



SOUND INSULATION

PANEL HEATING

DRY SCREED



Fire protection
up to REI 90



EPD
Declaration



Sound insulation
up to 64 dB



Load-
bearing

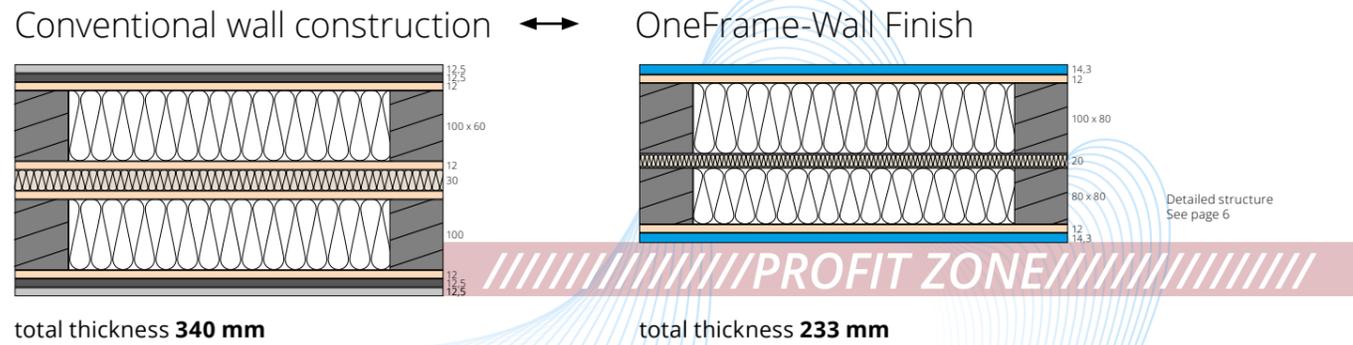
OneFrame-Wall

Efficiency redefined ?

Fire protection - Sound insulation - Cost reduction

Successful model in timber construction - OneFrame-Wall

Fire protection and sound insulation perfectly combined

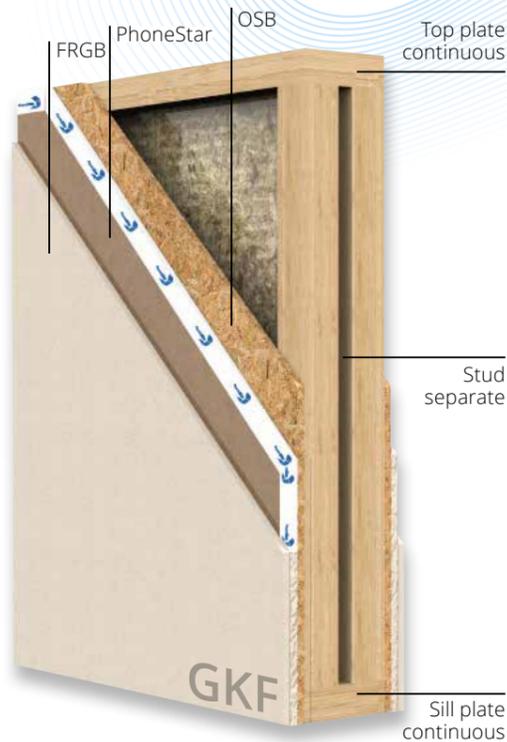


- ✓ increase in profits
- ✓ material saving
- ✓ maximising living space

OneFrame-Wall

Increase effectiveness & reduce costs

- up to **30%** Material saving
- up to **15%** Space gain
- up to **40%** Reduction in manufacturing time
Completely prefabricated in series
- up to **50%** Reduction in assembly times
Only one wall needs to be installed
- Σ 30 - 40%** Savings potential



- ✓ The OneFrame Wall creates a consistently tested system with products that are readily available on the market. There is no need to coordinate with manufacturers regarding the products.

