SOUNDPROOFING
SOLUTIONS
FOR BUILDINGS

VÉLAPHONE® **RANGE**

SOPREMA GROUP
EXPERTS IN WATERPROOFING & INSULATION

VÉLAPHONE® **RANGE**

SOPREMA provides a response to current requirements for reducing noise pollution by offering two Thin Acoustic Underlays:

- **Vélaphone® Fibre 22** : excellence in sound insulation,
- **Vélaphone® Confort** : optimal sound insulation.

Vélaphone® Fibre 22 and **Vélaphone® Confort** have QB Certification mark [1] and benefit from QUALITEL [2] approval.

ENSURING ACOUSTIC COMFORT

The acoustic comfort of interior spaces should not be neglected. This is a regulatory obligation and above all a necessary concern. Good acoustic comfort has a positive influence on the quality of daily life and on the relations between users of a building.

In residential buildings, noise pollution can be a source of neighborhood conflicts. Noise is also a concern in hotels and schools.

For tertiary buildings such as offices, for example, the psychological balance and work productivity of occupants are also closely linked to acoustic comfort.

[1] **QB** - Quality in Building, launched by CSTB at the end of 2015, aims to simplify the current certification scene in the construction sector and maximize the legibility of benchmarks for the quality, performance and reliability of products, services and stakeholders.
The QB mark certifies the compliance of products with conditions set out in certification reference systems.
As a certification body, the CSTB performs all certification operations, from the development of reference documents to the issuance of certificates and monitoring of certificate holders.
[2] The **QUALITEL** Association promotes, alongside housing professionals, the quality of new and existing housing.
CERQUAL Qualitel Certification, the certification body of the QUALITEL Association, supports all players in the construction industry and public bodies, to build, renovate or operate quality, healthy, comfortable and sustainable housing, for the well-being of their occupants, through the NF Habitat-NF Habitat HQE certification.

MADE IN FRANCE

ACERMI

ΔL_w

The acoustic performance of the flooring underlay solutions is calculated from laboratory results.
The reduction in the weighted impact noise level ΔL_w is stated in dB.

The higher this value, the better the soundproofing performance.
This value is determined during standardised tests with a 14 cm thick concrete slab combined with a 4 cm screed over the acoustic underlay.

This index is one of the elements making it possible to compare and select the underlays.
It is also used to estimate the “in situ” performance of the structure, which is also a function of the construction elements and the nature of the associated materials as coating.

It is this index that characterises the performance of our acoustic underlays present in this document.

AIRBORNE NOISE SOUND REDUCTION INDEX

Working on the same principle as acoustic insulation for impact noise, for laboratory performance and in situ measuring indices, we have a weighted attenuation index **Rw (C,Ctr),** expressed in dB. It relates to acoustic insulation qualities of a partition:

- **C** is the corrective term related to indoor airborne noise.
- **Ctr** is the corrective term related to road noise.

THE +

- **Long Lasting and certified performances**
- **Millions of m² of references**
- **Reliable answers for all types of buildings and finishes**
- **Independent thin soundproofing solution for floor covering**
- **Excellent tear resistance thanks to the bitumen surface**

THE + VÉLAPHONE® FIBRE 22 :

- **Best performance on the market : ΔL_w with 22 dB under a floating screed**

PRESENTATION OF THE VÉLAPHONE® RANGE

	Vélaphone® Fibre 22	Vélaphone® Confort
		
Solution	Efficient	Optimal
SC1 classification	Yes	Yes
Acoustic performances	+++	++
Quick installation	++	+++
Behavior during implementation	+++	++
Tear resistance	+++	++
QB certified product	Yes	Yes
Robinson-type floor tester according to ASTM C627-10	Requirements met for : Residential, Light, Moderate, Heavy and Extra Heavy	

