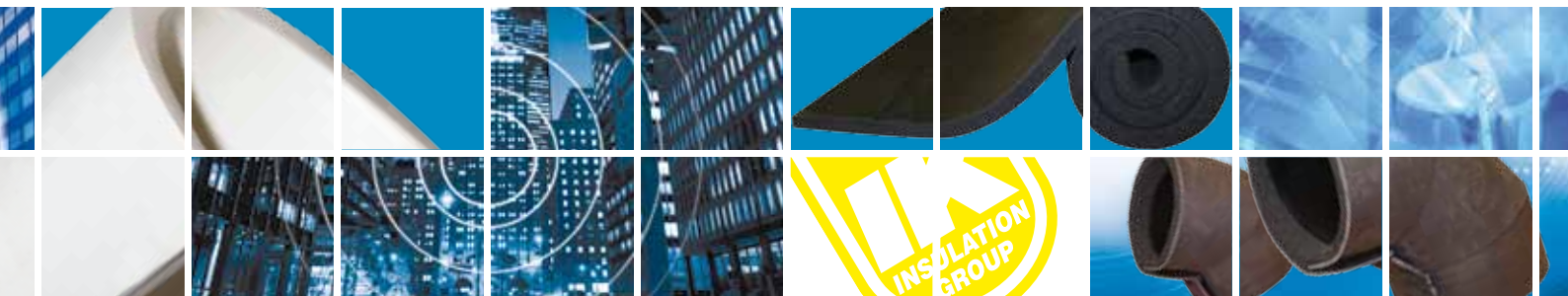


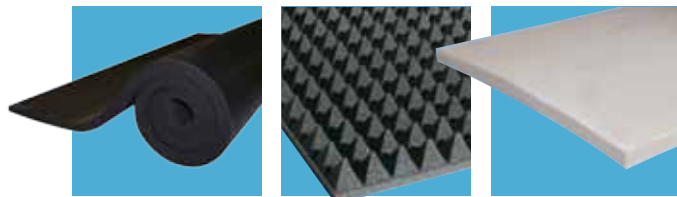
DAMPING
SOUND ABSORPTION
SOUND INSULATION



Acoustic Insulation



products for acoustic insulation



L'ISOLANTE K-FLEX
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K-FLEX K-FONIK SYSTEM

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SOUND INSULATION

SOUND ABSORPTION

*K-FLEX K-FONIK GK, GV are soundproofing and damping materials



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Company Profile

Worldwide Leader in the **production**
of **Elastomeric Insulation** for **Energy Saving**.

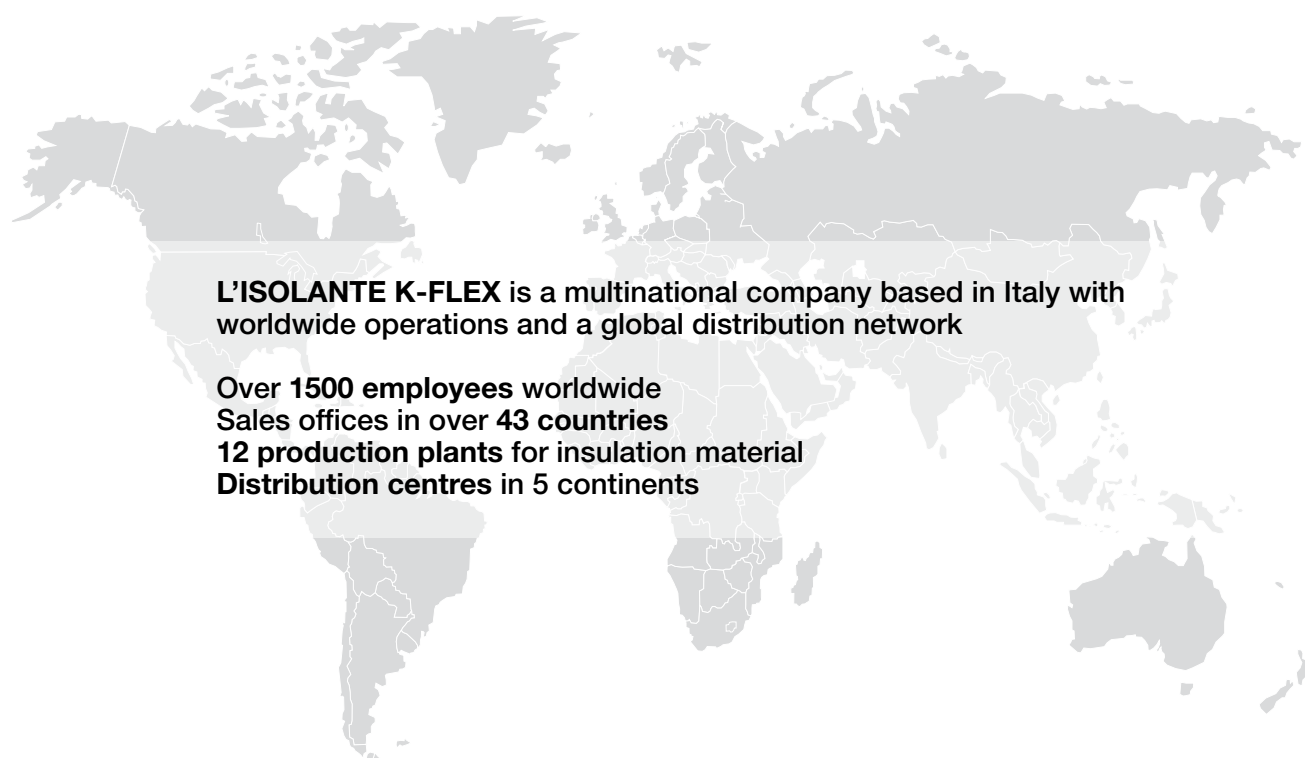
L'ISOLANTE K-FLEX is an Italian company specialising in the manufacture of thermal and acoustic elastomeric insulation; with a worldwide presence of sales offices and production facilities. Its products and insulation solutions have applications in many different fields: from construction to transport, and from the petrochemical industry to renewable energy.

L'ISOLANTE K-FLEX products are designed for the following markets:

- > HVAC
- > Technical Insulation
- > Solar Energy
- > Refrigeration
- > Plumbing & Heating
- > Acoustic insulation
- > Oil & Gas / Industrial applications
- > Shipbuilding and Public Transport
- > Food & Beverage
- > Fire Stopping

L'ISOLANTE K-FLEX is a world-wide market leader thanks to the high quality and technological innovation of its products, which play a key role in the reduction of both energy consumption and greenhouse gases.

L'ISOLANTE K-FLEX demonstrates the success of Italian industry throughout the world.



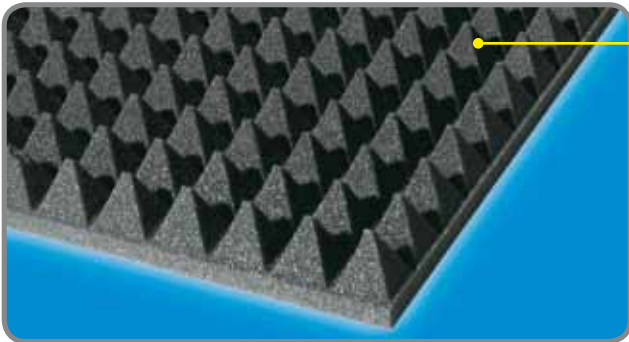
L'ISOLANTE K-FLEX is a multinational company based in Italy with worldwide operations and a global distribution network

Over 1500 employees worldwide
Sales offices in over 43 countries
12 production plants for insulation material
Distribution centres in 5 continents

www.kflex.com

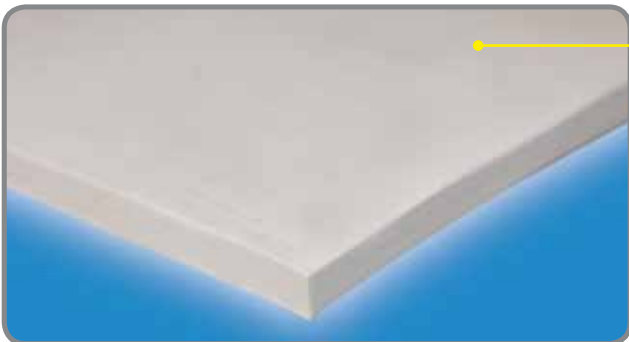


Application groups



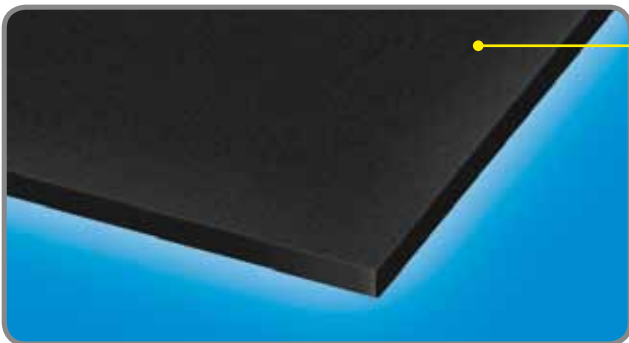
Sound Absorption Materials

For the absorption and dissipation of sound energy by reducing the amount reflected back to its source.
K-FONIK P, K-FONIK ST B GK, K-FONIK 160-240, K-FONIK B...



