ISOLFON

BUILDING ACOUSTIC PRODUCTS

ALPHA ACOUSTIKI S.A.

In TUNE with YOUR needs

ISOLFON

BUILDING ACOUSTIC PRODUCTS

ISOLFON product range is specialized in Building & Industry Acoustics applications that require Sound Absorption, Noise Insulation or Vibration Control treatment.
The main advantage of ISOLFON product series, is the fact that they are easily installed and they can be utilized in many DIY applications. That includes among others floating floor constructions, increasing the sound insulation of a walls, sound proofing for inexpensive acoustic interventions in music rehearsal and control rooms etc.

The main products of ISOLFON range are:

Sound Absorption products
- ISOLFON SEP- PU-SEPY: Polyurethane Acoustic Foam Panels
- iZiFON: Polyester fiber Slabs
- ISOLFON Rebond: Recycled polyurethane foam sheets

Noise insulation products
- ISOLFON – Barrier : Mass Loaded Vinyl membrane
- ISOLFON- PB: Rolls with Lead Sheet
- ISOLFON Rebond: Recycled polyurethane foam sheets

Vibration control products
- ISOLFON ReRub: Recycled rubber sheets
- ISOLFON Rebond: Recycled polyurethane foam sheets
- ISOLFON ReCork: Cork and recycled rubber rolls
- ISOLFON FF: Polyethylene foam for floating floors

The technical information provided in this brochure is based on measurements and tests conducted in good faith and with objectivity.
This does not imply responsibility on the part of the Company and may be subject to change.

Our company aplies the Quality Management System **ISO 9001.2008** &
the Environmental Management System **ISO 14001.2004**.

: Eco-friendly product with recycled materials

ISOLFON SEP

Wave form Acoustic Foam Slabs

ISOLFON - SEP : Polyurethane foam slabs with a wave form design, that effectively traps sound and reduces the reverberation time.

The style of egg-crate acoustic foam offers sound proofing in the middle and high frequency. The panel is flexible and can be easily installed using appropriate glue on flat or curved surfaces of any kind (free of dust, oil and grease).

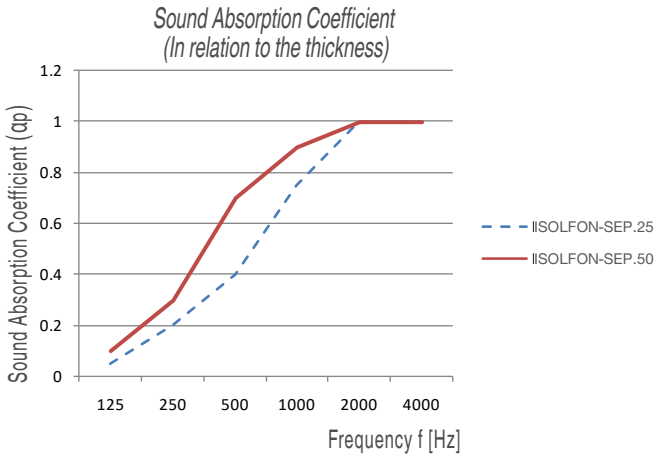
The product can also be supplied with self-adhesive surface to facilitate application. Some critical applications may need also appropriate mechanical fixing.

TECHNICAL CHARACTERISTICS

Slab Dimensions: 100x50 cm
Other dimensions on request.
Thickness (max): 15, 25, 30 & 50 mm
Fire Resistance: SE (MVSS 302) Self-extinguishing.
Characteristics: High sound absorption, uniform porous structure. Reduces excess sound reflection, reverberation times, improving vocal clarity.

APPLICATIONS

Sound absorption in recording studios, home cinema, night clubs, ventilation air duct, loudspeakers, sound attenuators etc.



Type: ISOLFON-SEP	Practical Sound Absorption Coefficient (α_p)						Weighted Sound Absorption Coefficient (α_w)	Sound Absorption Class
	Frequency (Hz)							
	125	*250*	*500*	*1000*	*2000*	*4000*		
ISOLFON-SEP.25	0.05	0.2	0.4	0.75	1	1	0.75(H)	C
ISOLFON-SEP.50	0.10	0.3	0.7	0.9	1	1	0.9	A

Practical Sound Absorption Coefficient αp, has been calculated according to ISO 11654:1997.