Acoustic performances under screed

	Vélaphone® Fibre 22	Vélaphone® Confort
Impact noise reduction ΔL_w	22 dB	19 dB
Classification	SC1 a_4 A - SC1 b_3 A	SC1 a_2 A - SC1 b_2 A Ch
Airborne noise reduction R_w (C ; Ctr)	58 (-2 ; -8) dB	59 (-3 ; -6) dB
QB certification	03a-02	03a-01

Acoustic performances under wood flooring

	Vélaphone® Fibre 22	Vélaphone® Confort
Impact noise reduction ΔL_w	21 dB	20 dB

Characteristics and packaging

	Vélaphone® Fibre 22	Vélaphone® Confort
Constitution	Non-woven polyester on bitumen coated base	Glass fleece on bitumen coated base
Thickness	3,4 mm	2,5 mm
Dimensions	20 x 1,07 m (20 m² useful)	20 x 1,07 m (20 m² useful)
Roll weight	Approx. 11,5 kg	Approx. 13,8 kg
Roll per pallet	16 rolls (320 m²)	25 rolls (500 m²)
Thermal resistance	0,100 m².K/W	0,075 m².K/W

IMPACT NOISE INSULATION UNDER FLOATING SCREED

The **Vélaphone®** range is laid under floating slab or screed or under sealed tiles. The products of the **Vélaphone®** range provide floors acoustic insulation against impact noise, in accordance to the provisions of standard (Code of Practice) NF DTU 52.10.

Vélaphone® Fibre 22 installation

1- Support
2- Thin Acoustic Underlay **Vélaphone® Fibre 22**
3- Disconnection strip
4- Adhesive tape
5- Floating screed
6- Tile adhesive
7- Flooring
8- Flexible mastic bead sealant

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Vélaphone® Confort installation

1- Support
2- Thin Acoustic Underlay **Vélaphone® Confort**
3- Floating screed
4- Tile adhesive
5- Flooring
6- Flexible mastic bead sealant

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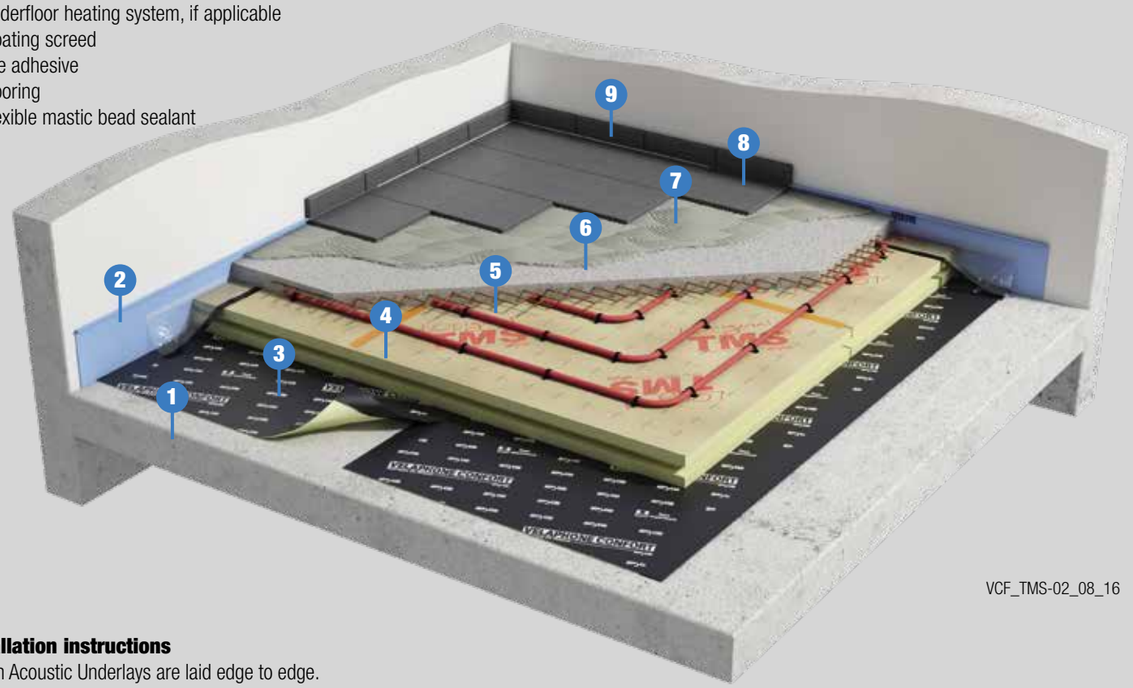
Installation instructions

- Thin Acoustic Underlays are laid :
  - edge to edge thanks to the integrated self-adhesive overlap to prevent the passage of concrete, or with
  - 5 cm longitudinal overlap.

