

PCI NANOLIGHT

Multi use tile adhesive for all kinds of substrates and ceramic coverings

Uses

- For indoor and outdoor use.
- For walls and floors.
- **For all substrates:** cementitious screeds, ground anhydrite and/or gypsum based floated screeds, concrete, precast concrete elements, aerated concrete, heated screeds, plaster boards, gypsum fibre boards, dry screeds, magnesite screeds, mastic asphalt (only indoors), insulation boards, plaster slabs, plaster, render and gauged render, masonry, old ceramic coverings and even, sound wooden substrates such as wooden chipboards, OSB boards etc., metal substrates (only indoors), firmly adhering PVC coverings.



Variable range of application – for all kinds of substrates and ceramic coverings.

- **For all ceramic coverings laid in thin or medium bed:** non-vitrified tiles, vitrified tiles, fully vitrified tiles, porcelain mosaic, glass mosaic, glass tiles, brick tiles and terracotta.
- To lay tiles and flags onto supporting elements such as PCI Polysilent, or for impact sound insulation PCI Polysilent plus.
- To lay tiles and flags onto bonded waterproofing such as PCI Lastogum (e.g. bathrooms).

- To repair and level uneven wall and floor surfaces (e.g. masonry, render, screed) prior to laying tiles and flags.

User benefits

- Unique light filler combination incorporating Nano technology.
- High yield due to the use of special additives and a unique filler combination.
- Plastic mortar providing good workability, mortar can be easily applied with a spatula or trowel.
- Low shrinkage during the curing phase, the mortar can be applied up to a thickness of 15 mm in thin-bed and medium-bed method.
- Rapid curing, but still approx. 90 minutes working time and long open time.
- **Non sag**, therefore easier and quicker application.
- Deformable, compensates elongations of the substrate caused by variations in temperature.
- **Low in chromates in compliance with TRGS 613.**
- **Meets the requirements of C2FTE** according to DIN EN 12004

Packaging

15 kg PE lined heavy-duty paper bag

Technical data material

Material base	dry mortar mix with a special filler combination
Labelling for	
- Regulation for hazardous goods on roads	non hazardous
- Regulation for hazardous substances	irritating, contains cement
<i>For further information refer to the paragraph titled Safety.</i>	

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Technical data application

Consumption	approx. 0.9 kg of dry powder /m ² and p/ mm of adhesive bed
Colour	grey
Yield*	15 kg PCI Nanolight are sufficient for approx.
required notch size:	
- 4 mm	16.6 m ²
- 6 mm	11.5 m ²
- 8 mm	8.3 m ²
- 10 mm	7.1 m ²
Thickness of adhesive bed	from 1 to 15 mm
Working temperature	+5°C to +25°C
Gauging water for - 1 kg powder	approx. 600 ml
- 15 kg bag	approx. 9 litres
Slake time	approx. 3 minutes
Working time**	approx. 90 minutes
Open time**	approx. 30 minutes
Curing times** (on slightly absorbent substrates)	
- walkable after	approx. 5 hours
- groutable after	approx. 5 hours
- able to bear weight after	approx. 24 hours
Temperature resistance	-30°C to +80°C

* The surface structure of the substrate and the reverse profile of the used ceramic are also important factors, besides the tile size, for the consumption of mortar. The indications refer to the installation of slightly profiled non vitrified or vitrified tiles on render or cement screed.

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

Storage

Cool and dry

Shelf life

Approx. 12 months

Substrate preparation

Minimum age of the substrate:

- Cement screed: 28 days

- Concrete: 3 months

The substrate must be sound, clean and load bearing. Oil stain's, bond inhibiting materials and other residues must be mechanically removed.

For the installation of ceramic tiles the substrate must be plumb and flush to comply with DIN 18202, therefore prior to the installation of PCI Nanolight level substrate irregularities on walls and/or floors with PCI Nanolight upto 15mm or alternatively use Mastertop 528 to level horizontal areas.

Screeds on separation or insulation layers tend to deform due to non-uniform dehydration (concave arching). To avoid excessive lowering of the edge at a later stage please contact the PCI Technical Help-line prior to levelling or tiling. Prime very absorbent cement based substrates and aerated concrete with PCI Gisogrund, diluted 1 : 1 with water. For ground anhydrite and/or gypsum based floated screeds, gypsum based substrates and poured asphalt screeds on internal applications prime with undiluted PCI Gisogrund.

Where coverings to Mineral substrates are required, and where time constraints are prevalent (e.g. retail outlets) the substrate should be primed with PCI Gisofix NT.

Metallic substrates indoors such as steel and aluminium, which are not exposed to moisture must be well supported to provide resistance to bending and oscillations. The substrate must be free from rust and preservatives. Prime metal surfaces with PCI Flächengrund 303 .

Wooden chipboards or OSB boards should have a moisture content of no more than 10%. The wooden chipboard (V100) or OSB board must be at least 25 mm thick if applied to floors and at least

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19mm if applied to walls. The chipboards must be screwed to the substructure at 40cm centres max. The edge joint must be at least 8 mm wide. The joints of the chipboards should be tongue and grooved and must be glued.