Application for fire protection requirements

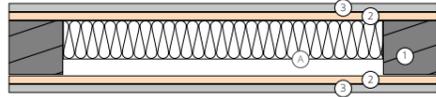
Fire protection requirements under building law (German)		Building classes according to German building law (MBO)				
		GK 1 detached building OKF ≤ 7 m ≤ 2 units of use Σ NE ≤ 400 m ² without a basement	GK 2 non-detached building OKF ≤ 7 m ≤ 2 units of use Σ NE ≤ 400 m ² without a basement	GK 3 other buildings OKF ≤ 7 m + NE > 400 m ²	GK 4 OKF ≤ 13 m NE ≤ 200 m ²	GK 5 OKF ≤ ∞ NE > 400 m ²
unit of use	Load-bearing walls	Fire resistance class REI 30 GKF	Fire resistance class REI 30 GKF	Fire resistance class REI 30 GKF	Fire resistance class REI 60 GKF	Fire resistance class / REI 90
	apartment partition	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF	Fire resistance class REI 60 GKF	Fire resistance class / REI 90
	Wall instead of fire wall acc. MBO (fire replacement wall)	Fire resistance class REI 60 GKF	Fire resistance class REI 60 GKF	Fire resistance class REI 60 GKF	Fire resistance class REI 60 - M (upon request)	Fire resistance class / REI 90 - M GKF
escape routes	Required corridor walls	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF	Fire resistance class (R)EI 30 GKF
		lift shaft	kA GKF	kA GKF	Fire resistance class REI 30 GKF	Fire resistance class REI 60 GKF
Vertical paths	Required Stairwell wall	kA GKF	kA GKF	Fire resistance class REI 30 GKF	Fire resistance class REI 60 - M (upon request)	Fire resistance class / REI 90

The requirements are based on the German Model Building Code (MBO) and are specified for each federal state.

- ✓ ecologically
- ✓ environmentally friendly
- ✓ highly soundproof

Standard | Reference wall

Wall construction - continuous stud



- ③ 12,5 mm gypsum fibreboard
- ② 10 mm gypsum fibreboard
- ① 60 mm timber stud wall
- ④ 40 mm insulation

indicated with

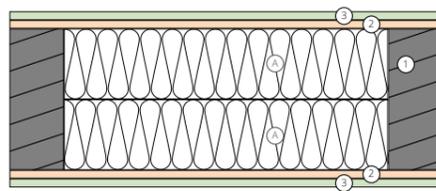
R_w 47 dB
DIN 4109-33 - table 3

TEST SERIES

The systematic concept of the test series is intended to work out the differences between the design variants and make them assessable in the sound prediction: continuous stud / separate stud, stiffening layer (OSB board 12 mm / gypsum fibreboard 12.5 mm), PhoneStar sound insulation layer (single layer / double layer), outer planking (gypsum plasterboard 12.5 mm / fire-resistant gypsum board (FRGB) 12.5 mm each single layer).



1 | Reference wall



- ④ FRGB
- ③ OSB board
- ① 200 mm timber stud wall
- ② 2 x 100 mm insulation

with FRGB

R_w 47.8 dB

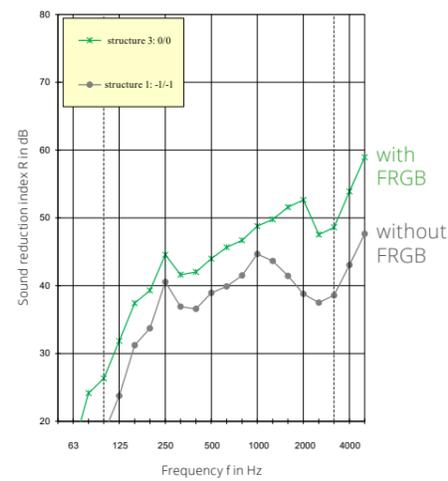
without FRGB

R_w 40.3 dB

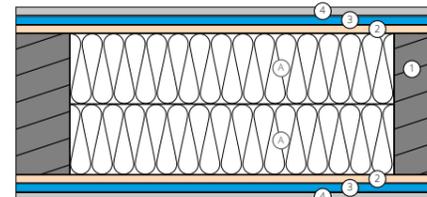
+ 7,5 dB

REI 45*

Based on the test 3.2-23-064-1_PB_HDI_REI45_ Wooden stud construction
* Depending on the insulation material used