ISOLFON SE.PY

Acoustic Foam Slabs with Pyramid shapes

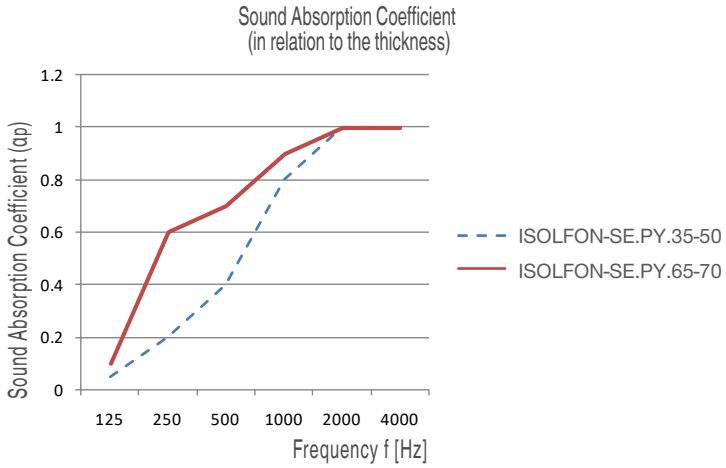
ISOLFON - SE.PY : Polyurethane foam slab with paterned pyramidic form, that effectively traps sound and reduces reverberation time.

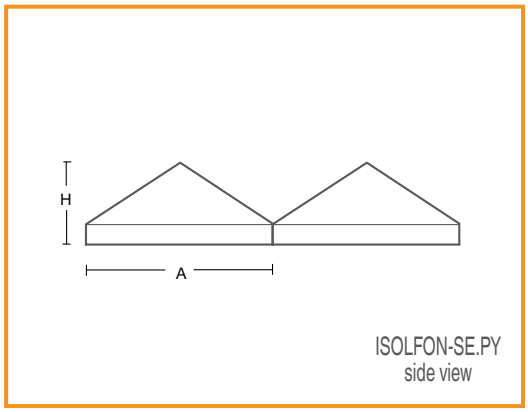
TECHNICAL CHARACTERISTICS

Thickness (Max): 40 - 65 mm (other dimensions on request).
Dimensions: 100 x 50 cm
Fire Resistance: SE (MVSS 302) Self-extinguishing.
Applications: Sound absorption in recording studios, home cinema, night clubs, loudspeakers, etc.
Characteristics: High sound absorption, uniform porous structure. Reduces excess sound reflection, reverberation time, improving vocal clarity.

ISOLFON - SE.PY offers sound absorption in the middle and high frequencies.
It is produced in various thicknesses to cover the needs of all kinds of applications where sound absorption is required.
The panel is flexible and can be easily installed (no advanced equipment is required). Just use glue on flat or curved surfaces of any kind (free of dust, oil and grease). Some critical applications may need appropriate mechanical fixing.

ACOUSTIC PROPERTIES





Type ISOLFON-SE.PY	Pyramid Dimensions (H x A) (mm)	Practical Sound Absorption Coefficient αp						Weighted Sound Absorption Coefficient (α_w)	Sound Absorption Class
		Frequency (Hz)							
		125	250	500	1000	2000	4000		
ISOLFON-SE.PY.35-50	35 x 50	0.05	0.2	0.4	0.8	1	1	0.8(H)	B
ISOLFON-SE.PY.65-70	65 x 70	0.1	0.3	0.7	0.9	1	1	0.9	A

Practical Sound Absorption Coefficient α_p, has been calculated according to ISO 11654:1997.

ISOLFON PU

Acoustic Foam Flat Slabs

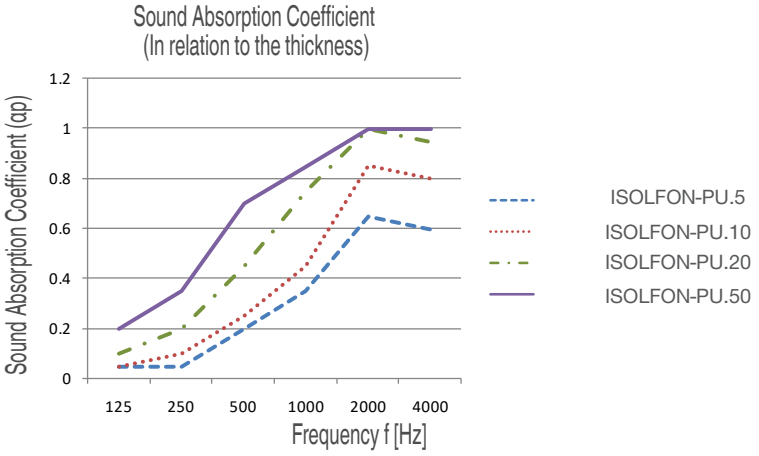
ISOLFON - PU : Polyurethane foam slabs with a flat form design that effectively absorbs sound and reduce noise.

TECHNICAL CHARACTERISTICS

Thickness (Max): 5 - 10 - 20 - 50 mm (other dimensions on request).
Dimensions: 100 x 100 cm. (also available in rolls)
Fire Resistance: SE (MVSS 302) Self-extinguishing.
Characteristics: High sound absorption, uniform porous structure.
Applications: Sound absorption in, ventilation air ducts, Fan boxes, Acoustic Louvers, Machine canopies. Reduces excess sound reflection.

