MAPEI

Kerapoxy P

Two-component, acid resistant epoxy mortar for joints wider than 3 mm, easy to apply and easy to clean

CLASSIFICATION ACCORDING TO EN 13888

Kerapoxy P is an RG-class reactive (R) mortar for tile joints (G).

WHERE TO USE

Internal and external grouting of ceramic and stone floors and finishing material, particularly suitable for grouting large surfaces where easy application is required. The use of **Kerapoxy P** allows floors, walls, worktops, etc. to be made that comply with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding the hygiene of foodstuffs.

Some application examples

- Grouting of floors and finishing materials in the foodstuffs industry (dairies, cheese factories, abattoirs, breweries, wineries, preserves factories, etc.), shops and environments where a high level of hygiene is required (ice-cream parlours, butchers shops, fishmongers, etc.).
- Grouting of industrial floors and finishing materials (galvanizing plants, tanneries, accumulator rooms, paper works, etc.), where high mechanical strength and a high resistance to attack by acids is required.
- Grouting of swimming pools, especially recommended for pools containing spa or sea water.
- Grouting of tiles on laboratory benches, kitchen worktops, etc.

TECHNICAL CHARACTERISTICS

Kerapoxy P is a two-component, epoxy resin-based product with silica sand and other special components. It has excellent resistance to acids, is easy to apply and very easy to clean.
When applied correctly, it forms tile joints with the following characteristics:

- excellent mechanical strength and resistance to chemicals, therefore excellent durability;
- smooth, compact final surface which is non-absorbent and easy to clean, to guarantee a high level of hygiene;
- good workability and finish;
- high degree of hardness, excellent resistance to heavy traffic;
- no shrinkage and, therefore, no cracking;
- uniform colour, resistant to atmospheric agents.

RECOMMENDATIONS

- Use **Kerapoxy IEG** to grout ceramic floors and finishing materials subject to attack by oleic acids (ham curers, sausage factories, oil mills, etc.) and aromatic hydrocarbons.
- Use a flexible sealant from the MAPEI range (such as **Mapesil AC**, **Mapesil LM** or **Mapeflex PU21**) for flexible expansion joints or for joints subject to movement.
- **Kerapoxy P** does not guarantee perfect bonding if the edges of the tiles are wet or contaminated with cement, dust, oil, grease, etc. during grouting.

Kerapoxy P

Grouting floor joints with a rubber trowel

Grouting floor joints with a rubber trowel

Cleaning off Kerapoxy P with water and a single head rotary machine with Scotch-Brite®

- Non-glazed klinker tiles may only be grouted with **Kerapoxy P** if it is available in the same colour.
- Do not use **Kerapoxy P** for grouting Tuscany terracotta tiles, they are difficult to clean.
- If porcelain tiles are grouted with a contrasting colour of **Kerapoxy P** (for example black on white), carry out preliminary tests beforehand.
- Always carry out preliminary tests before grouting stone or ground porcelain with a porous or rough surface.
- Do not add water or solvents to **Kerapoxy P** to increase workability.
- Use the product at temperatures of between +12°C and +30°C. However, if the temperature is lower than +15°C, application may be difficult.
- The packages are pre-dosed and, therefore, it is not possible to make mixing errors. Do not rough guess the quantities when mixing the two components: hardening will be compromised if the catalysing ratio is wrong.
- If hardened **Kerapoxy P** has to be removed from the joints, use an industrial hot air blower. If hardened residues of the product remain attached to the tiles, use **Pulicol 2000** for cleaning.

APPLICATION PROCEDURE

Preparation of the joints

The joints must be clean, free of dust and empty down to at least 2/3 of the thickness of the tiles. Any adhesive or mortar which has seeped into the joints while laying the tiles must be removed while still fresh. Before grouting, make sure the installation mortar or adhesive have set and most of the humidity has been lost.
Kerapoxy P is not harmed by moisture from the substrate, but the joints must not be wet when grouting.

Preparation of the mix

Pour the catalyst (component B) into the container with component A and mix well until a smooth paste is obtained. We recommend using a low-speed electric mixer to guarantee perfect bonding, and to avoid overheating of the mix which would reduce working times. Use the mix within 45 minutes of its preparation.

Application

Spread on **Kerapoxy P** with a special MAPEI trowel, making sure that the joints are filled right down to the bottom. With the edge of the same trowel, remove excess material.

