

Flexible flowable adhesive

PCI Flexmörtel® S1 Flott

especially for large-format floor tiles

NEW



All test certificates are available under www.pci-augsburg.eu

Fields of application

- For indoor and outdoor use.
- For floors.
- For covering cement screeds/cementitious heated screeds $\leq 4\%$ CM.
- For laying especially large-format floor tiles.
- For practically void-free laying of large-format vitrified tiles and fully-vitrified tiles; also for coverings with irregular surfaces such as terracotta or Terrazzo.
- For balconies, terraces, underfloor heating as well as industrial areas subject to mechanical stress such as halls, rooms and corridors in industrial buildings, markets, institutional buildings, administration buildings and commercial buildings.
- For laying natural stones insensitive to staining.
- For levelling irregular substrates before tiling.

Features and benefits

- Non sagging, prevents heavy and large-format flagstones from sagging in the adhesive bed.
- Convenient workability, long processing time up to 3 hours.
- Fast setting time, floor covering can be grouted after approx. 6 hours.
- For levelling irregular substrates and for laying flagstones with a back pattern in a mortar bed with a height from 1 to 15 mm.
- Flexible, compensates variations in temperature and movements in the substrate.
- Waterproof and frost resistant, to be used for floor areas in the interior and exterior.
- Replaces the combined method (buttering-floating).
- Crystalline water binding.
- Low in chromates.
- Meets the requirements of C2E S1 in accordance with DIN EN 12004 - the guideline "Flexible mortar" issued by Deutsche Bauchemie e.V. (German Building Chemicals Industry) - the test principles to issue an official test certificate for bonded

Technically, a cement screed can be tiled over without any problems when the residual moisture level falls to 4% CM (measurement method) or lower.

*However, the generally accepted rules of technology in Germany currently call for a waiting time of 28 days. For legal reasons, the client must therefore be informed of this fact if tiles are to be laid less than 28 days after the screed has been installed and an agreement concerning a deviation from the generally accepted rules of technology must be concluded. Standard texts for the information to be provided and the agreement are available at www.pci-augsburg.de.



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DE0160/01
PCI Flexmörtel S1 Flott
(DE0160/01)
EN 12004:2007+A1:2012
Improved deformable cementitious adhesive with extended open time for tiles for indoor and outdoor use
EN 12004 C2E S1
Reaction to fire Class A2B-s1
Initial tensile adhesion strength ≥ 1.0 N/mm²
Tensile adhesion strength after water immersion ≥ 1.0 N/mm²
Tensile adhesion strength after heat ageing ≥ 1.0 N/mm²
Tensile adhesion strength after freeze/thaw cycle ≥ 1.0 N/mm²

Class
**C2E
S1**
to
EN 12 004-1



Features and benefits

waterproofing in combination with PCI bonded waterproofing such as PCI Lastogum, PCI Seccoral 1K,

PCI Seccoral 2K Rapid, PCI Apoflex F/W and PCI Pecilastic W.

Technical data

Material

Material base	Cement mortar mix with additives. Does not contain asbestos or other mineral fibres. No harmful silica dust during the application.
Fresh mortar density	approx. 1.5 kg/l
Shelf life	min. 12 months; store dry, no permanent storage over +30°C
Packaging size	20 kg PE-lined heavy duty paper bag stock no. 1049/5

Application

Consumption/coverage		
Required notch size	consumption per m ²	20 kg PCI Flexmörtel S1 Flott cover approx.
6 mm (rectangular notch)	approx. 2.3 kg	8.7 m ²
8 mm (rectangular notch)	approx. 2.7 kg	7.4 m ²
10 mm (rectangular notch)	approx. 3.0 kg	6.7 m ²
10/20 mm (arched notch)	approx. 3.8 kg	5.3 m ²
Mixing ratio	20 kg dry mortar (= 1 bag) : 5.0 l water 1 kg dry mortar : 250 ml water	
Adhesive bed thickness	1 to 15 mm	
Slake time	approx. 3 minutes	
Processing temperature	+5°C to +25°C (substrate temperature)	
Processing time*	approx. 3 hours	
Open time*	approx. 30 minutes	
Curing times*		
- walkable after	approx. 6 hours	
- groutable after	approx. 6 hours	
- able to bear weight after	approx. 2 days	

* At +23°C and 50% relative humidity. Higher temperatures reduce, lower temperatures increase the times given.

Preparation of substrate

■ Minimum age of substrate:

- PCI Novoment M1 plus and PCI Novoment Z1: 24 hours
- PCI Novoment M3 plus and/or PCI Novoment Z3: 3 days
- cement screed ≤ 4% CM
- concrete 3 months

■ The substrate must be dry, free from oil and dust and able to bear weight.

Prime very absorbent cementitious substrates with PCI Gisogrund, diluted 1 : 1 with water. Prime rough-ground anhydrite screed, gypsum based floated screed and mastic asphalt screed with undiluted PCI Gisogrund. Use PCI Gisogrund Rapid to prime cementitious and gypsum based substrates if time is a factor.

Allow primer to dry. Cement screeds must not have a residual moisture content in excess of 4%, anhydrite screeds not more than 0.5% (CM meter).

Application procedure

1 Fill gauging water (see Technical Data/Application) in a clean mixing bucket. Add PCI Flexmörtel S1 Flott and mix to a creamy, lump-free consistency using a suitable basket mixer (e.g. from Collomix).