THERMAL & IMPACT NOISE INSULATION UNDER FLOATING SCREED

Vélaphone® Confort Installation

1- Support
2- Disconnection tape **Efirive**
3- Thin Acoustic Underlay **Vélaphone® Confort**
4- Thermal insulation **TMS®**
5- Underfloor heating system, if applicable
6- Floating screed
7- Tile adhesive
8- Flooring
9- Flexible mastic bead sealant



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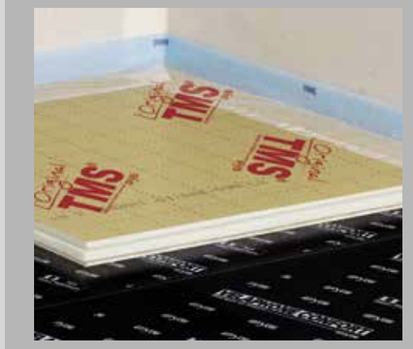
Installation instructions
● Thin Acoustic Underlays are laid edge to edge.

TMS® AND VÉLAPHONE® CONFORT



The thermal regulations favour insulation solutions such as insulation under a floating screed between business premises, parking lots and living quarters. Such configuration must also take account of the acoustic regulation. **SOPREMA** offers you a high-performance thermo-acoustic solution, in line with these two obligations, by combining **Vélaphone® Confort** with **TMS®**.

This combination makes it possible to satisfy thermal and acoustic requirements, especially in the case of underfloor heating or in the case of rooms above unheated elements.

TMS® benchmark thermal insulation for floors under screed (λ_D = 0,022 W/(m.K)). It is intended for thermal insulation of floors and comes in the form of rigid polyurethane foam panels coated with a facing on each of its faces. **TMS®** has an SC1 a_2 Ch classification in accordance to the provisions of standard (Code of Practice) NF DTU 52.10 and ACERMI [4] certified (from 25 to 140 mm).

(4) **The Association pour la CERtification des Matériaux Isolants** is a non-profit organization (association loi 1901) formed in 1983 by the CSTB and LNE, which created the ACERMI certification mark. Its purpose is to award qualification certificates for manufactured insulation materials and products within the meaning of French law 78-23 of January 10, 1978. ACERMI certification is based on a double commitment:
- The manufacturer gives its commitment to apply continuous production process controls and produce statistical values for the characteristics of its product.
- ACERMI gives its commitment to conduct an initial audit of the production plant, conduct initial tests on the product and monitor (audit + test) certified products on a twice-yearly basis.