ISOLFON - PU offers sound proofing in the middle and high frequency.
The panel is flexible and can be easily installed (no advanced equipment is required). Just use glue on flat or curved surfaces of any kind (free of dust, oil and grease). Some critical applications may need appropriate mechanical fixing.

ACOUSTIC PROPERTIES



Type ISOLFON-PU	Practical Sound Absorption Coefficient (α_p)						Weighted Sound Absorption Coefficient (α_w)	Sound Absorption Class
	Frequency(Hz)							
	125	*250*	*500*	*1000*	*2000*	*4000*		
ISOLFON-PU.5	0.05	0.05	0.2	0.35	0.65	0.6	0.35 (H)	D
ISOLFON-PU.10	0.05	0.1	0.25	0.45	0.85	0.8	0.45 (H)	D
ISOLFON-PU.20	0.1	0.2	0.45	0.75	1	0.95	0.75 (H)	C
ISOLFON-PU.50	0.2	0.35	0.70	0.90	1	1	0.9	A

Practical Sound Absorption Coefficient αp has been calculated according to ISO 11654:1997

ISOLFON iZiFON

Sound Absorption - Thermal Insulation. Fiber polyester slabs

iZiFON : New generation, revolutionary product, made of 100% polyester fibre.

iZiFON consists of fine, long , polyester fibres thermally bonded without the use of any chemical additive in its production. Is widely recognized for its energy conserving and sound absorption / thermal insulation properties. Produced by industry certified with OEKO-TEX®.

TECHNICAL CHARACTERISTICS

Dimensions: 120 x 60 cm *(for slabs)*
12 m x 60 cm *(for rolls)*

Thickness: 30 or 50 mm *(other dimensions on request)*
(Tolerance range ±0,5cm)

Density: 20 or 38 Kg/m^3 *(for slabs)*
10 or 12 Kg/m^3 *(for rolls)*
(Tolerance range ±10%)

Colour: Off-white, Black *(only S38/50)*

Thermal insulation

Thermal conductivity: λ_{10} = 0.031 W/m.K *(34 Kg/m^3)*

Order example: iZiFON-25/50 *(density/thickness)*

Fire reaction

Since there are no chemical components involved in the manufacturing process at any time, it has self-extinguishing characteristics according to FMVSS 302:2011
(Certified by Bureau Veritas). Reaction to Fire classification. B- s2,d0 according to EN 13501-1 : 2018.

Stability

iZiFON is not affected by ultraviolet radiation neither by bacterial, microorganisms, insects etc. It has long time durability and does not need frequent replacements.
Temperature application range - 40 to +80°C.

Flexibility

It is particularly lightweight, flexible and easy to assemble.

Eco friendly

Some types of iZiFON are made from recycled materials and it can also be recycled.

Friendly for humans and the environment

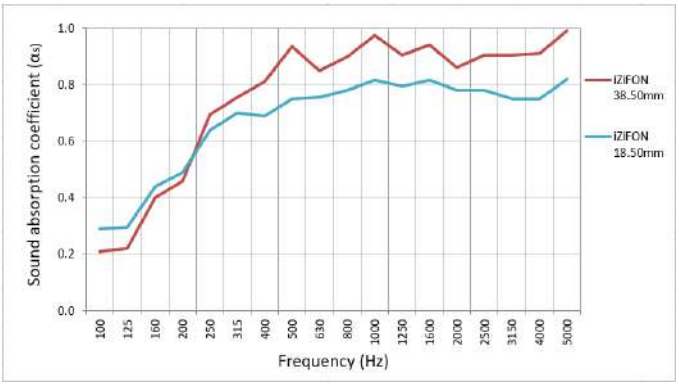
iZiFON is totally hygienic and non-allergic. It can be installed with bare hands and does not leave any itchy feeling to the installers. No gloves are required for handling it and it is 100% non-carcinogenic, thereby making it very user friendly. It is also odorless.
Certified according to ISO 16000: Indoor air quality, VOC & Formaldehyde **free** by CSI-SpA Italy.

APPLICATIONS

iZiFON is versatile. It can be applied over or under false ceilings, under concrete roofs, between gypsum board layers, etc.
iZiFON offers:

- Thermal and sound insulation between walls.
- Sound absorption for room acoustics.
- Thermal and sound insulation in air ducts.