Sound Insulation Materials

For isolating airborne noise and preventing its migration.
K-FONIK GK, K-FONIK ST GK, K-FONIK GV...



Damping Materials

Facilitates damping of noise caused by the vibration of sheets, panels and covers.
K-FONIK GK, K-FONIK GV...





L'ISOLANTE K-FLEX

A NEW GENERATION OF INSULATION MATERIALS

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GUIDE TO PRODUCTS & APPLICATIONS



WORK SECTOR	APPLICATIONS	SOUND INSULATION					SOUND ABSORPTION					DAMPING	
		K-FLEX K-FONIK ST GK	K-FLEX K-FONIK GK -GV*	K-FLEX K-FONIK PU GK	K-FLEX ECO/GV*	K-FLEX K-FONIK PE GK	K-FLEX K-FONIK OPEN CELL 160	K-FLEX K-FONIK OPEN CELL 240	K-FLEX K-FONIK B	K-FLEX K-FONIK P	K-FLEX K-FONIK PU	K-FLEX K-FONIK FIBER P	K-FLEX K-FONIK GK - GV*
BUILDING	Perimeter walls, Dividing walls, Floor and Ceiling, Plumbing and draining system	●	●	●		●	●	●	●	●	●	●	
HVAC	Ventilation channels and industrial pipes	●	●				●	●	●	●		●	
INDUSTRIAL and OIL & GAS	Piping, equipment and plants		●		●		●						●
O.E.M.	Machinery covers, Engine compartments	●	●				●	●	●	●	●	●	●
TRAIN & SHIPBUILDING	Engine and frames, Partitions, Technical installations		●		●							●	●
AUTOMOTIVE	Engine noise insulation and frames, Sound absorption for the roof frame, Driver cabins.	●	●									●	●

*K-FLEX K-FONIK GV special viscoelastic mass with certification for train & shipbuilding industry.

Sound Insulation

AIRBORNE SOUND INSULATION

The sound reduction index R versus frequency is used to describe the airborne sound insulation of building elements. It is also called transmission loss (TL). From the sound reduction index versus frequency, the single number quantity, the weighted sound reduction index R_w is calculated by comparing the values with a reference curve according to ISO 717-1.

Two supplementary spectrum adaptation terms have been introduced in a new edition of ISO 717-1, C for pink noise (equal levels over the whole frequency range which represents activities like talking, music, TV and medium and high speed railway traffic) and Ctr for noise with mainly low frequencies (representing city traffic, factories, disco music etc.). With the sum of R_w and the relevant spectrum adaptation term (according to the relevant spectrum) the difference of A-weighted levels can be calculated. The spectrum adaptation terms may be stated for the frequency range 100-3150 Hz (used for decades) as well as for the enlarged frequency ranges of 50-3150 Hz or 100-5000 Hz; the relevant frequency range has then to be stated as an index, e.g. C50-5000 or Ctr,50-5000.

Different countries have different units to describe the airborne sound insulation between two rooms. If one considers that sound is transmitted in buildings only through separating structures, the sound reduction index is also used to describe the sound insulation between two rooms; to take into account the fact that the sound is generally transmitted in a building via the separating element and the flanking elements, the sound reduction

index in the building is called the apparent sound reduction index $R'1$. The single number quantities, weighted apparent sound reduction index $R'w$, and C and Ctr, are calculated and stated as described above.

¹ pronounced R-dash; the dash represents the fact that the given sound reduction index is measured in the building.

The sound level difference D between two rooms is stated to differentiate between the sound insulation of building elements and the sound insulation between two different rooms in a building. Since sound levels in receiving rooms are also determined by the sound absorption in the room, this means that the higher the sound absorption, the lower the sound level, this sound level difference has to be referred to as standardized absorption; two units are standardized: the normalized sound level difference D_n , referred to 10 m² of sound absorption area in the receiving room and the standardized sound level difference D_{nT} , referred to 0.5 seconds of reverberation time in the receiving room. Numerous measurements have shown that the reverberation time in living rooms is independent of the volume over 0.5 seconds and therefore the standardized sound level difference is better in practice at representing the acoustic conditions in rooms 2.

Supplementing apparent sound reduction index, normalized sound level difference and standardized sound level difference, the spectrum adaptation terms are stated.

As far as building acoustics are concerned, one may draw a clear differentiation to describe acoustic quality:

The sound insulation of a building element is characterized by the sound reduction index; this can only be measured in a normalized test facility; the single number stated is the weighted sound reduction index R_w , and additionally the spectrum adaptation terms C and Ctr.

In a building, the sound insulation between two rooms, whether adjacent or one on top of the other or not directly connected to each other, is characterized by the standardized sound level difference; the single number stated is the weighted standardized sound level difference $D_{nT,w}$, and additionally the spectrum adaptation terms C and Ctr.

² The sound absorption area A results from the volume V and the reverberation time T by $A = 0.16 \cdot V/T$; evidently the sound absorption area grows with rising volume while the reverberation time remains constant independent of volume.

IMPACT SOUND INSULATION

The impact sound insulation of floors is described by the normalized impact sound level, i.e. the sound level which is measured in a test environment in the room beneath the floor (receiving room), which is excited by a tapping machine. This sound level refers to a 10 m² sound absorption area in the receiving room. From the sound level measured in third-octave or octave bands, a single number is calculated according to ISO 717-2, the weighted normalized impact sound level $L_{n,w}$.

In a new edition of ISO 717-2 a supplementary spectrum adaptation term CI was defined. This spectrum adaptation term may be determined for the frequency range of 100-3150 Hz, which has been used for decades, and also for the enlarged frequency range of 50-3150 Hz or 50-2500 Hz; the frequency range has to be specified as an index, e.g. $CI_{50-2500}$. The sum of $L_{n,w}$ and CI characterizes the linear impact sound level and corresponds better to the A-weighted sound level, produced by walking on the floor.

In residential buildings nearly all floors mainly consist of a bare floor with a floor covering. However, a single bare floor does not guarantee an effective impact sound insulation. An additional floor covering needs to be added to ensure the required impact sound insulation. Therefore the

planner must know the impact sound level of the bare floor and the reduction in impact sound pressure level from the floor covering to be able to calculate the impact sound level of the entire floor. Single number quantities have been defined for the bare floor and the floor covering for this purpose: the equivalent weighted normalized impact sound pressure level $L_{n,eq,0,w}$ of bare massive floors and the weighted reduction in impact sound pressure level ΔL_w for the floor covering. The weighted impact sound pressure level of a floor with covering is the equivalent weighted normalized impact sound pressure level $L_{n,eq,0,w}$ of the bare massive floor less the weighted reduction in impact sound pressure level ΔL_w for the floor covering.