3 | PhoneStar ST Tri applied on both sides



- ④ FRGB
- ③ PhoneStar ST Tri
- ② OSB board
- ① 200 mm timber stud wall
- ② 2 x 100 mm insulation

with PhoneStar two-sided

R_w 55.7 dB

with FRGB

R_w 47.8 dB

without FRGB

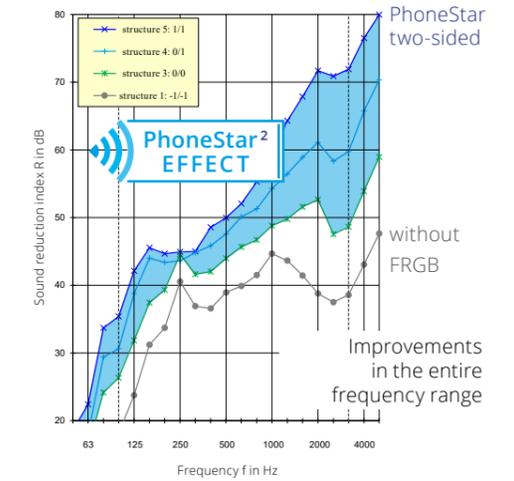
R_w 40.3 dB

+ 7,9 dB

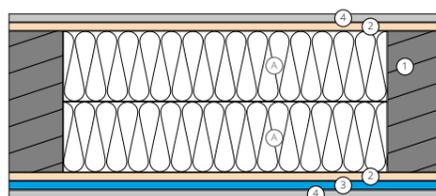
+ 7,5 dB

REI 90*

Based on testing PB 3.2/24-57-2
* Depending on the insulation material used



2 | One-sided with PhoneStar ST Tri



- ④ FRGB
- ③ PhoneStar ST Tri
- ② OSB board
- ① 200 mm timber stud wall
- ② 2 x 100 mm insulation

with PhoneStar one-sided

R_w 53 dB

with FRGB

R_w 47.8 dB

without FRGB

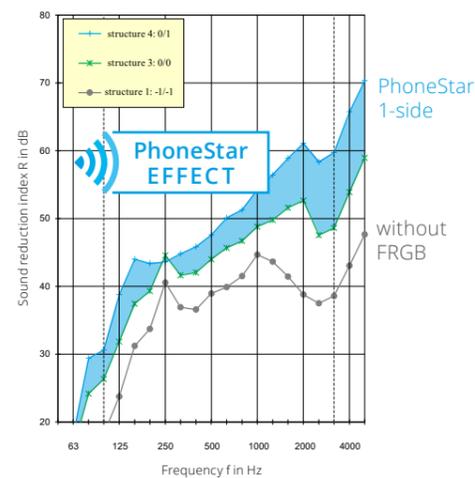
R_w 40.3 dB

+ 5,2 dB

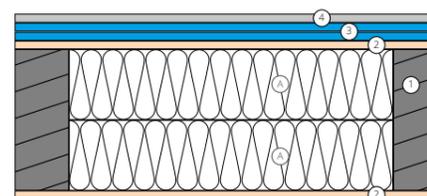
+ 7,5 dB

REI 45*

Based on test 3.2-23-064-1_PB_HDI_REI45_ Wooden stud construction (test without PhoneStar)
* Depending on the insulation material used