Acoustic performances of Vélaphone® Confort and TMS® under floating screed

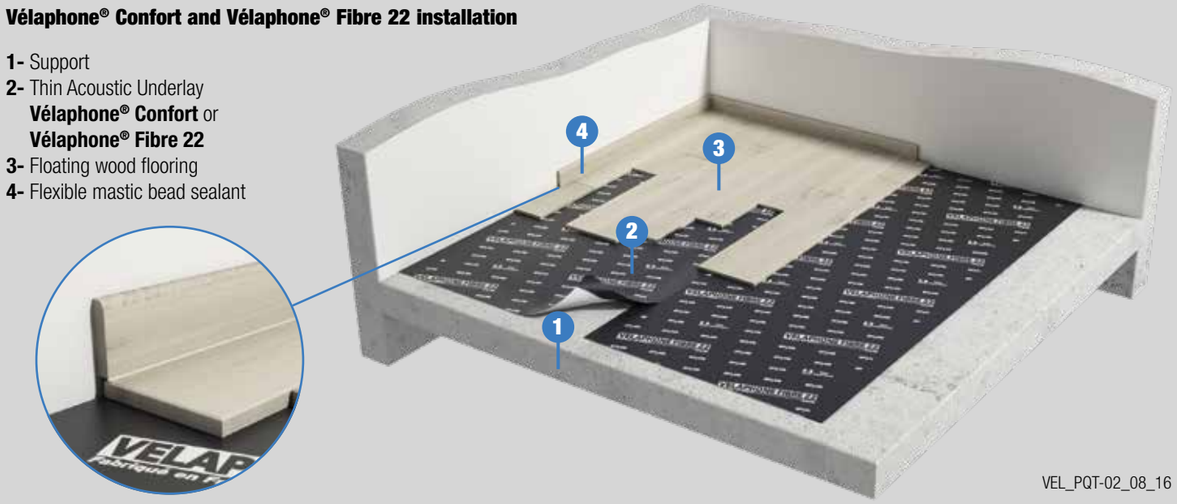
	Vélaphone® Confort	
Thickness of TMS (λ_D= 0 ,022 W/(m.K).	TMS 48 to 80 mm	TMS 100 to 140 mm
Classification of the work	SC2 a_4 A Ch	SC2 a_4 A Ch
Impact noise reduction : ΔL_w	20 dB	22 dB
Airborne noise reduction : R_w(C ; Ctr)	59 (-2 ; -8) dB	61 (-3 ; -10) dB

IMPACT NOISE INSULATION UNDER FLOATING WOOD FLOORING

Vélaphone® Confort or **Vélaphone® Fibre 22** products are also installed under wood flooring in accordance to the provisions of standard (Code of Practice) NF DTU 51.11.

Vélaphone® Confort and Vélaphone® Fibre 22 installation

1- Support
2- Thin Acoustic Underlay
Vélaphone® Confort or
Vélaphone® Fibre 22
3- Floating wood flooring
4- Flexible mastic bead sealant



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THERMAL & IMPACT NOISE INSULATION UNDER FLOATING WOOD FLOORING

Vélaphone® Fibre 22 is associated to the **Vermaspha®** product for level adjustment, thermal insulation (λ = 0,076 W/(m.K)) and soundproofing on old concrete or wood supports. **Vermaspha®** consists of a ready-to-use mixture of vermiculite grains coated with bitumen.

Vélaphone® Fibre 22 installation

1- Timber support floor
2- Vermaspha®
3- Vélaphone® Fibre 22
4- Floating wood flooring

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A 5 mm thick edge strip is previously placed on the periphery of the room. **Vermaspha®** is applied dry by simple pouring, then leveled and compacted (minimum height 3 cm, maximum height 12 cm in successive layers 5 cm thick).
The **Vélaphone® Fibre 22** underlay is placed on **Vermaspha®**. It is then covered by the floating wood flooring in accordance to the provisions of standard (Code of Practice) DTU 51.3, with wooden-based panels machined on the 4 faces, staggered and glued on their 4 edges.

Performances example of floating wood flooring on Vélaphone® Fibre 22 + Vermaspha®

	Vélaphone® Fibre 22
Timber support floor	Chipboard wood panel CTBH 22 mm
Levelling layer	**Vermaspha®** - 30 mm
Thin Acoustic Underlay	**Vélaphone® Fibre 22** - 3,4 mm
Floating wood flooring	Chipboard wood panel CTBH 22 mm
Impact noise reduction : Δ ($L_{n,w}$)	21 dB
Airborne noise reduction : R_w (C ; Ctr)	47 (-3 ; -9) dB

RANGE PRESENTATION : DISCONNECTION TAPES

Self-Adhesive disconnection tape

Closed cell polyethylene foam,
adhered by 2 x 10 mm-wide threads on one side.