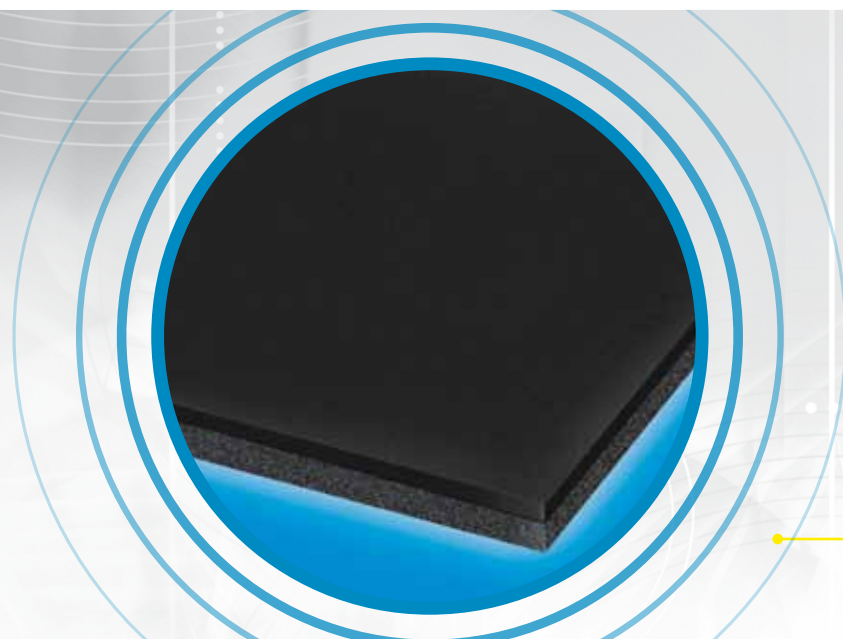
For wooden floors it is not possible to use the weighted reduction in impact sound pressure level ΔL_w . However, a special quantity for the reduction in impact sound pressure level by floor coverings on wooden floors has been defined in a new edition of ISO 717-2; this has to be determined separately by measurement on a normalized timber joist floor and stated with the single number $\Delta L_{t,w}$ for the impact sound pressure level on timber joist floors and $\Delta L_{t,w}$ for the impact sound pressure level on vertically laminated wooden floors 5. In an investigation the basis for the determination

of these quantities and $\Delta L_{t,w}$ und $\Delta L_{t,w}$ for a great number of usual types of floor covering on wooden floors was measured (Lang, 2004). The airborne and impact sound insulation of a series of timber joist floors with different floor coverings was also measured in this investigation; furthermore, a connection between impact sound insulation measured by the tapping machine and given for walking was determined by comparison with the noise of persons walking on the floors.

The impact sound insulation of floors in a building is measured with the tapping machine in the same way as in test facilities. However, the sound level does not refer to 10 m² sound absorption area but to the reverberation time of 0.5 seconds (which is usual in living rooms in practice regardless of their volume) and the result is called the standardized impact sound level.

L'_{nT} and the single number weighted standardized impact sound level $L'_{nT,w}$.

However, in the standards in several countries, requirements for the impact sound insulation in buildings are laid down based on the weighted normalized impact sound level $L'_{n,w}$ or on the weighted standardized impact sound level $L'_{nT,w6}$, in some countries with the additional adaptation term CI .



SMOOTH ELASTOMERIC SOUND INSULATION PANEL IN VARIOUS THICKNESSES, COUPLED WITH A HIGH DENSITY ELASTOMERIC SHEET.

N.B.: THE PRODUCT IS LEAD-FREE AND AS A RESULT DOES NOT REPRESENT A HEALTH RISK.

Description

K-FONIK ST GK combines the features of K-FONIK GK with a layer of our elastomeric K-FLEX ST.

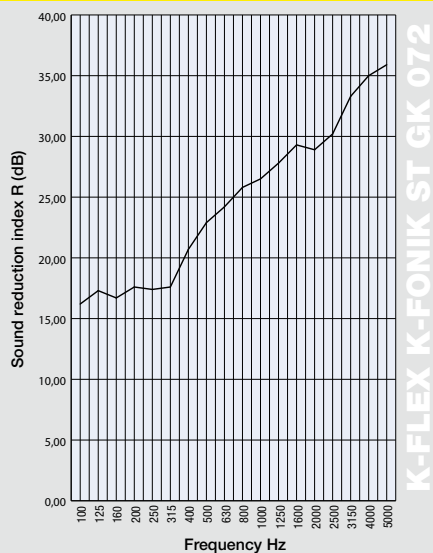
Applications:



K-FLEX K-FONIK ST GK

Sound insulation

Acoustic Performance



K-FONIK ST GK 072	
Freq. Hz	R dB
100	16,2
125	17,3
160	16,7
200	17,6
250	17,4
315	17,6
400	20,7
500	22,9
630	24,2
800	25,8
1000	26,5
1250	27,8
1600	29,3
2000	28,9
2500	30,2
3150	33,3
4000	35,0
5000	35,9

$R_w (C; C_{tr}) = 26 (-1; -3) \text{ dB}$

Applications

K-FONIK ST GK is ideal for sound insulation of fixed and false walls, ceilings and false ceilings, garages and acoustic cabins, drainage systems, theatres etc., and all types of sound insulation applications.

Range

K-FONIK ST GK 074 	K-FONIK ST GK 072
K-FONIK ST GK 070 	K-FONIK ST GK ST 074

Technical data

Material type	flexible elastomeric foam with high-density elastomeric material
Weight	4,4 kg/m ² (K-FONIK ST GK 072)
Thermal conductivity	0,036 W/(m•k)
Fire classification	EN 13501 - Bs3d0
Temperature range	-40 °C +70 °C
Dimensions	2000 x 1000 mm
Surface	smooth
Base colour	black



■ **HIGH-DENSITY ELASTOMERIC ACOUSTIC INSULATING PANEL, AVAILABLE PRE-CUT TO SIZE FOR OEM AND INDUSTRIAL APPLICATIONS.**
N.B.: THIS PRODUCT IS LEAD-FREE AND THEREFORE DOES NOT REPRESENT A HEALTH RISK. IT ALSO CARRIES A FIRE CLASSIFICATION IMO A653 (CE MARINE)

Description

K-FONIK GK is a viscoelastic acoustic insulation product made with partially reticulated polymers. Its special sound insulation characteristics make this an excellent product for traditional applications in the construction sector, eg. acoustic insulation of brick walls and plasterboards and for O. E. M. application.
K-FONIK GV is a viscoelastic acoustic insulation product made with partially reticulated polymers and fire-proof mineral fillers. Its special sound insulation characteristics make this product an excellent solution for the shipbuilding and railway sectors.

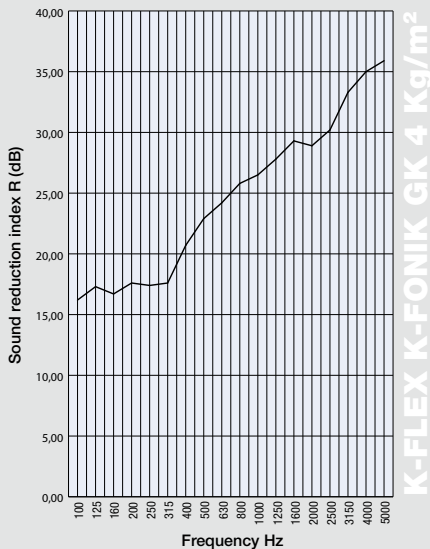


Applications:

K-FLEX K-FONIK GK/GV

Sound insulation

Acoustic Performance



K-FONIK GK/GV	
Freq. Hz	R dB
100	16,2
125	17,3
160	16,7
200	17,6
250	17,4
315	17,6
400	20,7
500	22,9
630	24,2
800	25,8
1000	26,5
1250	27,8
1600	29,3
2000	28,9
2500	30,2
3150	33,3
4000	35,0
5000	35,9

K-FONIK GK $R_w(C;C_p) = 26 (-1;-3)$ dB

Applications

K-FONIK GK is ideal for sound insulation of fixed and false walls, ceilings and false ceilings, garages and acoustic cabins, machinery and equipment manufacturers and all types of sound insulating applications.