Sound absorption properties



Sound absorption coefficient, α_s per frequency,
according to ISO 354-85 measured in a laboratory reverberation chamber.
Weighted sound absorption coefficient α_w = 0.90
according to ISO 11654
(for thickness 50mm and density 34.3 kg/m^3)

ISOLFON iZiFON

Sound Absorption - Thermal Insulation. Polyester fiber slabs & Rolls

iZiFON Slabs & Rolls

TYPE	DIMENSIONS (cm)	THICKNESS (mm)	NOMINAL DENSITY (kg/m^3)
iZiFON S 23/50 *(Slabs)*	120 x 60	50	23
iZiFON S 23/30 *(Slabs)*	120 x 60	30	23
iZiFON S 38/50 *(Slabs)*	120 x 60	50	38
iZiFON S 38/30 *(Slabs)*	120 x 60	30	38
iZiFON R 12/50 *(Rolls)*	1200 x 60	50	12
iZiFON R 12/30 *(Rolls)*	1200 x 60	30	12

(Tolerance range ±10%)

Thermal conductivity λ (W/m.K): iZiFON S40 λ=0.031, iZiFON S25 λ=0.038
(certified measurement by KEDE/ Ministry of Public Works)

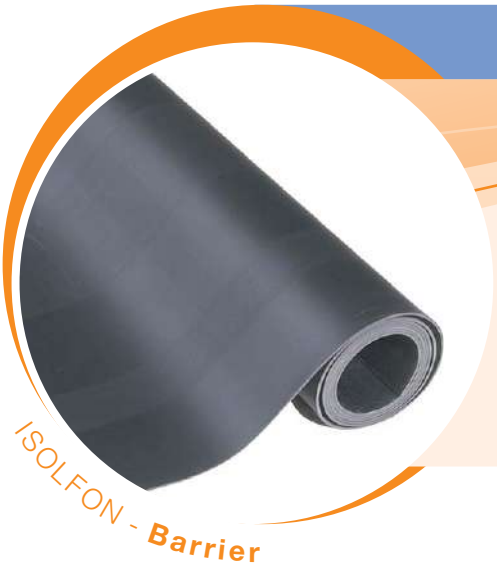
Typical applications

Floating ceiling application with iZifon

Floating dry-wall application with iZifon

ISOLFON Barrier

Noise Barrier - Viscoelastic Membrane



ISOLFON - Barrier : High performance, flexible, mass - loaded vinyl noise barrier, offering superior acoustic transmission loss.

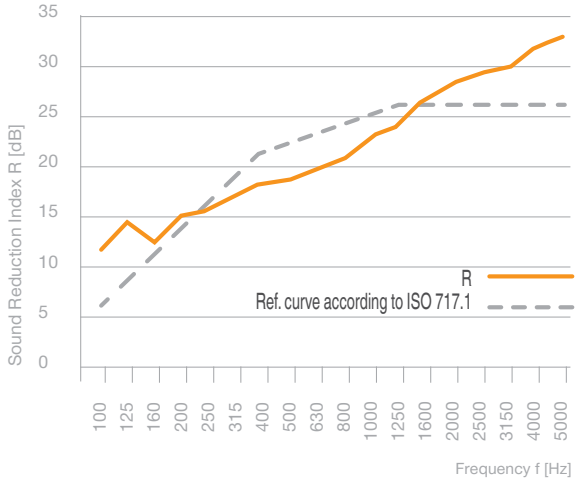
Constructed of non-reinforced blend of polymers compounded mineral filled, without lead and bitumen fillers.
ISOLFON - Barrier can be used to increase transmission loss between acoustically sensitive spaces. It offers comfort, privacy, confidentiality and protection from external noise by improving the noise insulation of existing structures, through retrofitting over existing walls and covering with gypsum board.

Stiff lightweight panel constructions, such as gypsum board, typically have coincidence dip resonance, which allows noise to be transmitted through a construction. The coincidence dip depends on the material's stiffness and thickness and occurs at the point where the transmitted through the structure sound matches the natural frequency of the panel.
ISOLFON - Barrier prevents coincidence dip resonance.

Acoustic Characteristics

Weighted Sound Reduction Index for Barrier.5R:
Rw (C, Ctr) = **26** (0, -3) **dB**
(according to ISO 140.3 & ISO 717.1)

Sound Reduction Index R [dB]

