



The Chemical Company

Reaction Resin Grout

PCI Epoxy Grout

For tile coverings exposed to most chemicals

Fields of application

- For interior and exterior use.
- For walls and floors.
- Waterproof and chemical resistant resin grout for laying and grouting of wall and floor coverings of ceramic tiles, mosaic and engineering brick.
- For ceramic coverings in swimming pools, breweries, dairies, cheese dairies, the soft drink industry, catering kitchens, the butcher's trade, slaughter houses, fat processing industries, electroplating plants, dye works, bleaching works, tanneries, paper mills, laboratories and hospitals.
- For ceramic coverings in administration buildings, schools, public conveniences, sewage plants, sewers, cow sheds and for flights of steps exposed to de-icing salts.
- For waterproof grouting of tiles and mosaic coverings on moisture-sensitive substrates and kitchen work tops.
- Classified as RG according to EN 13888 standard

Features and benefits

- Resistant to many chemicals, acids, and alkalis, fats and oils (refer to Resistance to Chemicals).
- Waterproof, inhibits the passage of water vapour and protects moisture sensitive substrates from moisture and water.
- Highly wear resistant, resistant to rolling and grinding loads, resistant to steam jet cleaning.
- Crack-free hardening and non-shrinkage setting, grout does not crack or crumble.
- Frost and weather-resistant, multi-purpose application indoors and out.
- High mechanical strength, good adhesion, low modulus of elasticity, superior to traditional cement-based grouts.
- Kit contains bonding resin with fillers and the hardener.
- Resilient and easy to work, for joint widths from 3 to 20 mm.
- Produces a smooth and impermeable joint surface, therefore easy to clean.



The Chemical Company

TECHNICAL DATA

Material

Material basis	Epoxy resin and aminic hardner
----------------	--------------------------------

Components	2 parts
------------	---------

Identification according to

Regulation for Hazardous Goods /Road
- basic component

Cl. 9, para 11c, UN 3082, substance harmful to the environment, liquid, n.o.s. (epoxy resins)

- hardener component

Cl. 8, para 53c, UN 2735 polyamine, liquid, corrosive, n.o.s. (pentaethylene hexamine)

Regulation for Hazardous Material
- basic component

irritant, contains epoxy resins

- hardener component

corrosive, contains pentaethylene hexamine and polyethylene amines

For further information refer to paragraph Safety Notes.

Shelf life

approx. 24 months; prior to mixing dissolve crystallized out base component using warm water (up to +50°C) and mix thoroughly. Do not mix with hardener component until cooled down to room temperature.

Storage

cool and dry

Packaging

4.5 kg unit (incl. hardener)

Colours

white, grey, beige grey

Application procedure

Consumption	
Installation of tiles	approx. 1.8 kg/m and mm layer thickness
Required notch size of trowel for ceramic tiles	
- small and medium mosaic	3 mm
- tiles with slight profile on reverse	4 mm
- tiles with strong profile on reverse	6 to 10 mm

Grouting of tiles	
150 x 150 x 8mm (joint width 3mm)	approx. 0.57 kg/m ²
50 x 50 x 5mm (joint width 3mm)	approx. 1.08 kg/m ²

Yield

Installation of tiles	4.5 kg PCI Epoxy Grout is sufficient for approx. 2.5 m ² (with 1 mm layer thickness)
-----------------------	--

1 x 4.5 kg unit is sufficient for approx.

Grouting of tiles	
- tiles 15 x 15 cm (joint width 4 mm)	5.6 m ²
- medium mosaic 5 x 5 cm (joint width 4 mm)	4.1 m ²
- split brick 24 x 11.5 cm (joint width 10 mm)	2.6 m ²

Working temperature	at least +10°C to +30°C (substrate temperature)
---------------------	---

Working time*	approx. 50 minutes
---------------	--------------------

Emulsive quality/washable	after* approx. 20 minutes
---------------------------	---------------------------

Curing times*	
- laid tiles walkable	after approx. 1 day
- grouted tiles loadable	after approx. 24 hours
- exposed to water and chemicals	after approx. 7 days

Temperature resistance	
- when dry	-20°C to +80°C
- when permanently wet	-20°C to +50°C
- brief exposure to stream jet	resistant to thermal shock

Joint width	3 to 20 mm
-------------	------------

- At +23°C and 50 % relative humidity. Higher temperatures reduce and lower temperatures increase these times.