4 | Double layers PhoneStar ST Tri applied on both sides



- ④ FRGB
- ③ 2 x PhoneStar ST Tri
- ② OSB board
- ① 200 mm timber stud wall
- ② 2 x 100 mm insulation

with PhoneStar two-sided / two-layered

R_w 57.7 dB

with FRGB

R_w 47.8 dB

without FRGB

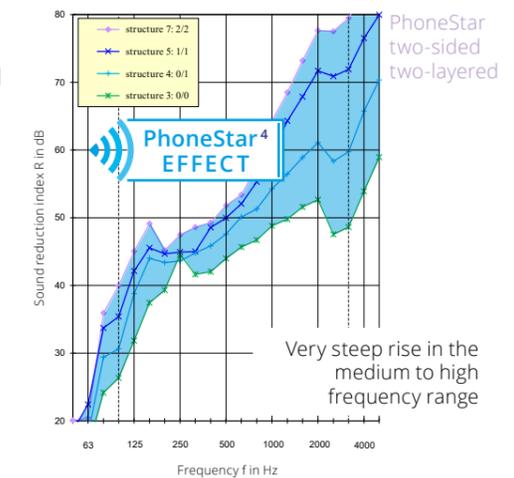
R_w 40.3 dB

+ 9,9 dB

+ 7,5 dB

REI 90*

Based on test PB 3.2/24-57-2
Test only with 2 layers of PhoneStar
* Depending on the insulation material used



- 4 x PhoneStar
- 2 x PhoneStar
- PhoneStar
- FRGB (fire-resistant gypsum board)
- OSB board without plasterboard



Further information can be found on our website:
www.wolf-bavaria.com

Comparison | continuous stud > separated stud

Continuous stud

- ① 12,5 mm FRGB
- ② 12 mm OSB board
- ③ 200 mm timber stud wall
- ④ 2 x 100 mm insulation

R_w 47.8 dB

Separated stud - continuous sill and top plate

- ① 12,5 mm FRGB
- ② 12 mm OSB board
- ③ 100 mm + 80 mm timber studs
- ④ 2 x 100 mm insulation

R_w 52.4 dB

+ 4.6 dB

Sound insulation evidence | separate stud

The calculation was carried out with the following boundary conditions for flanking transmission

Partition wall length = 5,94 m
Room height = 2,65 m
Surface wall = 15,7 m²

Ceiling: **D_{n,f,w} 67 dB**
Floor: **D_{n,f,w} 67 dB**

5 | One-sided with PhoneStar ST Tri

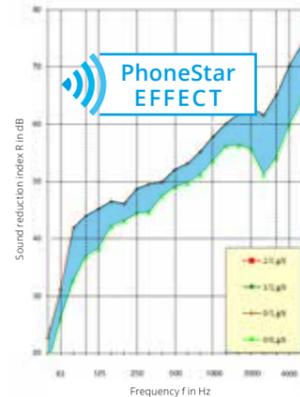
Separate stud with PhoneStar one-sided

- ① FRGB
- ② PhoneStar ST Tri
- ③ OSB board
- ④ Separated timber stud wall
- ⑤ insulation
- ⑥ Spacer insulation

R_w 57.4 dB

REI 45

Based on test 3.2-23-064-1_PB_HDI_REI45_Wooden stud construction (test without PhoneStar)



Partition wall | assembly 6.1

Separate stud FRGB stapled and filled

- ① FRGB
- ② PhoneStar ST Tri
- ③ OSB board
- ④ Separated timber stud wall
- ⑤ insulation
- ⑥ Spacer insulation

R_w 61.4 dB

REI 90*

based on test P 3.2/25-031-2
* depending on the insulation material used



6 | PhoneStar ST Tri applied on both sides

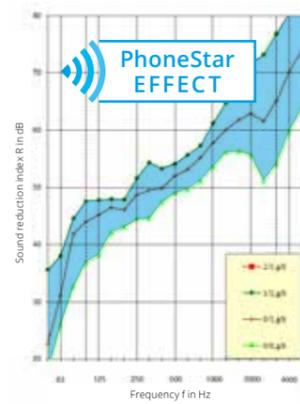
Separate stud with PhoneStar two-sided

- ① FRGB
- ② PhoneStar ST Tri
- ③ OSB board
- ④ timber stud wall
- ⑤ insulation
- ⑥ Spacer insulation