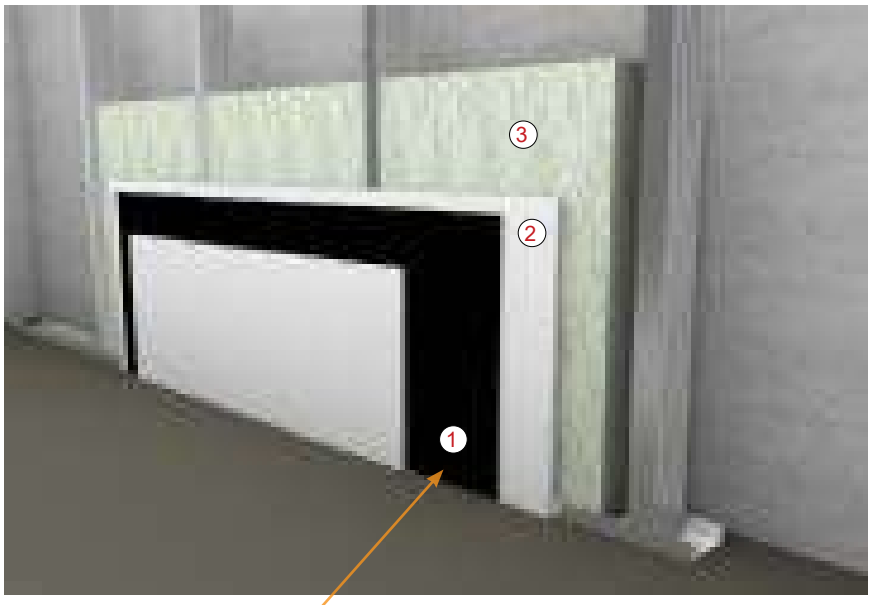


Application in floating ceilings

1. Viscoelastic Mass loaded vinyl ISOL*fon* - Barrier
2. Gypsumboard
3. Polyester fiber-slab iZiFon

ISOLFON Barrier *Viscoelastic Membrane*

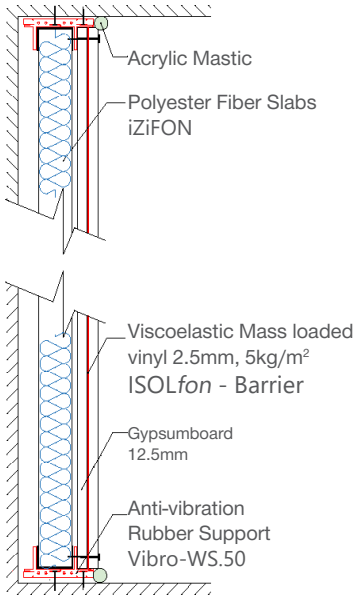
Application in gypsum-board partitions



1 Viscoelastic Mass loaded vinyl ISOL*fon* - Barrier

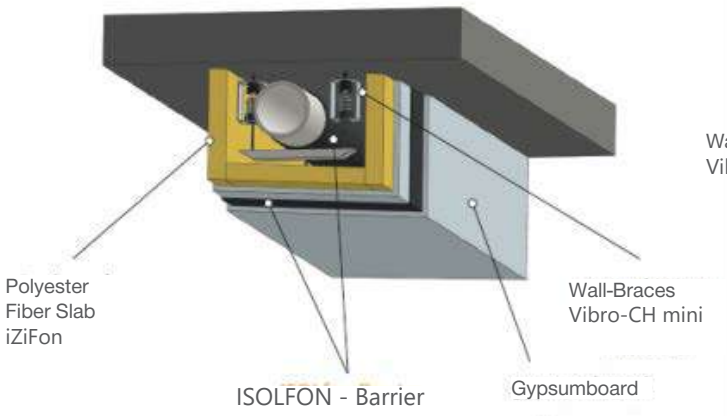
2 Gypsumboard

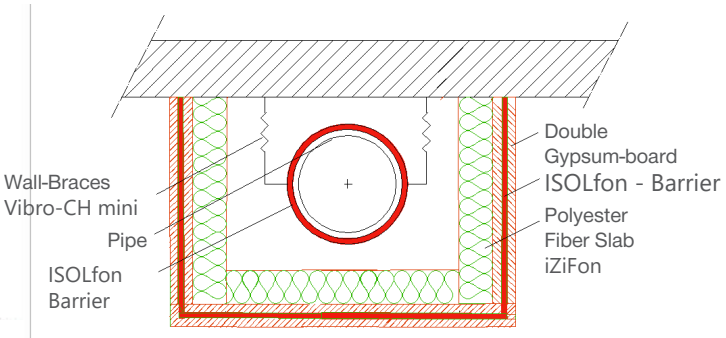
3 Polyester Fiber Slabs iZiFON



Section

Application in waste pipe noise insulation





Section

TECHNICAL CHARACTERISTICS

Types		Dimensions	Thickness
Barrier 3.5R:	Rolls with 3.5 kg/m²	5m x 1m	1.8 mm
Barrier 5R:	Rolls with 5 kg/m²	5m x 1m	2.5 mm
Barrier 10P:	Rolls with 10 kg/m²	1.2m x 1m	5 mm

Tensile Strength:	0.9 MPa
Fire Behaviour:	[FMVSS 302] < 100 mm/min ISO 3795: 1989 < 17.6 mm/min
Temperature Range:	-30°C, +130°C (continuous use)

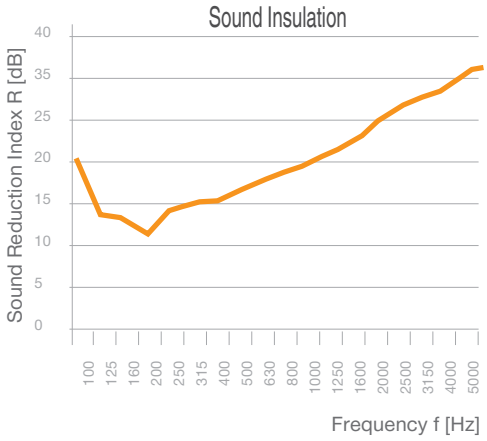
ISOLFON PB

Noise insulation lead rolls

ISOLFON – PB : Superior soundproofing lead noise barrier membrane.