Range

K-FONIK GK
from 4 to 8 Kg/m²

High-density elastomeric material

K-FONIK GV from 4 to 8 Kg/m²

High-density elastomeric material

Please see the price list for the full range

Technical data

Material type	high density elastomeric material
Fire classification	EN 13501 - Bs3d0 ¹⁾ , IMO A653 (CE MARINE) ²⁾ , FMVSS 302
Temperature	-40 °C +70 °C
Size	1000 x 2000 and 1000 x 1200 mm Rolls 25 or 50 m
Surface	smooth
Weight	from 4 Kg/m ² to 8 Kg/m ²
Base colour	black

¹⁾ only for K-FONIK GK on request

²⁾ only for K-FONIK GV

K-FONIK GV:

K-FONIK GV 4Kg $R_w(C;C_p) = 27 (-1;-4)$ dB

K-FONIK GV 6Kg $R_w(C;C_p) = 31 (-1;-3)$ dB

K-FONIK GV 8Kg $R_w(C;C_p) = 33 (-1;-3)$ dB

K-FONIK GV 10Kg $R_w(C;C_p) = 35 (-1;-3)$ dB

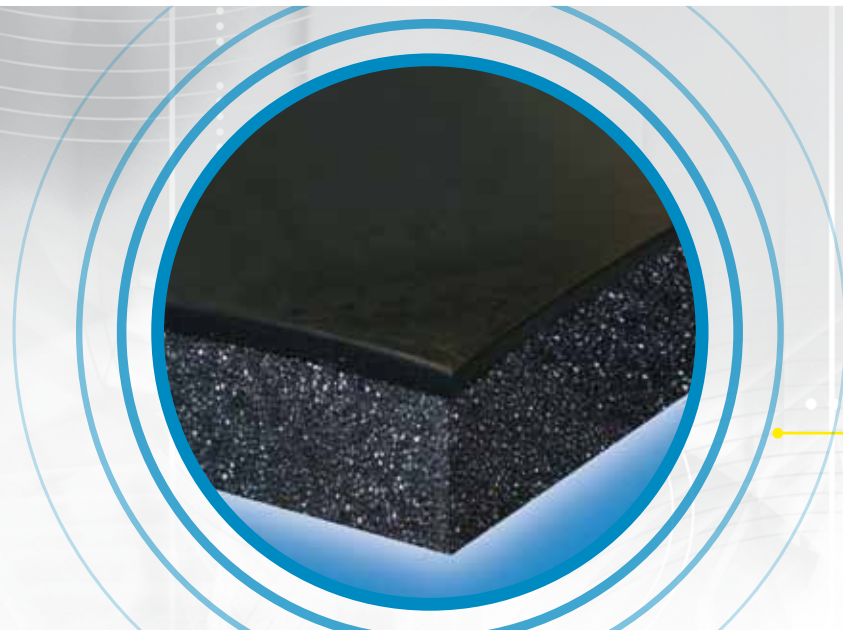




L'ISOLANTE K-FLEX

A NEW GENERATION OF INSULATION MATERIALS

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ACOUSTIC INSULATION PANEL.

Description

K-FONIK PU GK: a complete range with specific characteristics designed to handle every type of acoustic requirement.

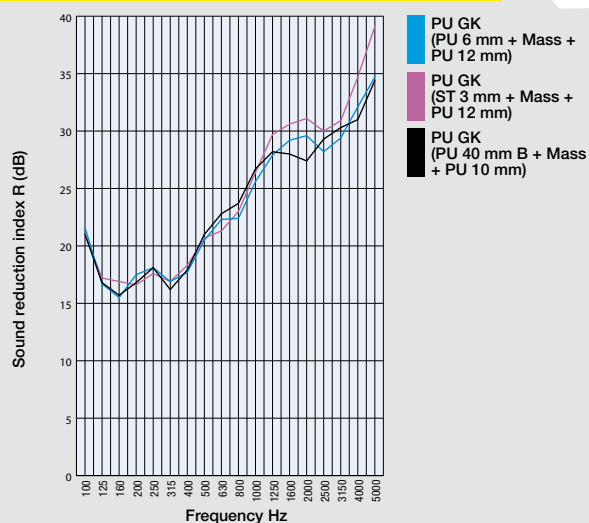
Applications:



K-FLEX K-FONIK PU GK

Sound insulation/Sound absorption

Acoustic Performance



Applications

K-FONIK PU GK is ideal for the sound insulation of fixed or false walls, ceilings and false ceilings, garages and acoustic cabins, drainage systems and all types of sound insulation applications.

Range

K-FONIK PU GK

K-FONIK PU GK

K-FONIK PU GK

Please see the price list for the full range

Technical data

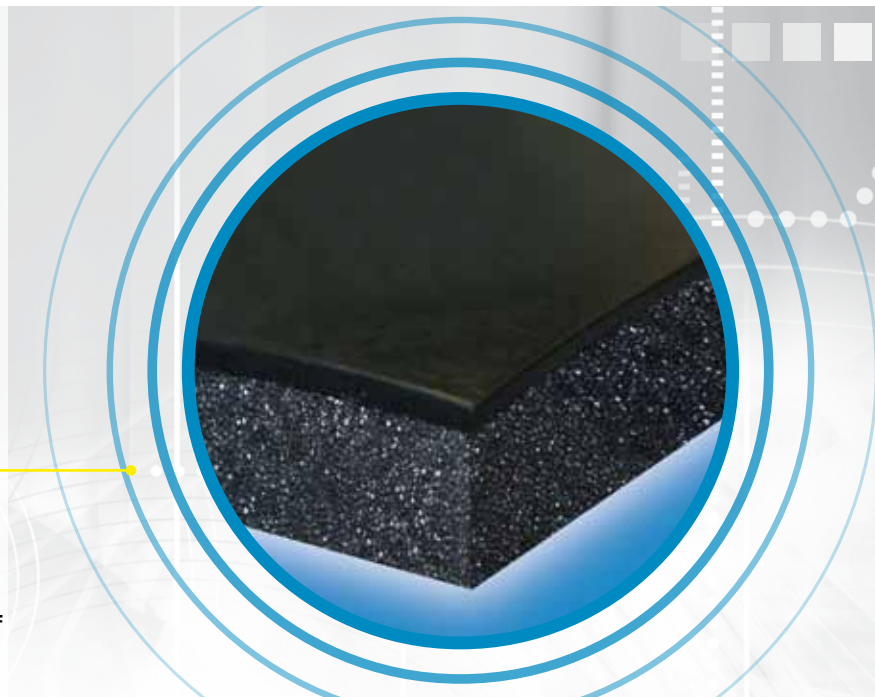
Material type	different materials (polyurethane, high density mass)
Thermal conductivity	N. A.
Fire classification	Self-extinguishing
Temperature	-40 °C +70 °C
Size	1000 x 2000 mm
Surface	smooth or embossed
Base colour	black



ACOUSTIC INSULATION PANEL.

Description

L'ISOLANTE K-FLEX acoustic insulation is manufactured with an integral lead sheet specifically designed to provide a solution to particular soundproofing problems. K-FONIK PE GK is a complete range with specific features, designed to handle all types of acoustic requirements.

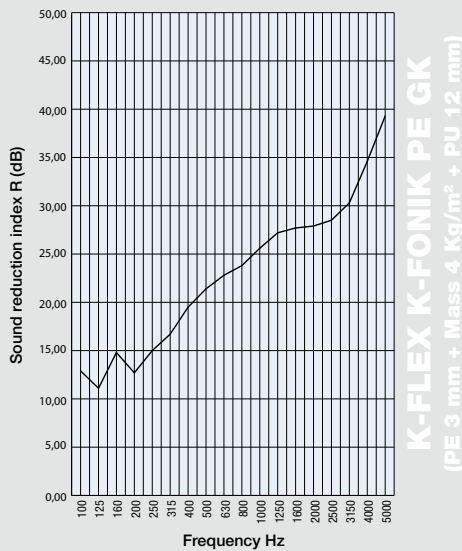


Applications:

K-FLEX K-FONIK PE GK

Sound insulation/Sound absorption

Acoustic Performance



PE GK (PE 3 mm + Mass 4 Kg/m ² + PU 12 mm)	
Freq.Hz	R dB
100	12,9
125	11,1
160	14,8
200	12,7
250	15,0
315	16,7
400	19,5
500	21,4
630	22,8
800	23,8
1000	25,6
1250	27,2
1600	27,7
2000	27,9
2500	28,5
3150	30,3
4000	34,6
5000	39,3

R_w (C;C_{tr}) = 25 (-1;-4) dB

Applications

K-FONIK PE GK sound insulation for both fixed and movable walls, ceilings, garages and acoustic studios, drainage systems, etc.