R_w 60.4 dB

REI 90*

based on test P 3.2/25-031-2
* Depending on the insulation material used



Evidence | minimum requirement (Germany)

Flanking wall rigid connection

flanking walls: **D_{n,f,w} 60 dB**

Floor and ceiling: $R_{Ff,w} = 67 \text{ dB} + 10 \lg \frac{4,5}{5,93} + 10 \lg \frac{15,7}{10} = 67,7 \text{ dB}$

Walls: $R_{Ff,w} = 60 \text{ dB} + 10 \lg \frac{2,8}{2,65} + 10 \lg \frac{15,7}{10} = 62,2 \text{ dB}$

R'_w = 10 lg [10^{-6,14} + 2 * 10^{-6,77} + 2 * 10^{-6,22}] = 56,5 dB

Calculation result according to DIN 4109-1:2018 taking into account forecast uncertainty: **u_{prog} 2 dB**

R'_w 54.5 dB

The wall **fulfils the minimum requirements** in accordance with DIN 4109-1:2018
vorh. R'_w - u_{prog} = 54,5 dB ≥ erf. R'_w = 53 dB

Evidence | increased requirement (Germany)

Flanking wall separated connection

flanking walls: **D_{n,f,w} 68 dB**

Floor and ceiling: $R_{Ff,w} = 67 \text{ dB} + 10 \lg \frac{4,5}{5,93} + 10 \lg \frac{15,7}{10} = 67,7 \text{ dB}$

Walls: $R_{Ff,w} = 68 \text{ dB} + 10 \lg \frac{2,8}{2,65} + 10 \lg \frac{15,7}{10} = 70,2 \text{ dB}$

R'_w = 10 lg [10^{-6,14} + 2 * 10^{-6,77} + 2 * 10^{-7,02}] = 58,5 dB

Calculation result according to DIN 4109-5:2020 taking into account forecast uncertainty: **u_{prog} 2 dB**

R'_w 56.5 dB

The wall **fulfils the increased requirement** in accordance with DIN 4109-5:2020
vorh. R'_w - u_{prog} = 56,5 dB ≥ erf. R'_w = 56 dB

7 | PhoneStar ST Tri applied on both sides

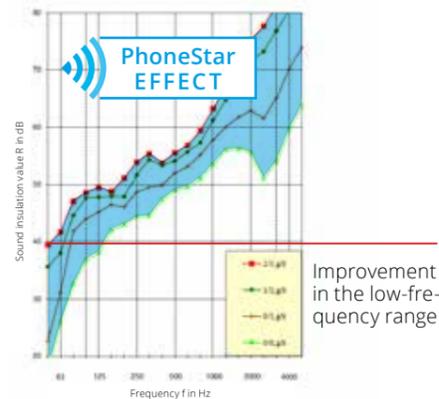
Separate stud with PhoneStar two-layered / one-layered

- ① FRGB
- ② PhoneStar ST Tri
- ③ 2 x PhoneStar ST Tri
- ④ OSB board
- ⑤ timber stud wall
- ⑥ insulation
- ⑦ Spacer insulation

R_w 62 dB

REI 90*

Based on test P 3.2/25-031-2 (test with 2x PhoneStar)
* Depending on the insulation material used



The innovative apartment partition wall with PhoneStar Finish



OneFrame-Wall Finish sets new standards in sound insulation. Whether in new buildings, renovations or industrial applications, PhoneStar Finish combines excellent sound insulation properties with sustainable materials and high cost-effectiveness.

Another advantage is the particularly slim wall construction of only approx. 233 mm and the surface that can be plastered or filled directly, eliminating the need for additional plasterboard.

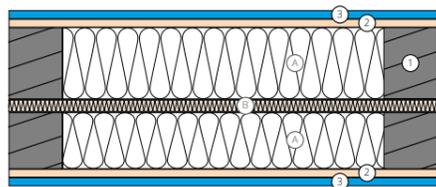
This makes the OneFrame-Wall Finish the ideal solution for modern timber construction and efficient interior design – wherever load-bearing capacity, sound insulation and fire protection are equally important.