ISOLFON - PB is the best choice for applications where space is limited. The lead is one of the heaviest material. Because of its inherent limpness or softness lead cannot be easily set in vibration. Due to mass law (greater surface weight of the barrier better noise reduction), they can offer a excellent noise insulation.
Both external surfaces of the roll are covered by a highly flexible reticulated polyethylene foam in order to protect the lead sheet, facilitate the installation and offer also an extra vibration absorption.

Complex composed of:
A: Layer of reticulated polyethylene foam (3mm)
B: Lead sheet



Test results according to ISO 140.3 & ISO 717.1

TECHNICAL CHARACTERISTICS

Supplied in rolls

Length:	6m *(other dimensions on request)*
Width:	1m
Thickness:	Total 6mm
Surface weight:	4kg/m^2
Reaction to fire:	Class 2 (self-extinguishing)
Dynamic Rigidity:	s'= 67 (MN/m^3) *According to ISO-EN 29052-1*
Weighted Sound insulation index:	R'w =27dB, *According to ISO 140.3 & ISO 717.1*

APPLICATIONS

Noise reduction in building separation walls, engine compartments in luxury boats or tracks, timber floors, machinery insulation covers etc.

INSTALLATION

Use glue on flat and curved surfaces of any kind (free of dust, oil and grease). The product can also be supplied with self-adhesive surface to facilitate application.

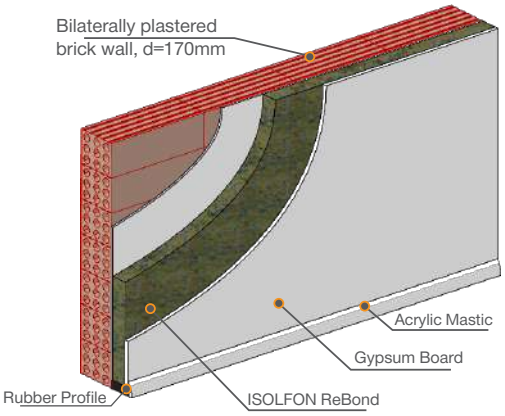
Application of ISOLFON PB on waste pipe

ISOLFON ReBond

Sound Absorption, Soundproofing & Impact noise reduction

ISOLFON - ReBond : Complex material, that can be used for sound absorption, soundproofing & impact noise insulation.

ISOLFON-ReBond is produced by mixing recycled chopped polyurethane foam with a liquid polyurethane polymer adhesive, and thermocompression the mixture until the desired specific gravity is achieved. It has excellent dynamic stiffness, very good elasticity, very low permanent deformation, high consistency and mechanical strength.
It is environmentally friendly, as it is obtained from recycled foam, it is 100% recyclable, it does not contain fibers or other health harmful substances.



Wall cut away view

APPLICATIONS

Its primary application is to solve complex acoustic problems in buildings. Used in wall & ceiling cladding to fill the air gaps and create the Mass Spring effect, to improve the Sound Insulation properties of the wall system. The consistency and elasticity of ISOLFON-ReBond composition is used as «spring», in combination with materials which play the role of the mass, such as plasterboards, MDF, hardboard, etc.

Dimensions: **100x50cm / 100x100 cm,**
Thickness : 20 mm / 10 mm
Other dimensions are available upon request with minimum order quantity)

Weighted Sound Reduction Index	Rw (dB)
Brick wall 170mm with plaster	53
Brick wall with ReBond 40mm + gypsumboard 18mm	62

According to ISO 717-1

USES ON FLOOR

· **Floating floor sound insulation** with separation of the load-bearing plate from the final floor for optimum sound insulation performance.

· **Floating floor sound proofing system**, with an intermediate substrate underneath sheets of cement-board, chipboard, MDF or similar substrate, ensuring improved sound insulation of airborne noise.

· **Anti-vibration underlay for impact noise sound reduction**, ideal for use under parquet, laminate or glued down wooden floors, Gym floors, carpets, LVT floors, ensuring reduced vibration and structure-borne noise transmission. It can offer an impact sound reduction ΔLw = 33 dB according to ISO 717.2.

ISOLFON-ReBond in floating floor

ISOLFON ReCork

Cork and recycled rubber rolls for Sound & Vibration reduction

ISOLFON ReCork : impact sound noise insulation membrane, with excellent elasticity and resiliency.

ISOLFON ReCork : is produced from natural, synthetic and recycled elastomeric compounds and cork, bonded with polyurethane glue. It is easy to install, resilient and durable with low structural weight. It can be 100% recycled. **ISOLFON ReCork** is suitable for all conventional subfloor and floor covering.

