

Multi use, fast setting flexible tile adhesive for all ceramic tiles

PCI Nanolight[®] Rapid

Fields of application

- For indoor and outdoor use.
- For walls and floors.
- For fast track works and application at low temperatures .
- For cementitious screeds, anhydrite and/or gypsum based floated screeds, concrete, precast concrete elements, aerated concrete, heated screeds, plaster boards, gypsum fibre boards, dry screeds, , mastic asphalt (only indoors), insulation boards, plaster slabs, plaster, render, masonry, old ceramic coverings, metal substrates (only indoors), firmly adhering PVC coverings .
- For all ceramic coverings laid in thin or medium bed: non-vitrified tiles, vitrified tiles, fully vitrified tiles, porcelain mosaic, brick tiles and terracotta .
- For laying tiles on the supporting elements PCI Peditur made of high-resistance foam and on the impact sound insulation and separation board PCI Polysilent and/or PCI Polysilent plus.
- For laying tiles on bonded waterproofing such as PCI Lastogum (e.g. private bathrooms), PCI Seccoral (e.g. swimming pool and terraces)

Features and benefits

- Unique light filler combination and Nano technology.
- High coverage due to use of special additives and a unique filler combination.
- Plastic and workable mortar which can be easily applied by trowel.
- Rapid curing, walkable and groutable after approx. 2 hours.
- Non sag, therefore easy and quick application.
- Deformable, compensates elongations of the substrate caused by variations in temperature.
- Low in chromates in compliance with chromate VI regulations
- Corresponds to C 2 FT acc. to EN 12004.
- Corresponds class S 1 acc. to EN 12002.

Technical data

Application/Characteristics of the mortar

Consumption	approx. 0.9 kg of dry powder/m ² and mm adhesive bed thickness	
Colour	grey	
Coverage*	Consumption per m ² :	15 kg of PCI Nanolight Rapid are sufficient for approx.
required notch size:		
- 4 mm	1.0 kg	15.0 m ²
- 6 mm	1.4 kg	10.8 m ²
- 8 mm	1.9 kg	8.0 m ²
- 10 mm	2.4 kg	6.3 m ²
Working temperature	+5 °C to +25 °C	
Gauging water for		
1 kg powder	approx. 460 ml	
15 kg bag	approx. 6.9 ltr	
Slake time	approx. 3 minutes	
Working time**	approx. 30 minutes	
Open time**	approx. 15 minutes	
Curing times**		
(on low absorbent substrates)		
- walkable after	approx. 2 hours	
- groutable after	approx. 2 hours	
- able to take weight after	approx. 24 hours	
Temperature resistance	-30 °C to +80 °C	

Material

Material base	dry mortar mix with special filler combination
Labelling for	
- regulation for hazardous goods on roads	non hazardous
- regulation for hazardous substances	irritant, contains cement

For further information see Health and Safety.

Shelf life	6 months when stored in dry conditions, no permanent storage over +30°C
Packaging	15 kg PE lined heavy duty paper bag

* 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.

Preparation of substrate

Minimum age of the substrate:

- PCI Novoment M1 plus and/or PCI Novoment Z1 screed: 24 hours
- PCI Novoment M3 plus and/or PCI Novoment Z3 screed: 3 days
- Cement screed: 28 days
- Concrete: 3 months

The substrate must be sound, clean and fully cured and dry. Oil stains, bond inhibiting material and other residues must be thoroughly removed.

For the installation of ceramic tiles the substrate must be plumb and flush to comply with BS5385 part 2. For the installation outdoors the substrate must have a slope of min. 1.5%. Prior to the installation level substrate irregularities with PCI Polycrret 5/20, PCI Pericret or PCI Periplan.

Level timber floors with PCI Periplan Extra before covering them, or overboard using 18mm suitable material, (pedicur/plywood)

Prime very absorbent cement based substrates and aerated concrete, ground anhydrite and/or gypsum based floated screeds as well as gypsum based substrates and poured asphalt screeds inside of buildings with PCI Gisofix NT.

Old PVC coverings must firmly adhere to the substrate, any contamination such as grease etc. must be removed and the bond area sanded and primed with PCI Primer.

Allow primers to dry.

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

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 Rapid to stand for approx. 3 minutes, then remix briefly.

Levelling irregularities in the substrate

1 The mortar can be applied by using a steel or plastic float.

2 The levelling mortar can be tiled on walls after approx. 2 hours, on 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 wet scratch coat with the notched edge of the trowel, in one direction if possible. Apply only 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 Lay tiles into the adhesive bed with a twist and slide motion and adjust to correct position.

Please note

- Do not apply at temperatures below +5°C and above +25°C and under extreme hot and windy conditions.
- 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.
- When laying tiles the valid BS585 regulations should be followed.
- The instructions of the gypsum manufacturers must be followed for preparation of gypsum and gypsum based substrates.
- The open time maybe reduced on very absorbent substrates (recommendation: priming with PCI Primer G of Fast-Track PCI Gisofix NT).
- Never add water or dry powder to a PCI Nanolight Rapid mix which has already begun to set.
- When laying fully vitrified tiles outdoors use either PCI Nanolight Rapid in the combined backbuttering method or the pourable flooring mortars PCI Floorfast 20 and/or PCI Floorfast 20 Rapid
- After laying mosaic tiles it is necessary to rake joints clean to a uniform depth to ensure proper, stainfree grouting afterwards. This also applies to front-sided paper-faced mosaic.
- When laying tiles on facades please follow the BS 5385 Part 2 „Outer claddings“.



The Chemical Company

- 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 natural stone adhesives PCI Carralight, PCI Carrafloft or PCI Carrament when laying natural stone.
- Store in dry conditions, no permanent storage over +30°C. Open bags must be closed immediately after use.

Health and Safety

PCI Nanolight Rapid 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 contact with skin. 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.

For years PCI Augsburg GmbH has been intensively engaged in the research of Nano structures in cementitious products and we have a variety of analytical possibilities and methods. By means of structural examinations from the very first minute of cement curing the formation of Nano structures can be observed and affected. The combination of various kinds of cement and the specific formulation, e.g. with high-quality polymers, light fillers and additives leads to improved and new characteristics of the product.

PCI Augsburg GmbH does not use Nano particles in any of its products.

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