Prime wooden chipboards and OSB boards when exposed to moisture with PCI Wadian, and then waterproof with PCI Lastogum.

Allow primers to dry.

Recently-laid cement screeds must have a residual moisture content of not more than 4%, anhydrite and/or gypsum based screeds not more than 0.5% (measured with a CM meter).

Application

Mixing of mortar

1. Place gauging water (see table) into a clean container and add powder while mixing with a suitable paddle (e.g. available from Collomix) attached to an electric drill until a plastic, lump-free mortar is achieved.
2. Leave PCI Nanolight to stand for approx. 3 minutes, then remix briefly.

Levelling irregularities in the substrate

1. The mortar can be applied in the usual working method by float. Small spillings can be scraped off with a steel trowel, large areas with a straight edge in both horizontal and vertical directions.
2. PCI Nanolight having been used as a levelling compound can be applied to walls after approx. 5 hours and floors after approx. 24 hours.

Laying tiles

1. Apply a thin scratch coat to the substrate using the straight edge of the trowel.

2. Comb mortar onto the fresh scratch coat with the notched edge of a trowel. Apply the adhesive bed in one direction if possible and only use as much mortar as can be covered with tiles during the open time. Check the open time by touching the mortar with your fingertip.
3. Position and align the tiles by slightly pushing them into the adhesive bed.

Grouting

from 2 to 8 mm joint width	from 5 to 20 mm joint width
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Water-repellent grout

- PCI Aquafug (from 1-4 mm joint width) Colours: white, silver grey, grey, basalt, pergamon
- PCI Megafug (from 2-10 mm joint width) Colours: no.19 basalt, no.21 grey, no.31 cement grey

Water-impermeable grout PCI Flexfug

Colour	Joint width
No. 22 sand grey	3 to 15 mm
No. 18 manhattan	2 to 10 mm
No. 19 basalt	2 to 10 mm
No. 30 aged white	2 to 10 mm

Cementitious grout highly resistant to mechanical stress

PCI Durafug NT Joint width 3 to 20 mm

Elastic joints

- Corner joints (floor/wall, wall/wall, wall/ceiling) and connection joints (fixtures/tiles, wood/tiles) should be sealed with the elastic sealant PCI Silcoferm S.

Seal corner and connection joints in underwater areas with PCI Silcoferm VE.

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Note

- Do not apply at temperatures below +5°C and above +25°C and under extreme hot and windy conditions.
- The scratch coat of PCI Nanolight must have cured prior to laying tiles indoors on walls on existing ceramic coverings not being exposed to wetness.
- For the installation on existing ceramics **outdoors** or **when exposed to permanent water** (e.g. shower facilities etc.) apply the bonding agent PCI Polyhaft and let it cure.
- The instructions of the gypsum manufacturers must be followed in case of gypsum and gypsum based substrates.
- The open time is reduced in case of absorbent substrates (recommendation: priming with PCI Gisogrund or PCI Gisofix NT).
- Never add water or dry powder to a PCI Nanolight mix which has already started to set.
- When laying floor coverings outdoors use either PCI Nanolight in the buttering/floating method or the pourable flooring mortars PCI Nanoflottflex.
- When laying glass mosaic in swimming pools only front-sided paper-faced or front-sided foil-faced glass mosaic should be used.
- Translucent glass mosaic appears darker when laying it with PCI Nanolight.
- Glass tiles with a reaction resin coating on the bottom side may only be laid with PCI Nanolight if the coating is alkali resistant.
- After laying mosaic tiles it is required to rake joints clean to a uniform depth to ensure proper, stain-free grouting afterwards. This

also applies to front-sided paper-faced mosaic.

- When laying tiles and flags on facades please follow the standard DIN 18 515-1 "Outer cladding".
- Suitable tools are available from Collomix GmbH, Horchstraße 2, D-85080 Gaimersheim, www.collomix.de
- Contaminated tools and ceramic should be cleaned with water immediately after use; once the product has cured it can only be removed by mechanical means.
- Use the adhesives PCI Carraflex, PCI Carrafloft or PCI Carrament when fixing natural stone.
- Store in cool, dry conditions. Open bags must be closed immediately after use.

Safety

PCI Nanolight contains cement. Contact with moisture or gauging water sets off an alkaline reaction which may cause skin irritation and/or caustic burns to mucous membranes (e.g. eyes). Risk of serious damage to eyes, therefore avoid contact with eyes and prolonged skin contact. In case of contact with eyes immediately rinse with plenty of water and consult a doctor. In case of contact with skin change contaminated clothing immediately and wash skin with plenty of soap and water. Wear suitable protective gloves (e.g. cotton gloves soaked in nitrile). Keep out of reach of children. If ingested seek prompt medical attention and show packaging or label.

Low in chromates according to TRGS 613.

For further information refer to the PCI Material Safety Data Sheet.

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