Range

K-FONIK PE GK

- PE 3 mm
- Mass 4 Kg/m²
- PE 3 mm

Please see the price list for the full range

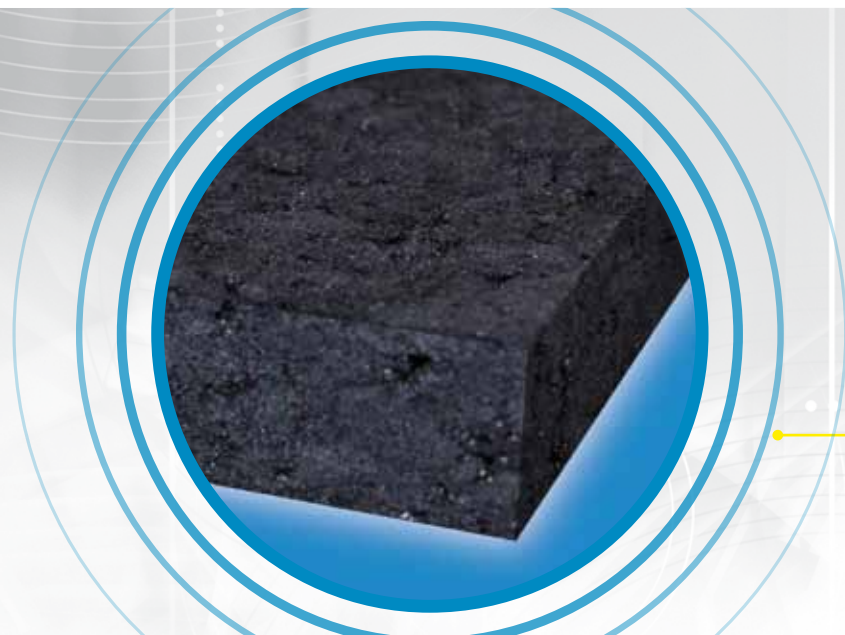
K-FONIK PE GK

- PE 3 mm
- Mass 4 Kg/m²
- PU 12 mm

Technical data

Material type	PE, PU and high density mass
Fire classification	Self-extinguishing
Temperature	-40 °C +70 °C
Size	1000 x 2000 in rolls
Surface	smooth
Base colour	black





OPEN CELL MATERIAL FOR SOUND ABSORPTION. IDEAL FOR ACOUSTIC INSULATION OF INDUSTRIAL PIPES.

Description

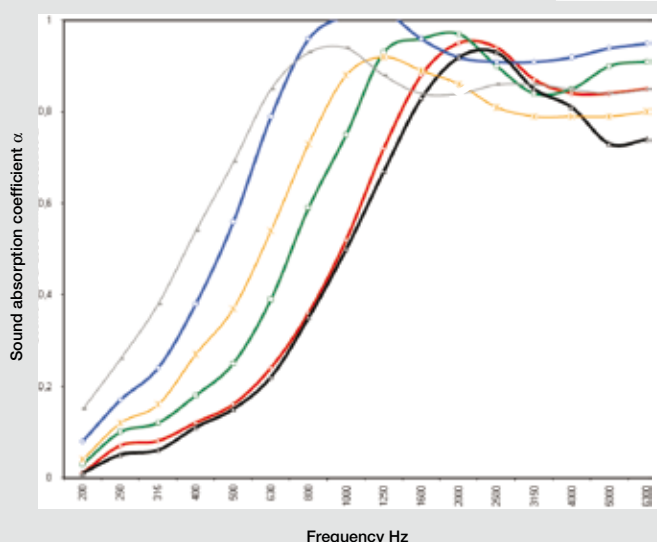
K-FONIK OPEN CELLS is a thermal-acoustic insulation material, ideal for sound absorption applications. It combines excellent acoustic performance and insulation characteristics. Supplied in different formats and thicknesses, based on customer requirements.

Applications:

K-FLEX K-FONIK OPEN CELLS

Sound absorption

Acoustic Performance



K-FONIK OPEN CELL 160, 10 mm $\alpha W = 0,25$

K-FONIK OPEN CELL 160, 15 mm $\alpha W = 0,30$

K-FONIK OPEN CELL 160, 25 mm $\alpha W = 0,45$

K-FONIK OPEN CELL 240, 10 mm $\alpha W = 0,25$

K-FONIK OPEN CELL 240, 15 mm $\alpha W = 0,40$

K-FONIK OPEN CELL 240, 25 mm $\alpha W = 0,55$

Applications

K-FONIK OPEN CELLS Sound absorption; industrial pipes.

Range

K-FONIK 160 - 240

from 10 to 350 mm

Please see the price list for the full range

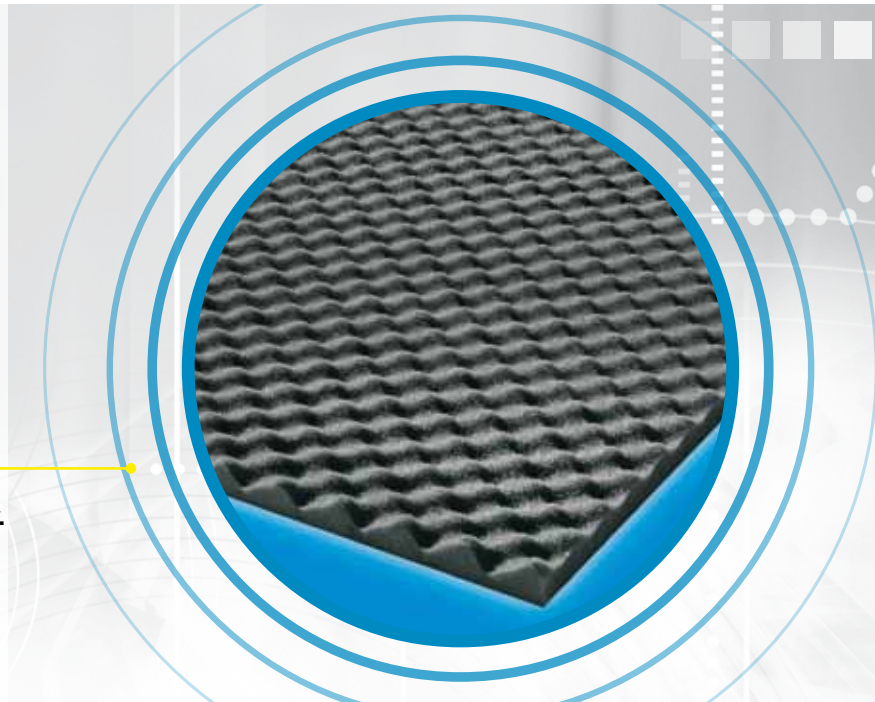
Technical data

Material type	flexible elastomeric foam
Density	160-240 Kg/m ³
Thermal conductivity	0,0431 W/(m·k)
Fire classification	FMVSS 302, EN 13501 CS ₃ d0
Temperature	-40 °C +85 °C
Dimensions	see price list
Thickness	from 10 to 350 mm
Base colour	black
Modulus (mpa)	22 ± 3.7 (160) - 57.7 ± 8.0 (240)
Elongation to break (%)	114 ± 33 (160) - 140 ± 47 (240)
Insertion Loss:	
K-FONIK 160 15mm	Rw=5 dB
K-FONIK 160 25mm	Rw=6 dB
K-FONIK 240 10mm	Rw=8 dB
K-FONIK 240 15mm	Rw=10 dB
K-FONIK 240 25mm	Rw=14 dB

EMBOSSED SURFACE
POLYURETHANE
FOAM SHEET IDEAL FOR
ACOUSTIC ABSORPTION.

Description

K-FONIK B material is specifically designed for situations where sound absorption is the priority. It is made of open cell flexible polyurethane foam with a density of 25/30 kg/m³. It is also available in the K-FONIK ST B version made with rubber foam which has Class 0 reaction to fire characteristics.