APPLICATIONS

- Floating floors (it can be used directly on the screed flooring or old coating).
- Antivibration underlay sheet, specifically used in renovations where available space is restricted.
- It can be installed as all traditional floating floor substrates.

TECHNICAL CHARACTERISTICS

Thickness:	3mm*
Fire rating:	B2-Efl (DIN 4102)
Temperature limits of applicability:	-30°C, +80°C
Coefficient of thermal conductivity:	0.085 W/mK (EN12667:2002)
Apparent dynamic rigidity:	88 MN / m3 (EN 29052-1)

*other thicknesses available uppon request with MOQ

ACOUSTIC PROPERTIES

Estimation of impact sound attenuation level *(according to EN ISO 10140-3)*	**ΔLw (dB)**
Application *(thickness 3mm)*	**ΔLw (dB)**
Test under ceramic	15
Test under glued parket 15mm	17
Test under floating parquet	21

Typical residential tile floating floor system with approved adhesive, grout and tile floor covering.

For more technical details or specifications, please refer to our technical department.

ISOLFON ReRub

Recycled rubber sheets for Sound & Vibration reduction

ISOLFON ReRub : Combines heavy surface mass, excellent elasticity and viscoelastic reaction of the compressed elastic particles.

ISOLFON ReRub is produced with a combination of recycled elastomeric compounds, coming from the recycling end of life tyre rubbers (ELT), bonded with polyurethane glue.
It can be applied to a wide temperature range and it also has remarkable mechanical resistance to impact, compression, friction etc. It is resistant to common chemical environments, moisture and oils.

Dimensions

Roll width 100 cm.
(*Other dimensions upon requests*)

APPLICATIONS

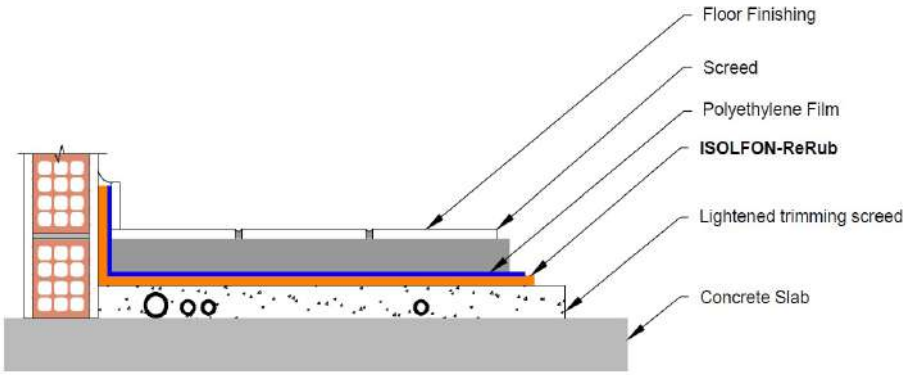
- Floating floors, especially in large load applications (commercial and industrial areas, warehouses with vehicle traffic etc).
- Antivibration underlay sheet, specifically used in renovations where available space is restricted.
- Airbourne noise insulation for walls, especially when used with dry wall.

INSTALLATION

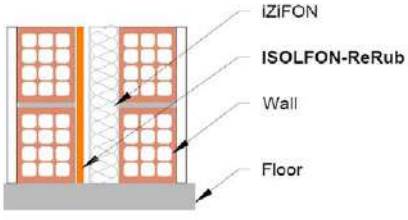
- Floor: Installation as all traditional floating floor substrates
- Walls: Fixed with mechanical support (plastic nails) or appropriate glue. The joints between the sheets sould be sealed with appropriate tape.

ACOUSTIC PROPERTIES

Estimation of impact sound attenuation level **ΔLw (dB)** *(according to ISO 12354-2)*									
Screed Weight (kg/m²)	85	100	115	130	145	160	175	190	200
Thickness **3** (mm)	17.8	18.8	19.7	20.5	21.3	21.9	22.5	23.0	23.3
Thickness 5 (mm)	21.1	22.1	23.0	23.8	24.6	25.2	25.8	26.3	26.7
Thickness 10 (mm)	25.7	26.8	27.7	28.5	29.2	29.8	30.4	31.0	31.9