The Chemical Company

Resistance to chemicals

Group EN13529	Description	Blistering ISO4628- 2	Visual Change ISO- 4628-1	Hardness Change	Maximum Time without changes
Group 1	Gasolines	500 h	168 h	168 h	168 h
Group 3	Diesel, heating oils, motor oils	500 h	168 h	500 h	168 h
Group 4	Hydrocarbons excluding groups 4a, 5, 5a	500 h	168 h	500 h	168 h
Group 4a	Benzene and Benzene derivatives e.g. (Tolulene, xylene)	500 h	500 h	168 h	168 h
Group 5	Mono and polyalcohols e.g. (methanol, ethanol, isopropanol, glycerine)	500 h	500 h	500 h	500 h
Group 5a	Alcohols and Glycol Esters	500 h	500 h	24 h	24 h
Group 7	Organic esters and Ketones e.g. (Ethyl acetate, Methyl isobutyl ketone)	500 h	500 h	500 h	500 h
Group 8	Aliphatic Aldehydes e.g. (Formaldehyde 30%)	500 h	1 h	500 h	1h
Group 9	Organic acids in aqueous solution up to 10% concentrate e.g. (Acetic, lactic, tartaric, citric and oxalic acids)	500 h	168 h	500 h	168 h
Group 9a	Concentrate organic acids (except formic acid) and their salts (in aqueous medium) e.g. (Acetic, lactic, tartaric, citric and oxalic acids)	500 h	1 h	1 h	1 h
Group 10	Inorganic Acids upto 20% concentration and their salts in aqueous solution (pH<6) except Hydrofluoric acid and oxidising acids and their salts. e.g. (Hydrochloric acid, sulphuric acid, nitric acid)	500 h	1 h	500 h	1 h
Group 11	Inorganic bases and their water based salts (pH > 8) except ammonia solutions and solution of oxidising salts (i.e. Hyperchlorate) e.g. (Sodium hydroxide, calcium hydroxide, potassium hydroxide)	500 h	500 h	500 h	500 h
Group 12	Solutions of inorganic non oxidising salts with pH between 6 and 8 e.g. (Sodium chloride, calcium chloride, potassium chloride)	500 h	500 h	500 h	500 h
OTHERS	Ammonia 25%	500 h	500 h	500 h	500 h
	Ammonium Chloride 10%	500 h	168 h	500 h	168 h
	Ammonium Sulphate 40%	500 h	168 h	500 h	168 h
	Iron Sulphate 20%	500 h	168 h	500 h	168 h
	Beer	500 h	168 h	500 h	168 h
	Coca cola	500 h	168 h	500 h	168 h
	Tomato Juice	500 h	168 h	500 h	168 h
Orange Juice	500 h	168 h	500 h	168 h	

Property	Standard	Unit	Values
Density:	-	g/cm ³	Approx. 1.8
Mixing time	-	Minutes	Minimum 3
Working time	-	Minutes	Approx. 50
Temperature for application (support and material):	-	°C	From +10 to + 30
Open to traffic after	-	Hours	Approx. 24
Applicable joint wideness	-	Mm	From 3 to 20
Temperature resistance in dry conditions:	-	°C	From -20 to +80
Temperature resistance in permanent humidity:	-	°C	From -20 to +50
Chemical and water resistance after:	-	Days	Approx 7
Flexural strength After 24 hours After 7 days After 28 days	EN 12808-3	N/mm ²	>25 >25 >30
Compressive strength After 24 hours After 7 days After 28 days	EN 24624 EN 12808-3	N/mm ²	Approx. 65 Approx. 80 Approx. 80
Abrasion resistance	EN 12808-2	mm ³	75
Shrinkage	En 12808-4	Mm/m	0.769
Water absorption after 240 minutes	EN 13888	g	0.05
Classification	EN 13888	-	RG

Hardening times are measured at 20°C and 55% relative humidity. Higher temperatures or lower relative humidity can reduce these times and the opposed.

Technical data shown are statistical results and do not correspond to guaranteed minima. If control data is required, sales specifications may be requested from our Technical Department.

Substrate preparation

Tile fixing

The substrate must be clean, dry, load-bearing and even. All forming oil and wax residues, chemical residues, old coats of paint and evaporation inhibitors have to be removed completely. Cement screeds must not have a moisture content higher than 4 %. Do not use where rising damp is evident.

Grouting

The joints must be clean, dry and free from grease and dust. Before grouting rake out joints uniformly and clean thoroughly. The bedding mortar and/or tile adhesive must be fully hardened.

Mixing

Add hardener component to the basic component and mix thoroughly with a suitable stirrer or mixer attached to a slow-speed drill until a homogenous mix is produced (mix for at least 3 minutes). Place mixed material in a clean vessel and mix again thoroughly. With partial quantities use 100 parts by weight of basic component and 20 parts by weight of hardener component.