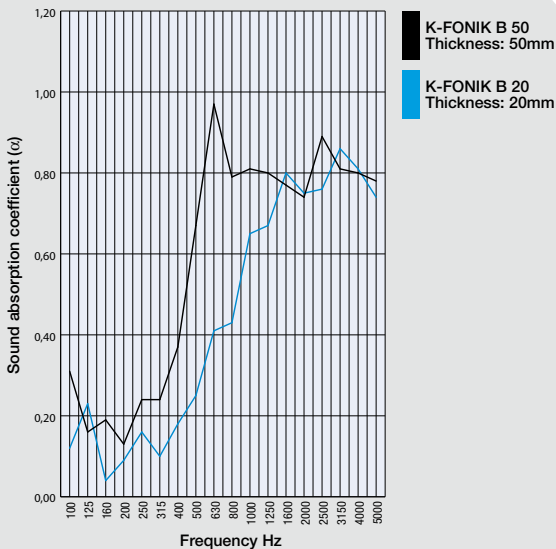
Applications:



K-FLEX K-FONIK B

Embossed sound absorption

Acoustic Performance

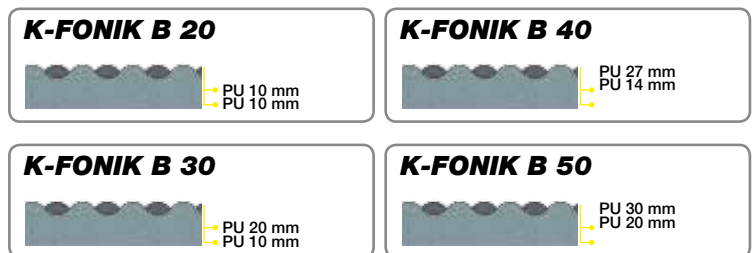


Freq. Hz	B 20	B 50
100	0,12	0,31
125	0,23	0,16
160	0,04	0,19
200	0,09	0,13
250	0,16	0,24
315	0,10	0,24
400	0,18	0,37
500	0,25	0,67
630	0,41	0,97
800	0,43	0,79
1000	0,65	0,81
1250	0,67	0,80
1600	0,80	0,77
2000	0,75	0,74
2500	0,76	0,89
3150	0,86	0,81
4000	0,81	0,80
5000	0,74	0,78
α W	0,28	0,62

Applications

K-FONIK B is widely used in gyms, conference rooms, rifle ranges, recording studios, radio/television studios, moveable acoustic panels, engine rooms, etc.

Range



Please see the price list for the full range

Technical data

Material type	polyurethane foam / expanded rubber
Density	25 ÷ 30 Kg/m ³
Fire classification	Class 0 (BS 476 PART 6/7) only ST B version with rubber foam; UL 94 - HF1
Temperature	-40 °C +70 °C
Dimensions	1000 x 2000 mm - also available in rolls of different sizes
Surface	embossed
Thickness	from 20 to 50 mm
Base colour	dark grey



■ ■ ■ POLYURETHANE FOAM PANEL WITH A RAISED PYRAMIDAL STRUCTURE.

Description

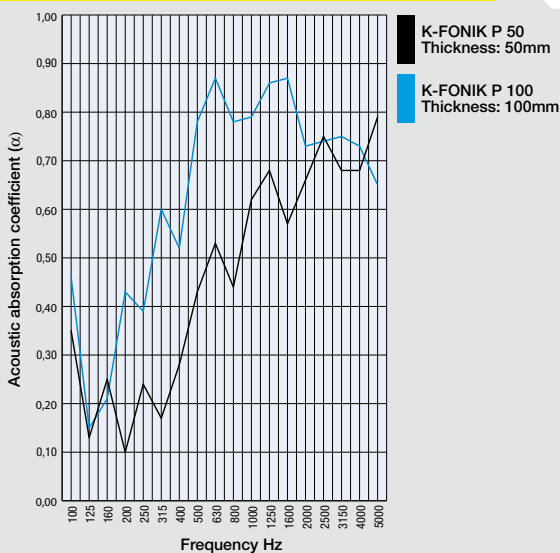
This sound absorption material is manufactured with a pyramid-shaped surface, and is the ideal acoustic insulation solution for rooms etc. Excellent results can be obtained at medium and high frequencies (500 ÷ 2000 Hz). The material is made of flexible polyurethane open cell foam with a density of 25/30 kg/m³. It can also be applied in combination with acoustic insulation material. It is also available with adhesive on one side.

Applications:

K-FLEX K-FONIK P

Pyramidal sound absorption

Acoustic Performance



Freq. Hz	P 20	P 50
100	0,35	0,46
125	0,13	0,15
160	0,25	0,21
200	0,10	0,43
250	0,24	0,39
315	0,17	0,60
400	0,28	0,52
500	0,43	0,78
630	0,53	0,87
800	0,44	0,78
1000	0,62	0,79
1250	0,68	0,86
1600	0,57	0,87
2000	0,66	0,73
2500	0,75	0,74
3150	0,68	0,75
4000	0,68	0,73
5000	0,79	0,65
α W	0,34	0,82

Applications

K-FONIK P is widely used in gyms, conference rooms, firing ranges, recording studios, radio/television studios, false walls, engine rooms, etc.

Range

K-FONIK P 50

PU 30 mm
PU 20 mm

K-FONIK P 100

PU 70 mm
PU 30 mm

K-FONIK P 70

PU 50 mm
PU 20 mm

Please see the price list for the full range

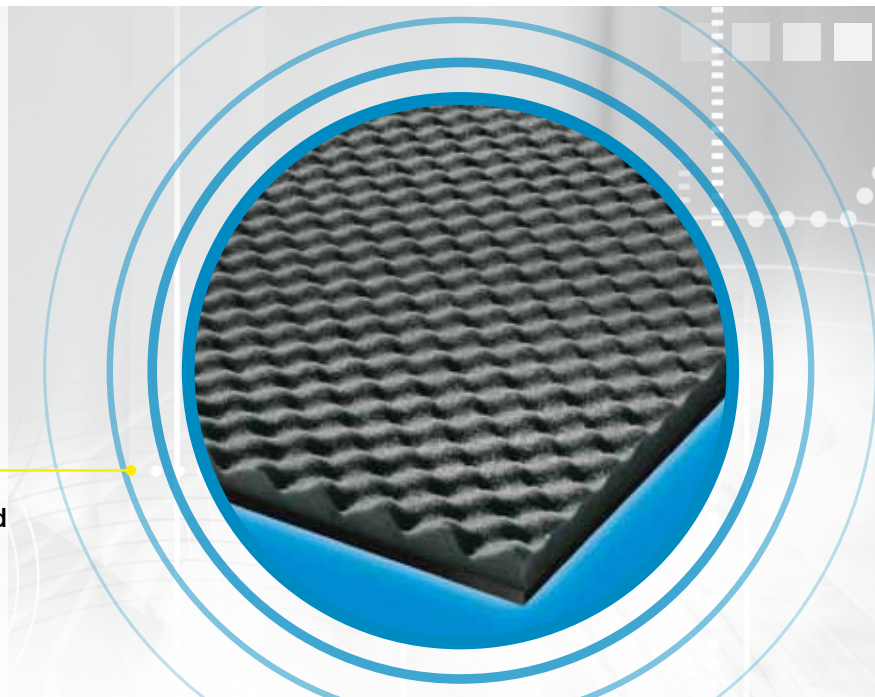
Technical data

Material type	polyurethane foam
Density	25 ÷ 30 Kg/m ³
Fire classification	Self-extinguishing
Temperature	-40 °C +70 °C
Dimensions	1000 x 1000 mm
Surface	pyramid structure
Thickness	50 - 70 - 100 mm
Base colour	dark grey

EMBOSSED ACOUSTIC INSULATION COUPLED WITH HIGH DENSITY ELASTOMERIC MATERIAL.

Description

K-FONIK ST B GK is a viscoelastic acoustic insulation product made with partially reticulated polymers and fire-proof mineral fillers, coupled to a flexible elastomeric foam sheet with an embossed surface, which combines excellent acoustic insulation and absorption qualities.



