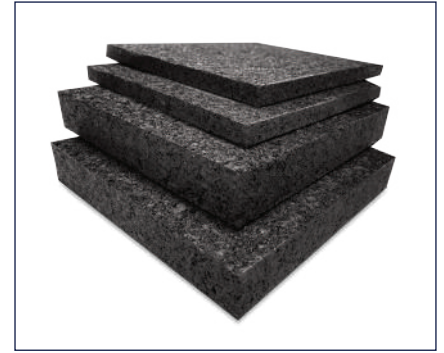
AeroSound® ESA - Elastomeric Sound Absorber

AeroSound® ESA 160, AeroSound® ESA 240

AeroSound® ESA is an open cell elastomeric foam based on synthetic rubber (NBR) that combines acoustic and thermal properties. It is designed to control sound transmission at a broad range of frequencies. The open cell elastomeric foam works as a sound absorber and vibration damper in a variety of applications.

Applications

Acoustic liner for HVAC ducts, air handling systems, plant rooms and architectural acoustics. Additionally, it can be used in vehicles, vessels, wall partitions, audiometric rooms and home theater.



Product Range

Available in sheets in 6 mm, 10 mm, 15 mm, 20 mm, 25 mm, 30 mm, 40 mm and 50 mm thickness. Standard sheet size is 1 m x 1 m.



Duct Work Installation



Engine Rooms



Audiometric Rooms

Technical Data

Properties	Value/ Assessment			Tested acc. to:
Temperature range Max. line temperature Min. line temperature	+105 °C -20 °C			ASTM C411
Thermal conductivity at 23 °C	0.041 W/m•K			ASTM C518
Reaction to fire	Class 1			BS 476, Part 7
Resistance to fungi	Passed			ASTM G21
Resistance to bacteria	Passed			ISO 22196
Color	Black			-
Size	1 m x 1 m			-
Sheet thickness tolerance	From 6.00 mm to 10.00 mm: ±1.00 mm >10.00 mm to 20.00 mm: ±1.50 mm >20.00 mm to 30.00 mm: ±2.00 mm >30.00 mm: ±3.00 mm			ASTM D3575
Length & width tolerance	1.00 m x 1.00 m: ±20.00 mm			-
Density range	ESA 160 - above 120 kg/m ³ ESA 240 - from 220 to 260 kg/m ³			-
* Noise Reduction Coefficient (NRC) & weighted sound absorption coefficient (α_w)	Thickness	NRC	α_w	ISO 354 ASTM C423
	10 mm	0.35	0.25	
	15 mm	0.55	0.35	
	25 mm	0.70	0.50	

* Values refer to AeroSound® ESA 240 product type.

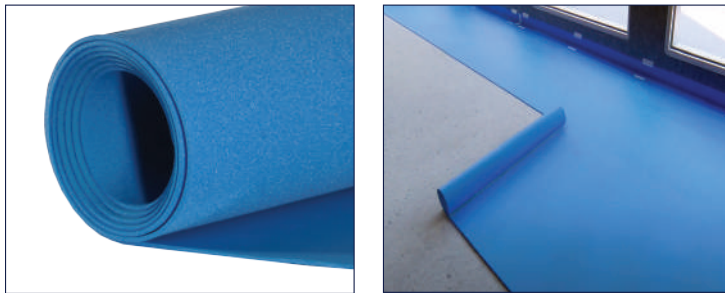
AeroSound® SF - Silent Floor

AeroSound® SF (Silent Floor) is a flexible cross-linked closed cell polyolefin foam with medium density, suitable for all floating floor applications to reduce impact noise and sound transmission in flooring systems. AeroSound® SF floor underlay can be used in both commercial and residential buildings, such as apartments, hotels, hospitals, schools and universities to reduce the sound transmission level between floors.

Usual application is to separate concrete base floor from final screed or screed from final finishing.

Thickness range: 3 mm, 5 mm, 8 mm and 10 mm (other thicknesses available upon request).

Properties	Value/ Assessment	Tested acc. to:
Color	Blue and Gray (other colors on request)	-
Size	1.2 m x 20 m (W: ±20 mm, L: ±50 mm tol.)	-
Density	25 kg/m ³ (±10% tolerance)	-
Maximum load	400 kg/m ²	-
Dynamic stiffness	24.5 MN/m ³	EN 29052
Water absorption	0.05 (kg/m ²)	BS EN 12087
Tensile strength	0.5 N/mm ²	ASTM D571