- ✓ GK 3 ✓ up to REI 90
- ✓ Weighted Sound reduction index up to 64 dB

OneFrame-Wall Finish Can be plastered/filled directly

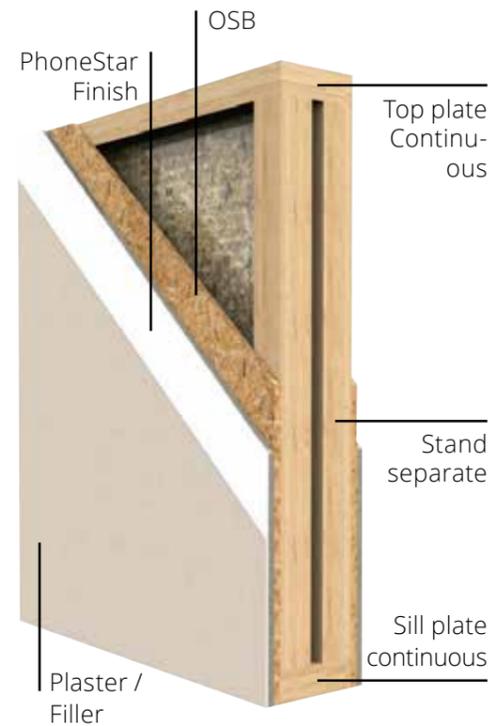
PhoneStar Finish is a revolutionary advancement of the proven PhoneStar sound insulation board. It offers effective sound reduction, a surface that can be plastered or filled, and is based on sustainable materials such as quartz sand, wood pulp (plaster/filler base) and corrugated cardboard.

Test bench measurements in accordance with DIN EN ISO 10140 show that PhoneStar Finish achieves outstanding sound insulation values when installed as a final layer on timber stud walls and, in the structure shown, meets the REI 90 fire protection requirement.



- ① 14,3 mm PhoneStar Finish
- ② 12 mm OSB 3
- ③ 2 x 80 mm Stud wall with 20 mm spacing
- ④ insulation
- ⑤ Spacer insulation

Total height approx. 233 mm

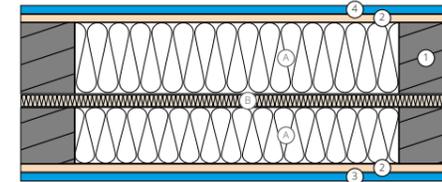


- ✓ load-bearing ✓ up to REI 90
- ✓ Sound insulation up to 64 dB

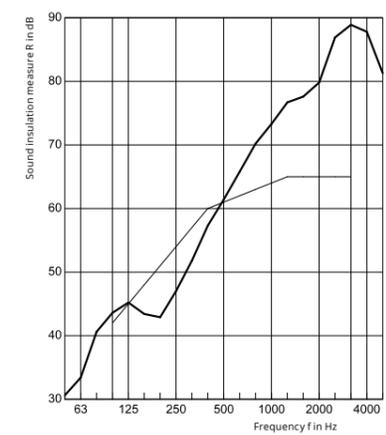
Tests OneFrame-Wall Finish | results



1 | Construction with OSB, without plaster/filler



- ① 14,3 mm PhoneStar Finish
- ② OSB
- ③ separated timber stud wall
- ④ insulation
- ⑤ Spacer insulation

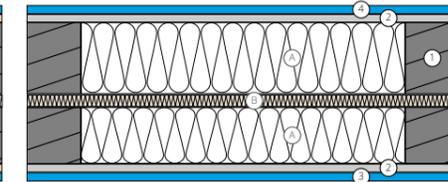


R_w	61 dB
	REI 90*

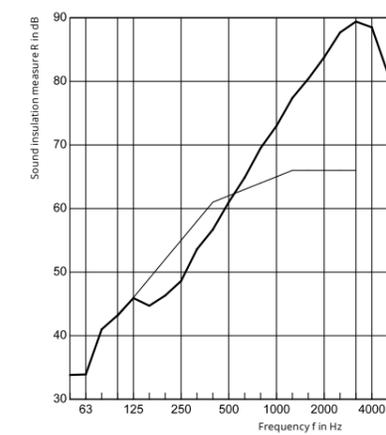
Based on the test 3.2-25-031-1_PB_Wolf Bavaria_REI90_BIE_mU
* Depending on the insulation material used



