



CONTOPP®

GRAVEL BOND

Item number: 20.426

Product description

Ready-to-use, odourless, latex-based binder for cement-bound gravel fillings with impact sound insulation requirements.

Application

For the production of bonded, highly elastic gravel fillings with high stability, low residual moisture content and improved sound insulation on wooden floors in interior applications. The specific sound insulation criteria depend on the layer thickness of the bonded gravel filling, the dynamic stiffness of the impact sound insulation and the layer thickness of the overlying screed slab. Gravel fillings based on CONTOPP® Gravel Bond have been tested in accordance with ISO 10140-2 and achieve the highest sound insulation level, 'Comfort' (Sound Insulation in Timber Construction, 2019). Licensed following EMICODE EC1 plus.

PROPERTIES



Specifications

Colour:	white
Form:	liquid
Density (at 20 °C):	1.01 ± 0.01 g/ml
Application temperature:	above +5 °C
Shelf life	Approx. 12 months – store away from direct sunlight and in a frost-free place
Packaging:	Disposable container: PE-HD can: 20 kg net Reusable container: Container: 1,000 kg net

TECHNICAL DATA

Mixing model

Formulation per 200 l. of mixture	CONTOPP®	Unit
Cement	12.5	kg
Air-dried basalt chippings 2/5	280	kg
Total water (including moisture of chippings)	max. 7	L
CONTOPP® Gravel Bond	700 ¹⁾	ml

¹⁾ corresponds to 5.6% by volume of the cement weight

Drying and Sound insulation

¹⁾ in accordance with Sound Insulation in Timber Construction – Fundamentals and Preliminary Design (2019)

Criterion	CONTOPP®	Unit
Readiness for installation ≤ 2 CM-%	48	hours
Standard impact sound level L _{n,w} (C _i)	≤ 46 (-2)	dB
Sound insulation level ¹⁾	"Comfort"	

This ideal levelling layer can only be produced by following the preparation instructions set out below. The moisture content of the chippings should not exceed 0.5% by mass. If the chippings are very damp, the amount of mixing water added must be significantly reduced or no mixing water added at all. For thicker chippings levelling layers > 40 mm, dry or artificially dried chippings are strongly recommended.

Raw materials

- Moderately damp or air-dried basalt chippings 2/5 or 4/8 in accordance with DIN EN 13139 with a maximum moisture content of 0.5% by weight

PROCESSING INFORMATION

Formulation

- Stir CONTOPP® Gravel Bond at regular intervals before and during use**
- Recommended dosage range for CONTOPP® Gravel Bond depending on the gravel size: 5–6% by weight of cement
- Mixing time of at least 2 minutes after adding all components.



Construction climate conditions

- Store aggregate outdoors in a location protected from rain.
- If aggregate with a moisture content higher than 0.5% by mass is used (apparently damp aggregate), it must be ensured that the aggregate levelling layer adequately releases its residual moisture before further processing. To this end, favourable drying conditions should be ensured under normal construction climate conditions of +20 °C and a relative humidity of 65%, as well as the removal of excess moisture through cross-ventilation.
- As soon as the gravel filling has a moisture content of $\leq 2\%$, the gravel filling is considered sufficiently dry and ready for further processing.
- Furthermore, if further moisture release by diffusion cannot be ensured due to an underlying or overlying PE film, it is recommended that the gravel filling be allowed to dry sufficiently before further processing at layer thicknesses > 40 mm, even in the case of air-dried gravel.
- We generally recommend installing a full-surface self-adhesive protective membrane film on the underlying timber elements prior to laying the gravel filling.

SPECIAL INFORMATION

Standards and test specifications

- DIN EN 13139: Aggregate for mortar
- DIN EN ISO 10140-3: Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation
- DIN 4108-3: Thermal insulation and energy saving in buildings – Climate-related moisture protection – Requirements, calculation methods and guidelines for design and execution

GENERAL INFORMATION

Comment

The raw materials we process and the products we manufacture are subject to strict in-house quality controls. When using this product, no additives from other manufacturers may be used. Please note that our products and the application process must be checked to ensure they are suitable for the expected site conditions. The quality of the screed depends largely on the quality of the sand and cement, the mixing ratios and the application in accordance with recognised rules of screed laying technology. As we have no control over site conditions or the execution of the works, no legal liability can be derived from this technical data sheet. With the publication of this technical data sheet, all previous versions lose their validity.