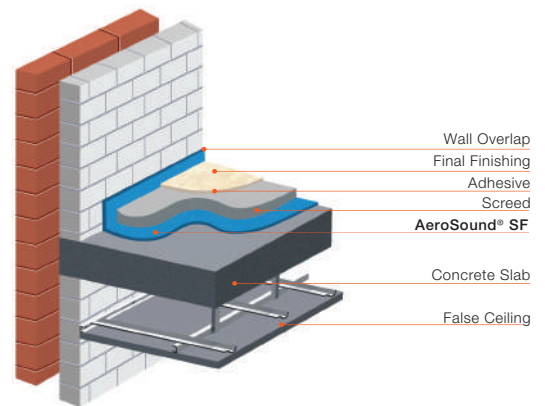


Impact Sound Reduction AeroSound® SF - 3,8,10 mm

Thickness	Δ Lw (EN ISO 10140-1)
3 mm	18-19 dB
8 mm	20-22 dB
10 mm	22-24 dB

Impact Sound Reduction AeroSound® SF - 5 mm (ASTM E2179-3 / EN ISO 10140-1)

Finishing	IIC	Δ IIC	Ln	Δ Lw
Ceramic tiles	50 dB	22 dB	58 dB	19-20 dB
Vinyl	54 dB	25 dB	54 dB	23 dB



AeroSound® ESF - Elastomeric Silent Floor

AeroSound® ESF (Elastomeric Silent Floor) is a flexible cross-linked elastomeric foam with medium density, suitable for all floating floor applications to reduce impact and sound transmission in flooring systems. AeroSound® ESF floor underlay can be used in both commercial and residential buildings such as apartments, hotels, hospitals, schools and universities to reduce the sound transmission level between floors.

Usual application is to separate concrete base floor from final screed or screed from final finishing.

Thickness range: 3 mm, 5 mm, 8 mm, 10 mm and 13 mm (other thicknesses available upon request).

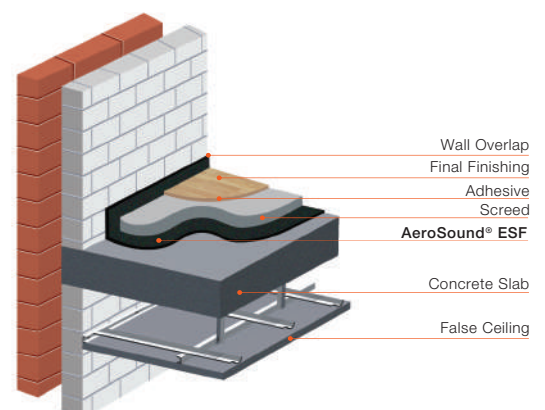
Properties	Value/ Assessment	Tested acc. to:
Color	Black	-
Size	1 m x 8-30 m (depending on thickness) (W: ±20 mm, L: ±50 mm tol.)	-
Density	60-85 kg/m ³	-
Maximum load	400 kg/m ²	-
Water absorption	0.06%	ASTM C209



Impact Sound Reduction AeroSound® ESF - 6,10,13 mm

Thickness	Δ Lw (EN ISO 10140-1)
6 mm*	17-18 dB
10 mm	19-20 dB
13 mm*	21-23 dB

* Values based on field test.



Projects

UAE



Burjeel Specialty Hospital,
Sharjah
AeroSound® SLM



Red Crescent Authority,
Baniyas, Dubai
AeroSound® LXF



Dubai Creek Harbour
Development, Dubai
AeroSound® SF

Oman



Ras Al Hamra
AeroSound® SLM

Kuwait



Assima Tower
AeroSound® SL+

Bahrain



Fontana Infinity
AeroSound® SLM

KSA



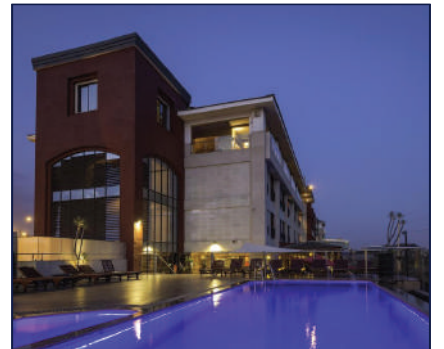
King Khalid International
Airport
AeroSound® SLM