Dimensions	Heating floor	Colours	Packaging
50 m x 100 mm x 3 mm	No	White	Box of 6 rolls / 16 boxes per pallet
50 m x 145 mm x 3 mm	No	White	Box of 4 rolls / 16 boxes per pallet

Self-Adhesive disconnection tape with flap

Polyethylene foam adhered by 1 x 25 mm wide thread on one side and 120 mm overflowing plastic flap.

Dimensions	Heating floor	Colours	Packaging
50 m x 120 mm x 3 mm	No	White	Package of 10 rolls
50 m x 150 mm x 5 mm*	Yes	White	Package of 10 rolls

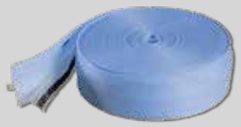
*Foam with 5 pre-cuts every cm.

Resilient tape

Closed cell polyethylene foam.

Dimensions	Heating floor	Colours	Packaging
150 m x 100 mm x 3 mm	No	White	Package of 14 rolls
100 m x 100 mm x 5 mm	Yes	White	Package of 14 rolls
150 m x 145 mm x 3 mm	No	White	Package of 10 rolls
100 m x 145 mm x 5 mm	Yes	White	Package of 10 rolls
50 m x 140 mm x 8 mm	Yes	Blue	Package of 7 rolls
50 m x 200 mm x 3 mm	Yes	Blue	Package of 6 rolls

Efirive, TMS® disconnection tape



Polyethylene foam disconnection tape with adhesive skirt.

Dimensions	Heating floor	Colours	Packaging
50 m x 120 mm x 5 mm	Yes	Blue	Package of 6 rolls
50 m x 150 mm x 5 mm	Yes	Blue	Package of 6 rolls
50 m x 180 mm x 5 mm	Yes	Blue	Package of 6 rolls
50 m x 210 mm x 5 mm	Yes	Blue	Package of 6 rolls
25 m x 150 mm x 8 mm	Yes	Blue	Package of 6 rolls

INSTALLATION : DISCONNECTION TAPE

Separation can be achieved by raising soundproofing underlay up on vertical walls (for skirting) around room perimeter (recommended with **Vélaphone® Confort**). As an alternative, it is also possible to apply disconnection tapes after laying the soundproofing underlay using its adhesive flaps. If the peripheral tapes do not have an integrated adhesive flaps, an adhesive tape should be put in place at the junction with the Thin Acoustic Underlay. The disconnection tapes must have a minimum thickness of 3 mm. This thickness is increased to 5 mm for heating floor systems. It can reach 8 mm for fluid screeds (upon Technical Approval).

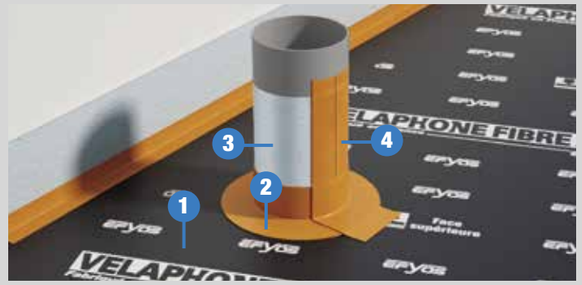
With 3 thicknesses and several widths with or without self-adhesive flap, our range of disconnection tapes perfectly fulfils the needs of contractors in the installation of floating screeds.

Vélaphone® Confort

Vélaphone® Fibre 22

FURTHER IMPLEMENTAION DETAILS

1- Disconnection tape folded under skirting, **2-** Tile adhesive,
3- Flooring, **4-** Flexible mastic sealant bead



1- Thin Acoustic Underlay, **2-** Adhesive tape, **3-** Disconnection tape,
4- Adhesive tape

TIPS

- Use a hook blade cutter for easy and precise cutting of the thin acoustic underlay.
- Cut out the underlayer with a sharp and frank gesture.

Good to know

All the products of **Vélaphone®** range are classified **A+**.

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SOPREMA at your service:

Do you have a question about a specific project, the products or application possibilities? Then contact our technical team.

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www.soprema.co.uk

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