2 | Construction with GFB, without plaster/filler



- ① 14,3 mm PhoneStar Finish
- ② Gypsum fibre board Knauf Integral
- ③ separated timber stud wall
- ④ insulation
- ⑤ Spacer insulation

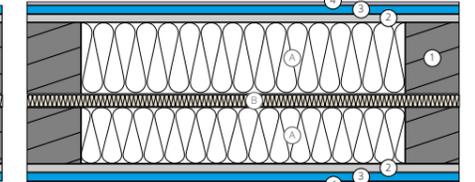


R_w	62 dB
	REI 90*

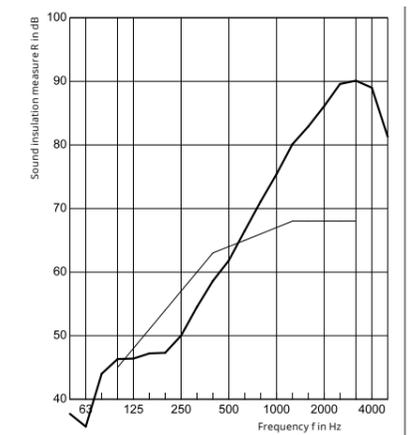
Based on test 3.2-25-031-1_PB_Wolf Bavaria_REI90_BIE_mU; test with OSB instead of gypsum fibre;
* depending on the insulation material used



3 | Construction with GFB, plastered/filled



- ① lime finishing compound
- ② 14,3 mm PhoneStar Finish
- ③ Gypsum fibre board Knauf Integral
- ④ separated timber stud wall
- ⑤ insulation
- ⑥ Spacer insulation



R_w	64 dB
	REI 90*

Based on test 3.2-25-031-1_PB_Wolf Bavaria_REI90_BIE_mU; test with OSB instead of gypsum fibre;
* depending on the insulation material used



PhoneStar Sound insulation panels

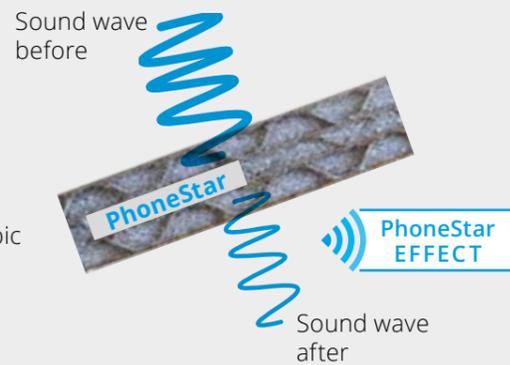


Our solution against noise

PhoneStar is approved as a sound insulation panel for use on floors, walls, ceilings and roofs in ETA 20/0371. At the same time, PhoneStar is certified as a sound-insulating dry screed.

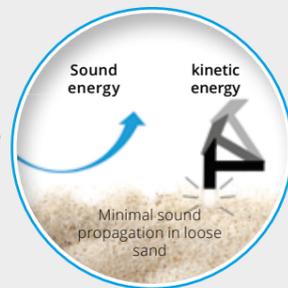
- + Effectively insulates airborne and impact sound
- + Ecological base materials wood and sand
- + Recyclable

- ✓ environmentally friendly
- ✓ effective
- ✓ certified



HOW IT WORKS

PhoneStar has high internal damping due to the sand filling. This minimises structure-borne sound and flanking transmission.



PhoneStar 3 in 1

Very high sound insulation is achieved thanks to the multilayer structure, flexibility and mass.