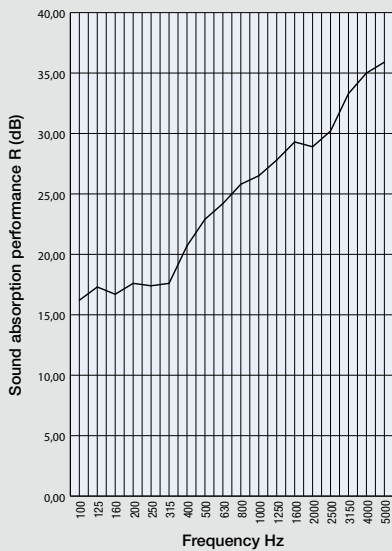
Applications:



K-FLEX K-FONIK ST B GK

Sound insulation/Sound absorption

Acoustic Performance



K-FLEX K-FONIK ST B GK

ST B GK	
Freq. Hz	R dB
100	16,2
125	17,3
160	16,7
200	17,6
250	17,4
315	17,6
400	20,7
500	22,9
630	24,2
800	25,8
1000	26,5
1250	27,8
1600	29,3
2000	28,9
2500	30,2
3150	33,3
4000	35,0
5000	35,9

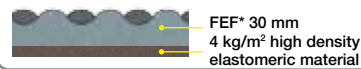
$R_w (C; C_{tr}) = 26 (-1; -3) \text{ dB}$

Applications

K-FONIK ST B GK combines both sound insulation and absorption qualities in all situations where it is necessary to work both on mass and absorption.

Range

K-FONIK ST B GK



*FEF = flexible elastomeric foam

Please see the price list for the full range

Technical data

Material type	flexible elastomeric foam with high-density elastomeric material
Thermal conductivity	0,036 W/(m·K)
Fire classification	Self-extinguishing
Temperature	-40 °C +70 °C
Dimensions	see price list
Surface	embossed
Base colour	black

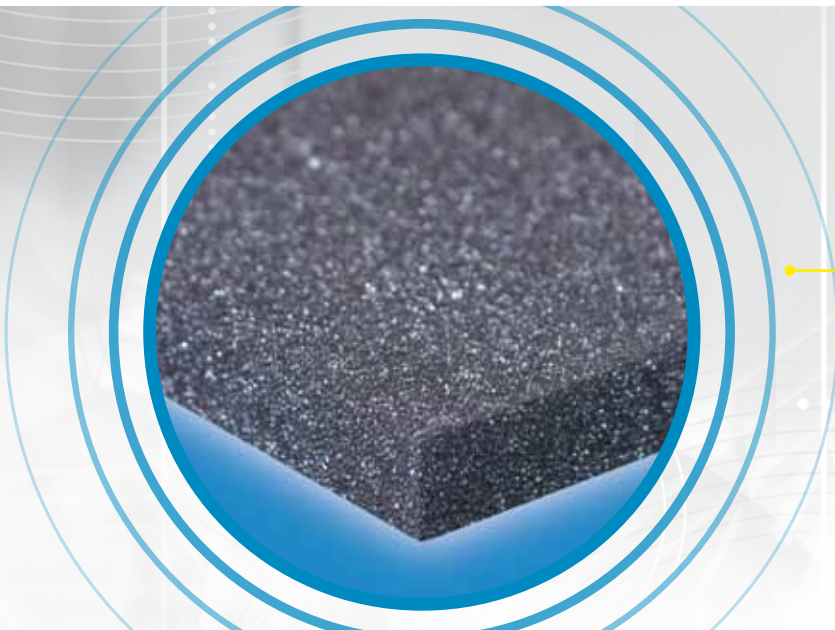




L'ISOLANTE K-FLEX

A NEW GENERATION OF INSULATION MATERIALS

www.kflex.com



**POLYESTER BASED
OPEN CELL POLYURETHANE
FOAM FOR SOUND
ABSORPTION.**

Description

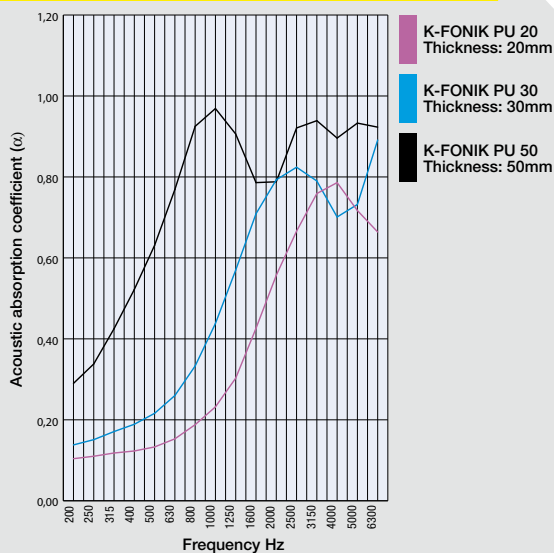
K-FONIK PU is a polyester based open-cell polyurethane foam for sound absorption. It can be supplied in sheets, rolls and is available as self-adhesive. Available with plastic or lead mass. Can be clad with non-woven fabric (TNT), Aluminium, PVC, fibreglass, etc.

Applications:

K-FLEX K-FONIK PU

Sound absorption

Acoustic Performance



Freq. Hz	PU 20	PU 30	PU 50
200	0,104	0,138	0,290
250	0,111	0,151	0,338
315	0,118	0,171	0,425
400	0,123	0,189	0,522
500	0,133	0,216	0,631
630	0,153	0,260	0,769
800	0,188	0,333	0,925
1000	0,232	0,438	0,969
1250	0,303	0,570	0,906
1600	0,426	0,709	0,786
2000	0,557	0,793	0,788
2500	0,666	0,824	0,921
3150	0,759	0,790	0,939
4000	0,786	0,701	0,896
5000	0,717	0,732	0,933
6300	0,664	0,891	0,923

Applications

Conditioning and ventilation systems, and household electronic equipment.

Range

Thickness from 6 to 50 mm

Technical data

Thickness	from 6 mm to 50 mm (+ 0, -2)
Dimensions	Rolls, h: 1000 mm
Bulk density (UNI 6349)	25 ÷ 30 (± 5%) Kg/m ³
Colour	anthracite grey
Elongation to break (ISO 3386)	140 %
Cells number (fine cells)	20 cm ²
Tensile strength (ISO R 1798)	For 25 kgm ³ , 120 kPa - For 30 kgm ³ , 130 kPa
Temperature	from -30 °C to 100 °C
Self extinguishing (UL 94)	HF1
Thermal conductivity λ	0.040 W /m ² K

■ ■ ■ THERMO-BONDED
POLYESTER TEXTILE FIBERS
FOR SOUND ABSORPTION.

Description

K-FONIK FIBER-P is a sound absorber made of polyester fibers. Very good mechanical and fire resistance, non-toxic and low smoke emission.



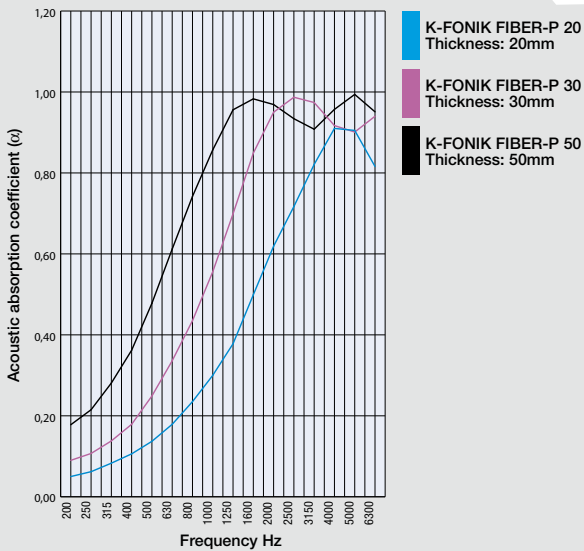
Applications:



K-FLEX K-FONIK FIBER-P

Sound absorption

Acoustic Performance



Freq. Hz	FIBER-P 20 α	FIBER-P 30 α	FIBER-P 50 α
200	0,050	0,090	0,178
250	0,062	0,107	0,215
315	0,083	0,138	0,281
400	0,106	0,179	0,362
500	0,137	0,249	0,478
630	0,179	0,336	0,612
800	0,235	0,435	0,742
1000	0,300	0,556	0,857
1250	0,378	0,699	0,946
1600	0,499	0,849	0,983
2000	0,619	0,950	0,969
2500	0,717	0,987	0,934
3150	0,821	0,974	0,908
4000	0,910	0,917	0,957
5000	0,905	0,901	0,994
6300	0,816	0,940	0,951

Applications

Buses, trains, panels, ventilation systems engine rooms, etc.