Date: 17/06/2026

Sound Reduction Index according to ISO 10140-2

Laboratory measurement of sound insulation of building elements – Measurement of airborne sound insulation



Customer:

KNOPP GmbH
Adolf-Oesterheld-Straße 1
DE-997337 Dettelbach

Composition of the test item (from the transmitting to the receiving room):

Details see in contract no. 20536/25 / no report

60,0 mm	floating cement screed (prefabricated elements HFA), $m' = 150 \text{ g/m}^2$
0,1 mm	separation layer
40,0 mm	impact sound insulation mat Akustik EP1, $s' = 6 \text{ MN/m}^2$ (according to the datasheet)
100,0 mm	fill (paving chippings, grain size 2 mm – 4 mm), bonded with „CONTOPP Gravel Bond“, $m' = 149,6 \text{ kg/m}^2$
0,1 mm	separation layer
180,0 mm	CLT floor, $m' = 77,0 \text{ kg/m}^2$

380,2 mm total thickness

Illustration: none

Product name:

CLT floor with bonded fill (CONTOPP Gravel Bond) and floating cement screed

Manufacturer:

binding agent „CONTOPP Gravel Bond“ KNOPP GmbH

Test date: 29.04.2026

Operator: Gregor Wurlitzer, Elias Uiblein

Installation by: Employees of KNOPP GmbH

Area S of the tested element: 19,8 m²

Surface-related mass: 379,9 kg/m²

Temperature in test rooms: 22,0 °C

Relative humidity in test rooms: 42,1 %

Static air pressure: 1005 hPa

Volume of the receiving room: 58,9 m³

Volume of the transmitting room: 60,3 m³

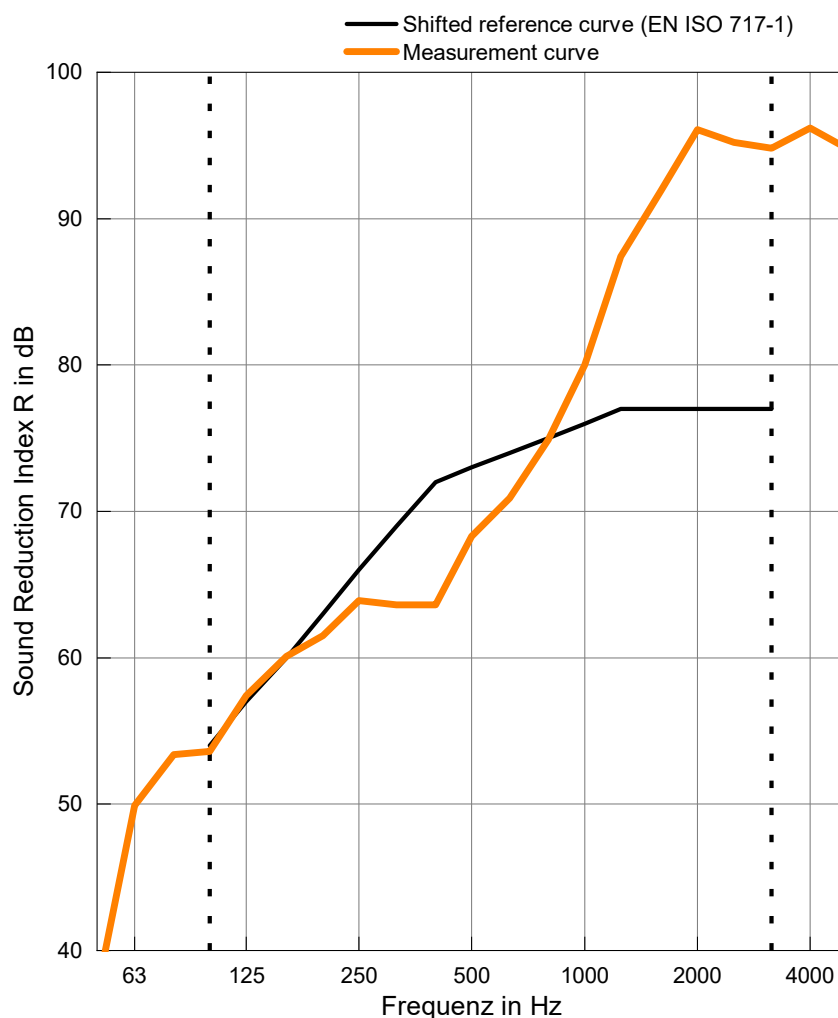
Test sound: white noise (Mode "equalised")