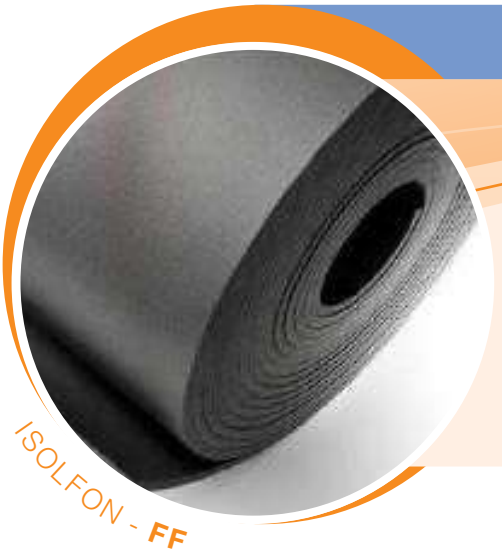
Floor application



Wall application

ISOLFON FF

Impact Sound Insulation for floating floors



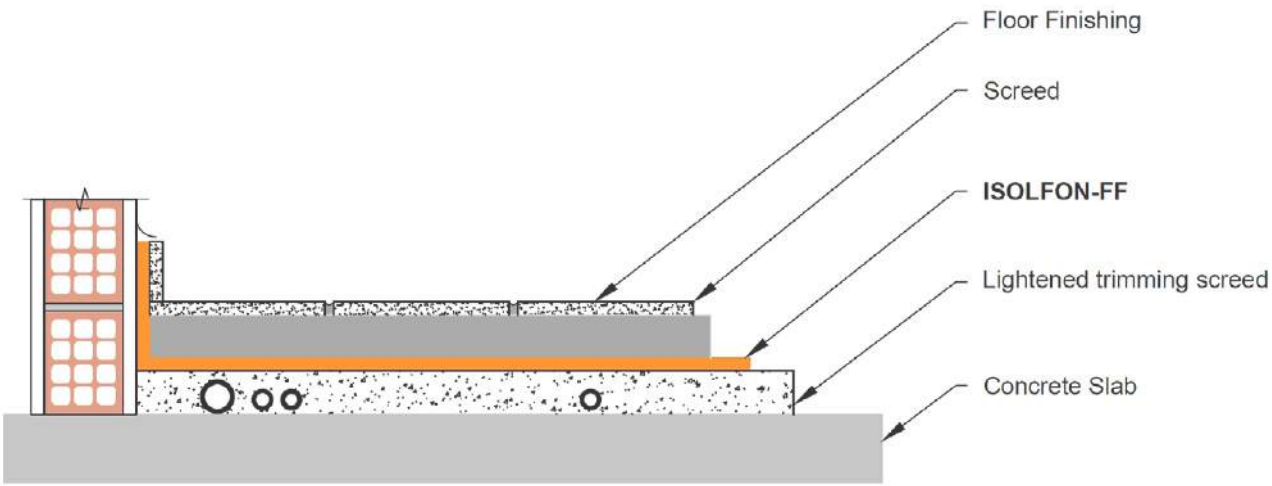
ISOLFON -FF : Closed cells foam that offer impact sound insulation in floating concrete floors.

ISOLFON-FF is easy installed in a great range of applications where impact noise insulation on floating floors is required.
It is produced from expanded polyethylene cross linked foam, with density of about 28 kg/m^3, which takes the shape of a rolled sheet. The structure of closed cells offers a greater deflection and rebound (after tension and release) due to the fact that air is trapped in the cells. Additionally it offers perfect resistance in water and humidity absorption. Expanded polyethylene is flexible and compressible, doesn't oxidize, is not affected by fungi or bacteria and is perfectly compatible with common building materials such as concrete, plaster, lime and sand.

Their ingredients are eco-friendly and do not contain HCFC and harmful chemicals.
Expanded polyethylene sheets can be applied underneath a number of different floor finishes, such as engineered laminated flooring in floating floor construction, laminate timber floor, concrete screed floor with ceramic tiles / marble finish, carpet, etc.

TECHNICAL CHARACTERISTICS

Dimensions:	Rolls with 5 and 10mm thickness *Other dimensions on request.*
Utilization Temperature:	-40°C +90°C
Thermal Conductivity:	0.035-0.04 Kcal/mh°C
Water absorption (EN12087:2002):	0.10% kg/m^2
Compression Resistance (ISO844)	25%Compression >0.03 Mpa 50%Compression >0.07 Mpa 75%Compression >0.18 Mpa
Improvement of Impact Noise Insulation *(According to ISO 140.8 & ISO 717.2)*	ISOLFON -FF.5: ΔLw = 19 dB ISOLFON -FF.10: ΔLw = 20 dB



ISOLFON-FF application in floating concrete floor

ISOLFON

BUILDING ACOUSTIC PRODUCTS CATEGORIES

SOUND ABSORPTION

The ability of a material to absorb sound.
The process by which sound energy is converted to heat energy.

SOUND INSULATION

The ability of a construction or building element to reduce noise transmission.

VIBRATION ISOLATION

The process of isolating a mechanical system from steady state excitations.

ECO-FRIENDLY

Eco-friendly product with recycled materials.

*Our company applies the Quality Management System **ISO 9001.2008** & Environmental Management System **ISO 14001.2004***

ALPHA ACOUSTIKI

In TUNE with YOUR needs

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SUSTAINABILITY
SEE OUR ACTIONS

Our technical department will be happy to assist you
find the best solution to your sound insulation problems.

CONTACT

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