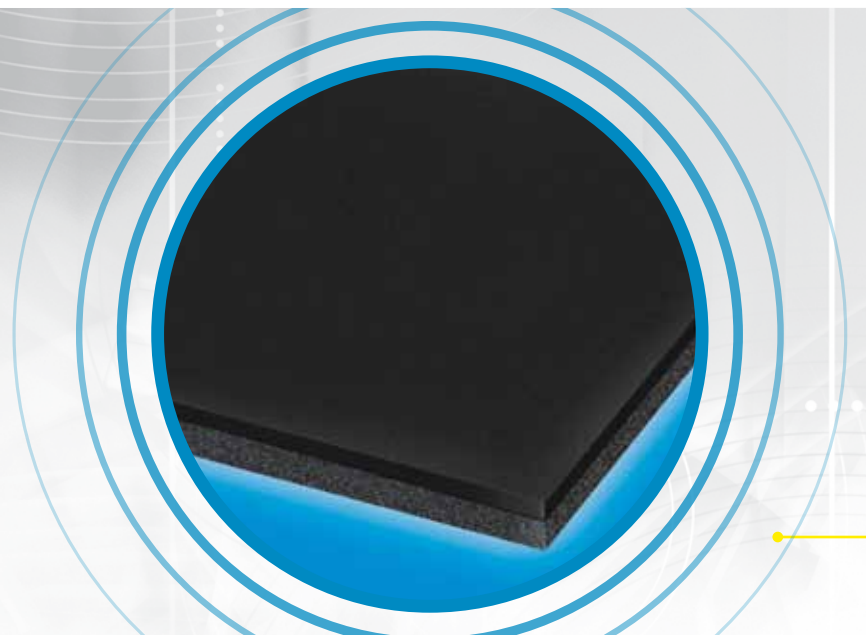
Range

Thickness from 10 to 50 mm

Technical data

Composition	100 % Polyester Fibers
Colour	White, Black
Standard dimensions	1200 x 2000 mm
Standard thicknesses	from 10 mm to 50 mm
Flammability temperature	380 °C
Oxygen Index (ISO4589)	≥ 21 (LOI)
Standard density	40 ± 10% kg/m ³
Fire resistance UNI 8457; UNI 9174;UNI 9176	Euroclass B, S2, d0-EN13501
Toxicity and smoke emission AFNOR NF F 16101	F1
Performance Temperature	from -50 °C to + 90 °C





- ■ ■ A unique and effective solution for sound insulation of tubing. Domestic and commercial buildings (hotels, hospitals, etc...) have to meet stringent requirements for acoustic features.
- ■ ■ A certified solution (by the Fraunhofer laboratory) offers the best approved result for specifiers and general contractors.

Description

Ready-to-use system for acoustic insulation of tubing.

Applications:

K-FLEX K-FONIK ST GK

Fraunhofer Institute certificate No. P-BA 247/2006

To assess the correct level of soundproofing for waste pipes, reference should be made to Italian legislation DPCM 5/12/1997, and also tests capable of simulating the true operating conditions of the products, as per the standards set by DIN EN 14366 and DIN 52219.

These tests enable the evaluation of acoustic comfort in terms of LASmax and LAeq (sound pressure level) not just through R or Rw, typical parameters for sound insulation of walls, but are by no means exhaustive for tubing applications.

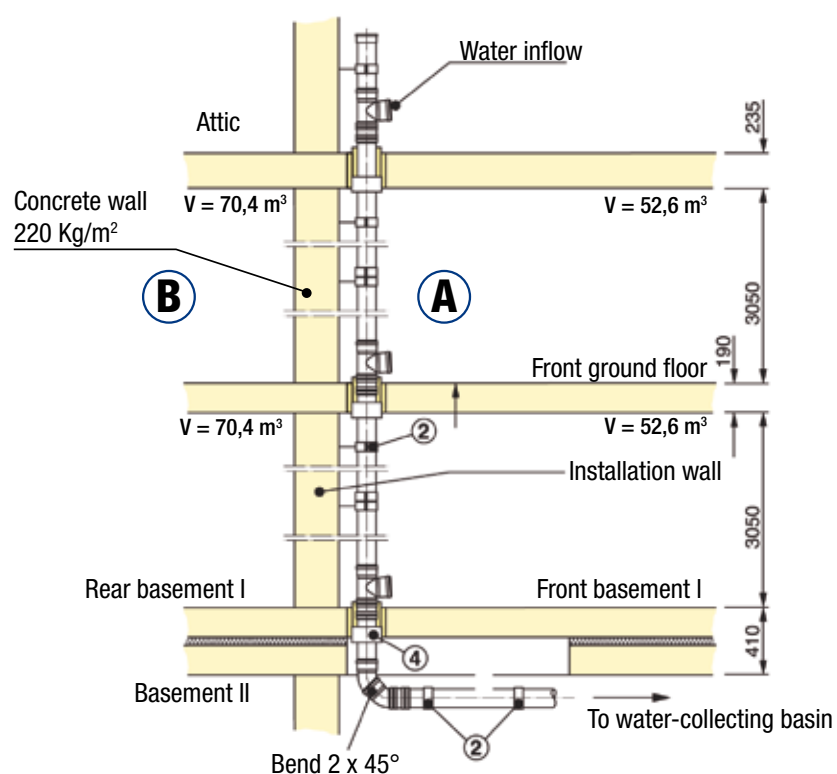
Products not specifically tested for the above parameters are therefore not valid for use with waste pipes.

Sound Pressure Level L_{in} [dB(A)]				
Water capacity [l/s]	0,5	1,0	2,0	4,0
Area:	First floor - Area A			
without K-FONIK ST GK	48	52	55	57
with K-FONIK ST GK	35	39	42	45
Area:	First floor - Area B			
without K-FONIK ST GK	14	18	24	27
with K-FONIK ST GK	4	9	14	19

PART OF THE FRAUNHOFER INSTITUTE CERTIFICATE NO. P-BA 247/2006

The test meets the requirements of the DIN 4109 (Germany) DIN 4109/A1: 2001-01 for residential buildings and DIN 4109 for non residential buildings

The test, shown below, is performed by simulating a real installation in a several storey building with room volumes equal to 70.4 m³ and 52.6 m³ (per floor).



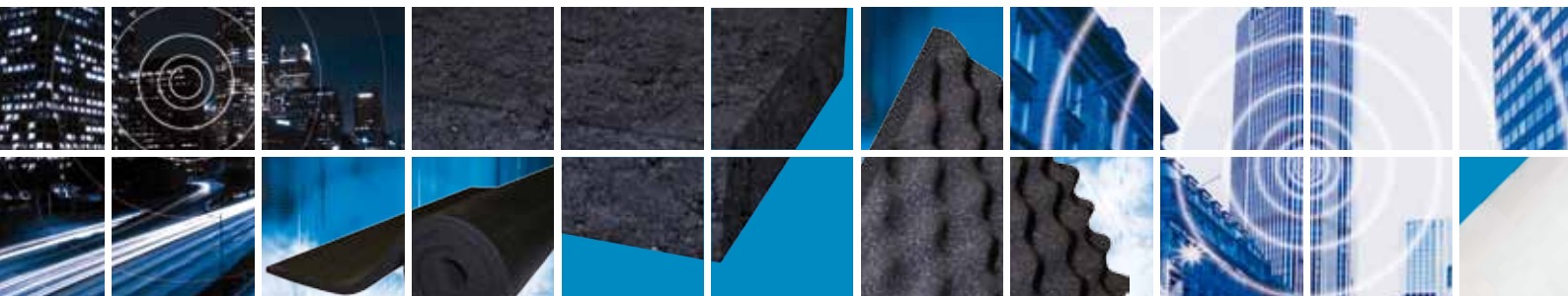
A night-time photograph of a city skyline with illuminated skyscrapers. Overlaid on the image are several concentric white circles that resemble sound waves emanating from a central point, symbolizing acoustic insulation. The overall color palette is dark with blue and white highlights from the city lights and sound waves.

K-FLEX K-FONIK SYSTEM

K-FLEX K-FONIK SYSTEM

**The ideal solution
for acoustic and thermal insulation**

Acoustic Insulation



SOUND ABSORPTION

SOUND INSULATION

DAMPING



L'ISOLANTE K-FLEX

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