Swaziland



Fish Hotel
AeroSound® LN and SLM

Kenya



Ole Sereni Hotel
AeroSound® SF

Projects

New Zealand



Metro Sports Facility
Christchurch
AeroSound® SLM

Morocco



Big Theatre of Rabat
AeroSound® SL+

Lebanon



BankMed HQ, Lebanon
AeroSound® LX

Sri Lanka



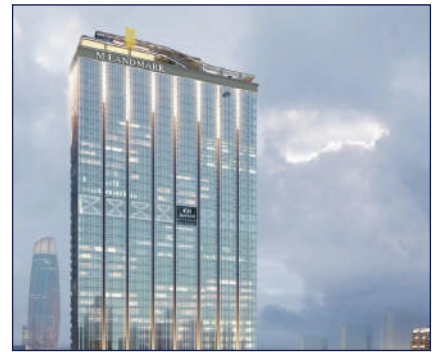
EKroma Fortune
AeroSound® ESA

India



Tata Steel Ltd.
Kalinganagar, Odisha
AeroSound® ESA

Vietnam



JW Marriott Hotel, Danang
AeroSound® LX

Nigeria



Chelsea Hotel
AeroSound® SLM



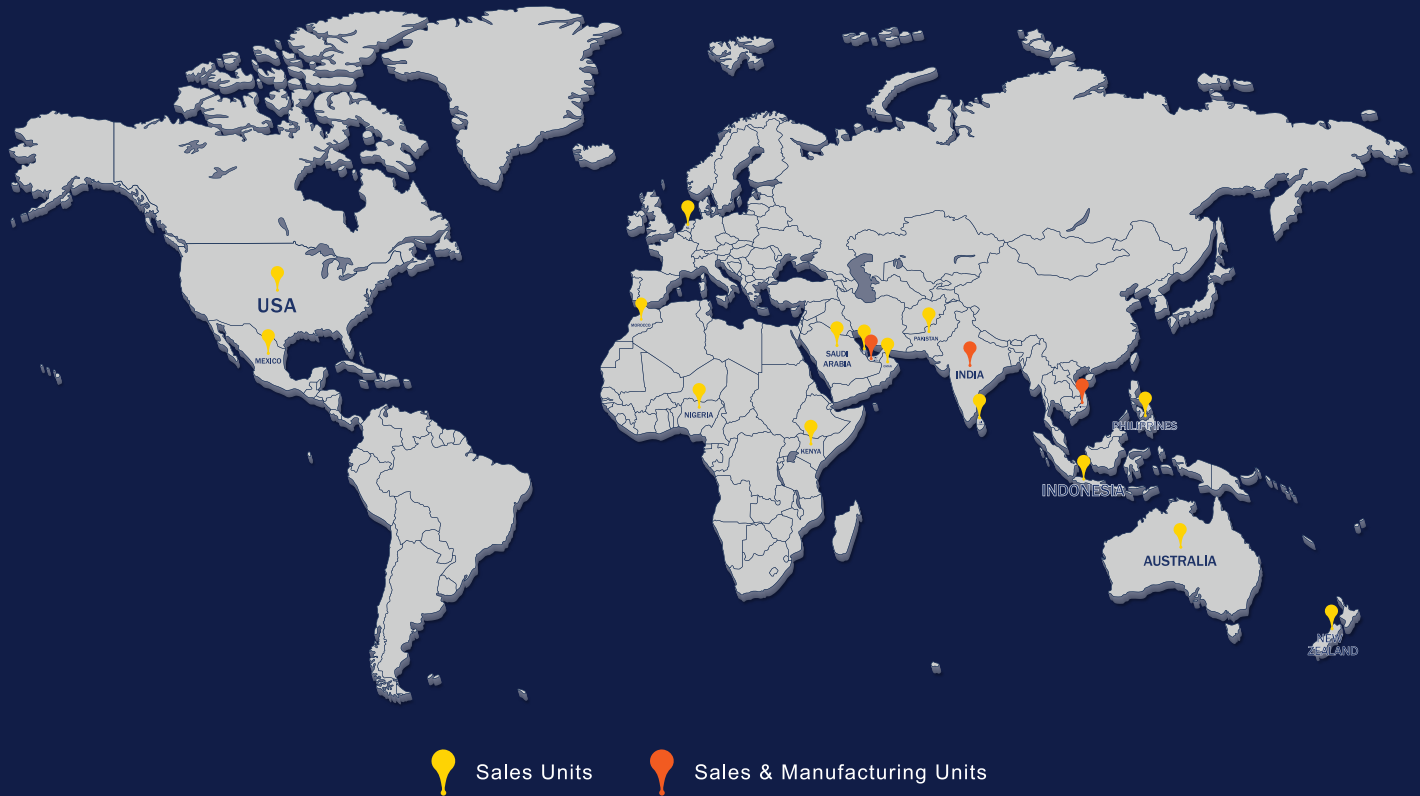
ExxonMobil HQ
AeroSound® LX



Lekki Free Trade Zone HQ
AeroSound® LX

AEROSOUND®

Global Footprint



For LEED Requirements/Compliance, please contact our technical department or local representative.

Engineered Applications: In everyday life we can face many problems due to noise in our surroundings, thus we need to find solutions with the help of engineering to control / reduce annoying noise levels, without affecting the performance of the construction. From auditoriums, theaters, concert halls to classrooms, hotel rooms, residential and offices, we can use AeroSound® products to reduce the noise that is transferred from one point to another and thus create acoustic comfort using the products alone or in combination with others. A clear example is the design of acoustic panels to absorb noise and avoid reverberation or echo, creating pleasant aesthetic designs by mixing colors for a better finish. In relation to exterior solutions, it can be used on the top of a building, or outside a building, it is common to see very noisy electro-mechanical systems such as chillers, AC equipments, electric generators, compressors and boilers to name a few. In such cases, noise control is essential and that is why AeroSound® products can be used in combination with other materials for the construction of noise barrier walls. For better advice and more information, please contact our technical department or our local representative.

Disclaimer: This information on Hira Industries products is presented to the best of our knowledge. All product data is based on average values and is for guidance only. As these products are subject to constant research and development, we reserve the right to update the contents without notice.

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Hira
INDUSTRIES