The Chemical Company

Tile fixing

1. With the smooth side of the trowel, held at a steep angle, apply a thin layer on the surface to make subsequent combing easier.
2. Then comb PCI Epoxy Grout with the notched side of the trowel. Only comb as much PCI Epoxy Grout as can be covered with tiles during the open time.
3. Place and align tiles. Use battens to temporarily support heavy tiles if required.

Grouting by trowel

1. Apply mixed PCI Epoxy Grout over the surface to be tiled and strike off diagonally with a plastic or hard rubber trowel, ensuring grout is worked well into joints.
2. Give first wash with warm water and a suitable hard sponge rubbing with circular motion. Rinse out sponge frequently.
3. Then wash with a soft sponge rinsing out sponge well.
4. After a minimum of two and maximum of five hours after grouting give final wash by removing the remaining haze from tiles with a clean, damp soft cloth.

Please note

- Wear suitable protective gloves and safety goggles/face protection during the application.
- Do not apply at substrate temperatures below 10°C.
- PCI Epoxy Grout contains pigments. Prior to grouting of unglazed and non-slip tiles a trial should be done (pigment stains).
- Use of acid-containing cleaners may cause discolourations.
- Please request technical advice when grouting profiled, non-slip tiles.
- PCI Epoxy Grout White may discolour, especially in contact with chlorinated water.
- PCI Epoxy Grout must not be diluted with water, alcohol or other liquids.
- Due to the proneness to dirt the colour white should not be used on floor areas.

- The best working temperature for grouting with PCI Epoxy Grout is at +20°C.
- Use limited water for cleaning. Do not allow the cleaning water to run into the drains.
- Fill the cleaning water into barrels and allow the material to settle. The settled and cured epoxy resin can be disposed of as rubbish.
- The assured material properties apply to the material only, but not to the surface fixed or grouted with PCI Epoxy Grout.
- Perfect cleaning is no longer guaranteed after 24 hours. It is therefore recommended to carefully inspect the final cleaning measures to ensure that the invisible translucent film of the uncured material is completely removed. Otherwise there is a higher risk of soiling if exposed to use.
- Block off perimeter and expansion joints before grouting.
- Apply elastic sealant to joints between ceramic, plaster, concrete, fixtures and pipe culverts as well as perimeter and corner joints:
- in normal cases: Silcoferm S, Silcoferm VE.
- Clean tools with water immediately after use; once the product has cured it can be removed by mechanical means only.
- Shelf life: approx. 24 months if stored in a cool and dry place. Before mixing dissolve basic material that has crystallized out in a warm water bath (up to +50°C) and mix thoroughly. Only mix with the hardener component after cooling down to room temperature.

Safety

Safety goggles must be worn when mixing the components. Skin irritation may result from contact with the mixed materials and/or individual components. Burns to mucous membranes may result from contact with the hardener component. Therefore avoid skin contact, e.g. by wearing protective gloves.

For further information refer to the PCI Safety Data Sheets.



The Chemical Company

NOTE:

Similar to all the other recommendations and technical information, this technical data sheet serves only as a description of the product characteristics, mode of use and applications. The data and information given are based on our technical knowledge obtained in the bibliography, laboratory tests and in practice. The data on consumption and dosage contained in this data sheet are based on our own experience and are therefore subject to variations due to different work conditions. Real consumption and dosage should be determined on the job by means of prior tests and are the liability of the client. Our Technical Service is at your disposal for any additional advice. Degussa Construction Chemicals España, S.A.. reserves the right to modify the composition of the products provided these continue to comply with the characteristics described in the data sheet. Other applications of the product not covered by those indicated shall not be our liability. In the case of defects in the manufacturing quality of our products we provide a guarantee, any additional claims being exempt and our liability being only to return the value of the goods supplied. The possible reservations with respect to patents or third party rights should be noted. Edition 24/02/06 The present data sheet becomes null and void on issuance of a new edition.

BASF Construction Chemicals (UK) Ltd

Albany House, Swinton Hall Road,
Swinton, Manchester,
M27 4DT, England.

Tel: + 44 (0) 161 794 7411

Fax: + 44 (0) 161 727 8547

E-mail: pci.uk@basf.com

Website: pci.uk.com

In view of widely varying site conditions this data sheet is meant to provide general application guidelines only. Any recommendation or information issued by us constitutes a preliminary and accessory contractual obligation only. Users must satisfy themselves regarding the applicability of the content to their own particular requirements. Please contact our Advisory Service for special requirements. Liability is accepted for incomplete or incorrect particulars in our information material only in the event of intent or gross negligence, without prejudice to claims under product liability laws. All transactions are subject to our Terms of Sale and Supply. Any subsequent publication supersedes this edition. Edition December 2006.

PCI[®]
Für Bau-Profis