Test code: 260429_SL_M3.0_260429_E_M3.0

Frequency in Hz	$R'_{\max}$ in dB	R in dB
50	35,7	$\geq 37,2$
63	49,8	$\geq 49,9$
80	55,2	$\geq 53,4$
100	68,6	$\geq 53,6$
125	76,6	57,4
160	78,9	60,1
200	83,9	61,5
250	90,6	63,9
315	93,3	63,6
400	94,8	63,6
500	99,6	68,3
630	108,4	70,9
800	106,2	74,9
1000	102,5	80,0
1250	104,4	87,4
1600	106,3	$\geq 91,9$
2000	106,3	$\geq 96,1$ *
2500	103,2	$\geq 95,2$ *
3150	101,6	$\geq 94,8$ *
4000	102,0	$\geq 96,2$ *
5000	99,5	$\geq 94,8$ *

$\geq$ in these frequency ranges the real sound reduction index of the test item may be higher due to the small difference to the maximum sound reduction of the test stand (< 15 dB)

* in these frequency ranges a correction was carried out due to the small difference to the background noise level (< 6 dB)



Rating in accordance with EN ISO 717-1 (in third-octave bands)

$R_w(C, C_{tr}) = 73 (-1; -5) \text{ dB}$ $C_{50-3150} = -2 \text{ dB};$ $C_{50-5000} = -1 \text{ dB};$ $C_{100-5000} = 0 \text{ dB}$
 $R_w(1/10) = 73,6 \text{ dB}$ $C_{tr,50-3150} = -12 \text{ dB};$ $C_{tr,50-5000} = -12 \text{ dB};$ $C_{tr,100-5000} = -5 \text{ dB}$

Test report number: HFA_20536_26_M3.0_eng

Holzforschung Austria

Date: 10. Juni 2026

Dr. Christian Lux

Processor

This test report was approved electronically in accordance with an internal HFA process by the designated authorized signatory, traceable and documented.

Impact Sound Insulation according to ISO 10140-3

Laboratory measurement of sound insulation of building elements – Measurement of impact sound insulation



Customer:

KNOPP GmbH
Adolf-Oesterheld-Straße 1
DE-997337 Dettelbach

Composition of the test item (from the transmitting to the receiving room):

Details see in contract no. 20536/25 / no report

60,0 mm	floating cement screed (prefabricated elements HFA), $m' = 150 \text{ kg/m}^2$
0,1 mm	separation layer
40,0 mm	impact sound insulation mat Akustik EP1, $s' = 6 \text{ MN/m}^3$ (according to the datasheet)
100,0 mm	fill (paving chippings, grain size 2 mm – 4 mm), bonded with „CONTOPP Gravel Bond“, $m' = 149,6 \text{ kg/m}^2$
0,1 mm	separation layer
180,0 mm	CLT floor, $m' = 77,0 \text{ kg/m}^2$

380,2 mm total thickness

Illustration: none

Product name:

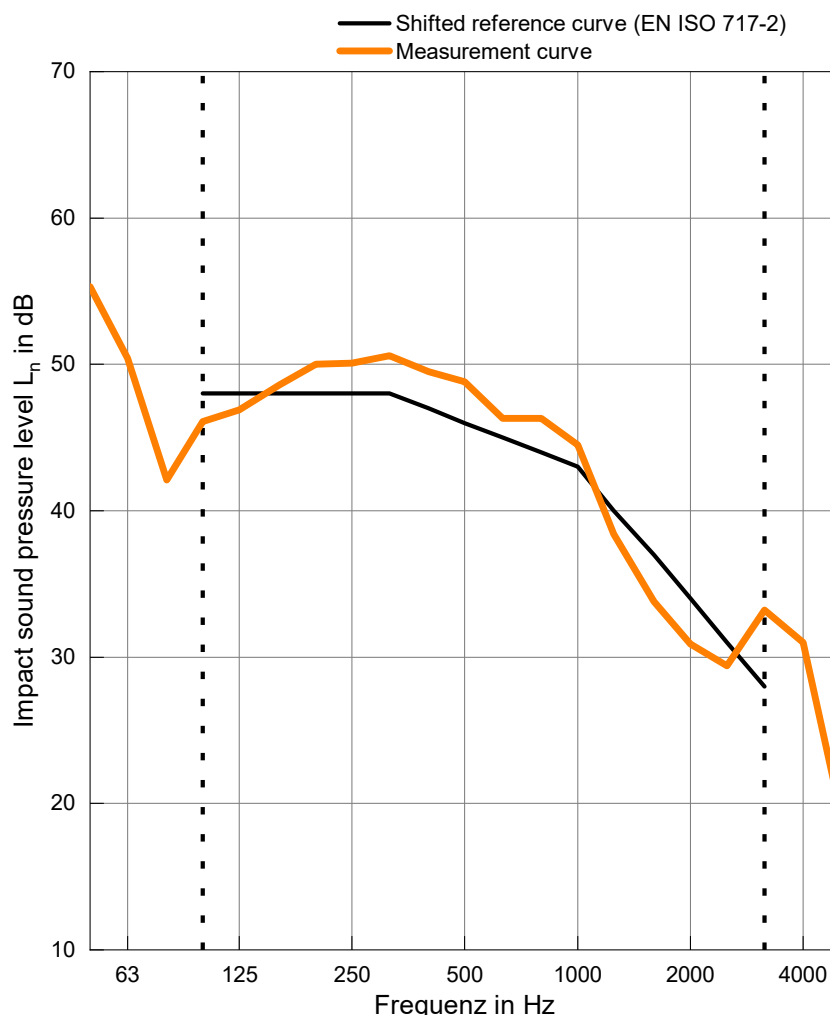
CLT floor with bonded filling (CONTOPP Gravel Bond) and floating cement screed

Manufacturer:

binding agent „CONTOPP Gravel Bond“ KNOPP GmbH
Test date: 29.04.2026
Operator: Gregor Wurlitzer, Elias Uiblein
Installation by: Employees of KNOPP GmbH
Area S of the tested element: 19,8 m²
Surface-related mass: 379,9 kg/m²
Temperature in test rooms: 22,0 °C
Relative humidity in the test rooms: 42,1 %
Static air pressure: 1005 hPa
Volume of the receiving room: 58,9 m³
Volume of the transmitting room: 60,3 m³
Test sound: Standardised tapping machine
Test code: DE1.0_M3.1_

Frequency in Hz	L_n in dB
50	55,3
63	50,4
80	42,1
100	46,1
125	46,9
160	48,6
200	50,0
250	50,1
315	50,6
400	49,5
500	48,8
630	46,3
800	46,3
1000	44,5
1250	38,4
1600	33,8
2000	30,9
2500	29,4
3150	33,2
4000	31,0
5000	19,7

* in these frequency ranges a correction was carried out due to the small difference to the background noise level (< 6 dB)



Rating in accordance with EN ISO 717-2 (in third octave bands)

$L_{n,w}(C_1) = 46 (-61) \text{ dB}$ $C_{1,50-2500} = -61 \text{ dB}$
 $L_{n,w}(1/10) = 45,1 \text{ dB}$

Test report number: HFA_20536_26_M3.1_eng

Holzforschung Austria

Date: 10. Juni 2026

Dr. Christian Lux

Processor

This test report was approved electronically in accordance with an internal HFA process by the designated authorized signatory, traceable and documented.