2 Leave to stand for approx. 3 minutes and re-mix briefly.

3 Apply a thin scratch coat to the substrate using the straight edge of the trowel. Comb adhesive onto the fresh scratch coat, in one direction if possible, using the notched edge of the trowel. Spread only as much adhesive as can be covered with tiles within the open time. Check open time by touching the

adhesive with your fingertip. Place tiles in the adhesive bed in a twist and slide motion and align its surface and joints.

Grouting

Cementitious joint grouts/epoxy resin joint grout

	Non-vitrified tiles	Vitrified tiles	Fully-vitrified tiles	Glass tiles/ glass mosaic
PCI Nanofug® from 1 mm	●	●	●	●
PCI Nanofug® Premium 1 to 10 mm	●	●	●	●
PCI Flexfug® 2 to 10 mm	○	●	●	too coarse for glass tiles ○
PCI Durafug® NT 1 to 20 mm	●	●	●	○
PCI Durapox® NT / NT plus 1 to 20 mm (epoxy resin)	●	●	●	●

● to be recommended

● suitable

○ suitable to a limited extent

Elastic joints

■ The standards issued by Zentralverband des Deutschen Baugewerbes (Central Association of the German Building Industry) are valid for the arrangement of joints.

■ Seal movement joints, corner joints (floor/wall) and connection joints (fixtures/tiles, wood/tiles) with the elastic joint sealant PCI Silcofug E or PCI Silcoferm S.

Please note

- Do not apply PCI Flexmörtel S1 Flott at substrate temperatures below +5°C and above +25°C and in hot weather and strong wind.
- The open time is reduced in case of absorbent substrates (recommendation: priming with PCI Gisogrund, diluted 1 : 1 with water).
- **Technically, a cement screed can be tiled over without any problems when the residual moisture level falls to 4% CM (measurement method) or lower.** However, the generally accepted rules of technology in Germany currently call for a waiting time of 28 days. For legal reasons, the client must therefore be informed of this fact if tiles are to be laid less than 28 days after the screed has been installed and an agreement concerning a deviation from the generally accepted rules of technology must be concluded. Standard texts for the information to be provided and the agreement are available at www.pci-augsburg.de.
- When laying tiles on a heated cement screed using PCI Flexmörtel S1 Flott, the heating-up process in accordance with the ZDB leaflet „Coverings on heated/unheated cement screeds" is not required. The heating can be put into regular operation 7 days after tile laying when using PCI Flexmörtel S1 Flott.
- We recommend to fix wall tiles with PCI Flexmörtel S1.
- Use PCI Flexmörtel S2 Rapid for laying tiles outdoors in late summer or autumn-like weather.
- In case of large-format flagstones (edge length > 50 cm or area > 0.25 m²), it might be necessary to apply a scratch coat to the reverse of the tile due to an irregular substrate or tile.
- Never add water or dry powder to reconstitute a PCI Flexmörtel S1 Flott mix which has already begun to set.
- Void-free bedding of tiles/flagstones requires an adhesive bed of sufficient height. The required mixing ratio must be followed. The size of the notched trowel is dependent on tile format and irregularities in the substrate (we recommend to produce a test area).
- Suitable tools are available from e.g. Collomix GmbH, Horchstr. 2, 85080 Gaimersheim/Germany, www.collomix.de.
- Clean tools and mixing buckets with water immediately after use; the cured product can only be removed by mechanical scraping.
- Shelf life: min. 12 months; store dry, no permanent storage over +35°C.

Declaration of Performance

The Declaration of Performance can be downloaded as pdf file under www.pci-augsburg.eu/dop.

Information on the safe use

PCI Flexmörtel S1 Flott contains cement:

Causes serious eye damage. Causes skin irritation. May cause respiratory irritation.

Keep out of reach of children. Wear protective gloves (e.g. cotton gloves soaked in nitrile) and eye/face protection. Avoid breathing dust. IF IN EYES: Rinse cautiously with water for

several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water and put skin cream on (pH value approx. 5.5). IF SKIN IRRITATION OCCURS: Get

medical advice/attention. Take off contaminated clothing and wash it before reuse.

The product is non-flammable. No special fire precautions are therefore required.

Giscode ZP 1

For further information: see PCI Material Safety Data Sheet.

Disposal of emptied PCI sales packaging

PCI participates in an area-wide waste disposal system for sales packaging completely emptied. DSD – Duales System Deutschland (Dual System Germany, contract number 1357509) is

our partner for waste disposal. PCI sales packaging completely emptied can be disposed of via DSD in accordance with the symbol printed on the packaging.

Services for architects and designers

Consultations at the workplace, supplementary information, testing certificates and sample descriptions can

be requested from professional advisors and at the company headquarters.



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zertifiziertes Qualitäts-
managementsystem

In view of widely varying site conditions and fields of application of our products this technical data sheet is meant to provide general application guidelines only. This information is based on our present knowledge and experience. The customer is not released from the obligation to conduct careful testing of suitability and possible application for the intended use. The customer is obliged to contact the technical help-line for fields of application not expressly stated in the technical data sheet under "Fields of Application". Use of the product beyond the fields of application as stated in the technical data sheet without previous consultation with PCI and possible resulting damages are in the sole responsibility of the customer. All descriptions,

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German edition April 2017; the latest edition is always available on the Internet under www.pci-augsburg.de