Fix & Finish

The sustainable, fillable sound insulation board



Innovative sound insulation that meets the highest standards

PhoneStar Finish is a revolutionary advancement of the proven PhoneStar sound insulation board. It offers effective sound reduction, a plasterable surface and is based on sustainable materials such as quartz sand, wood pulp (plaster base) and corrugated cardboard. The result: an environmentally friendly product that does not require additional plasterboard and at the same time achieves impressive sound insulation values.

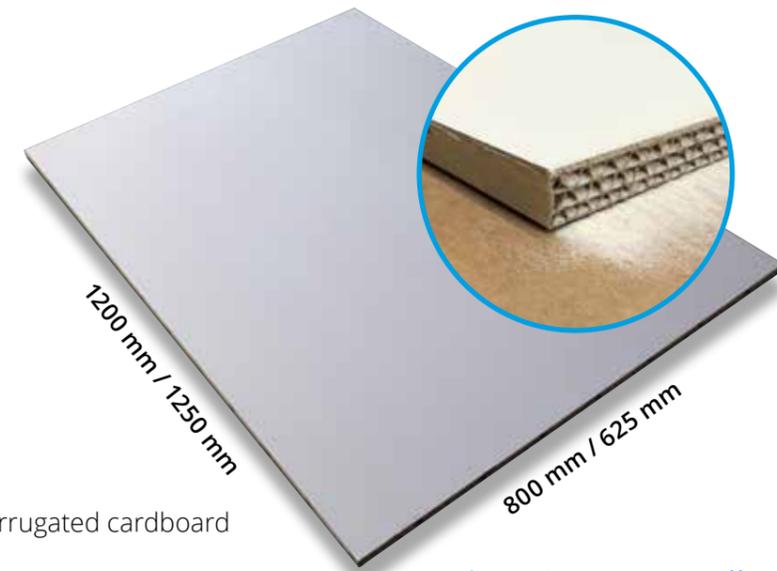
- ✓ resource-efficient
- ✓ reduces construction costs

PhoneStar Finish

Technology meets sustainability

With PhoneStar Finish, you will experience a new dimension in sound insulation. The panel offers:

- A surface that can be plastered directly: no additional plasterboard panels required.
- Excellent sound insulation.
- Ecological materials: quartz sand, recyclable corrugated cardboard and hydrophobic wood pulp.
- Optimal system solution: A "sound-insulating jacket" that combines acoustics, load-bearing capacity and fire protection in one.
- Single-shell apartment partition wall: Can be used up to building class 3 without plasterboard.



- ✓ environmentally friendly
- ✓ efficient
- ✓ reversible

PhoneStar ST Tri - Technical data

Length x width	1250 x 625 mm	1200 x 800 mm	
Surface / panel	0,78 m ²	0,96 m ²	
Thickness	12,5 mm		
Weight	17,5 kg/m ²		
Reduction in impact sound pressure level up to	Δ L _w = 20 dB		
Weighted sound reduction index	R _w = 36 dB		
Fire behaviour	E		EN 13501-1
Compressive strength (kPa)	≥ 1000		
Application	Interior construction		



CERTIFICATION
The complete PhoneStar product range is listed in the ETA-20/0371 with all superstructures/constructions for application in the areas of floors, walls, ceilings and sloping roofs.

Technical data

Length	1200 / 1250 mm
Width	800 / 625 mm
Thickness	11,8 - 14,3 mm
Weight	ca. 12,8 - 18,4 kg/m ²
Fire behaviour	E

Areas of application

- Wood panel construction: The ideal solution for high-performance sound insulation in timber stud walls.
- Interior finishing: Can be plastered directly – saves time and material.
- Renovations: Easy to retrofit for immediate sound insulation.
- Sustainable construction: the best choice for environmentally conscious projects.

Everything from a single source



PhoneStar SOUND INSULATION



PowerFloor PANEL HEATING



PhoneStrip SOUND DECOUPLING

System solutions for solid construction,
timber construction and renovation of old buildings
Consultancy & project support



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