Finish

Floors and finishing material must be cleaned after grouting while **Kerapoxy P** is still "fresh".
Wet and emulsify the grouted surface, using a Scotch-Brite® pad if necessary, taking care not to remove material from the joints. In the case of very large floor surfaces, finishing may be carried out by wetting the surface and using a single-head rotary machine with special abrasive felt disks such as Scotch-Brite®.
The residual liquid may be removed with a hard, cellulose sponge (for example a MAPEI sponge). Replace the sponge when it becomes too impregnated with resin. Use the same sponge to even out the grouted joints.
After the finishing operation, it is very important that no traces of **Kerapoxy P** remain on the surface. Once hardened, it is very difficult to remove. Therefore, rinse the sponge often with clean water during cleaning. Residual liquid may be drawn off using a rubber rake.
If too much time has elapsed after laying and **Kerapoxy P** has already started to set, add 10% alcohol to the cleaning water.

SET TO LIGHT FOOT TRAFFIC

Floors may be stepped on after 24 hours at +20°C.

READY FOR USE

After 4 days, the surfaces may also be subjected to chemical attack.

Cleaning

Tools and containers may be cleaned while the product is still fresh using plenty of water. Once **Kerapoxy P** has set, they may only be cleaned mechanically or with **Pulicol 2000**.

CONSUMPTION

The consumption of **Kerapoxy P** varies according to the size of the joints and the size and thickness of the tiles. The following table illustrates consumption in kg/m^2.

PACKAGING

Kerapoxy P is supplied in pre-dosed packages. It is contained in tubs which contain component A and a canister containing component B, which must only be added at the moment it is required.
The product is supplied in 10 kg kits.

COLOURS AVAILABLE

Kerapoxy P is available in 113 from the MAPEI range.
Other colours are available upon request for a minimum quantity of 300 kg.

STORAGE

Kerapoxy P may be stored for up to 24 months in its original packaging in a dry place.
Store component A at a temperature of at least +10°C to avoid crystallisation of the product, reversible by heating up.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Kerapoxy P is irritant for the skin and eyes, booth component A and component B may cause sensitization in those predisposed.
Kerapoxy P component B is corrosive and may cause damages to eyes.
During the applications, it is recommended to wear protective gloves and goggles and to take the usual precautions for handling

RESISTANCE TO CHEMICALS OF CERAMIC GROUTED WITH KERAPOXY P*

PRODUCT				USE	
				INDUSTRIAL FLOORING	
Group	Name	Concentration %	Laboratory benches	Permanently used (+20°C)	Sporadically used (+20°C)
Acids	Acetic acid	2.5	+	+	+
		5	+	(+)	+
		10	–	–	–
	Hydrochloric acid	37	+	+	+
	Chromic acid	20	–	–	–
	Citric acid	10	+	(+)	+
	Formic acid	2.5	+	+	+
		10	–	–	–
	Lactic acid	2.5	+	+	+
		5	+	(+)	+
		10	(+)	–	(+)
	Nitric acid	25	+	(+)	+
		50	–	–	–
	Pure oleic acid		–	–	–
	Phosphoric acid	50	+	+	+
		75	(+)	–	(+)
	Sulphuric acid	1.5	+	+	+
		50	+	(+)	+
		96	–	–	–
	Tannic acid	10	+	+	+
	Tartaric acid	10	+	+	+
	Oxalic acid	10	+	+	+
Alkalis	Ammonia in solution	25	+	+	+
	Caustic soda	50	+	+	+
	Sodium hypochlorite in solution:				
	active chlorine	6.4 g/l	+	(+)	+
	active chlorine	162 g/l	–	–	–
	Potassium	5	+	(+)	+
	permanganate	10	(+)	–	(+)
	Potassium hydroxide	50	+	+	+
	Sodium bisulphite	10	+	+	+
Saturated solutions at +20°C	Sodium hyposulphite		+	+	+
	Calcium chloride		+	+	+
	Ferric chloride		+	+	+
	Sodium chloride		+	+	+
	Sodium chromate		+	+	+
	Sugar		+	+	+
	Aluminium sulphate		+	+	+
Oils and fuels	Petrol, fuels		+	(+)	+
	Turpentine		+	+	+
	Diesel fuel		+	+	+
	Tar oil		+	(+)	(+)
	Olive oil		(+)	(+)	+
	Light fuel oil		+	+	+
	Petrol		+	+	+
Solvents	Acetone		–	–	–
	Ethylene glycol		+	+	+
	Glycerine		+	+	+
	Methylene glycol acetate		–	–	–
	Perchloroethylene		–	–	–
	Carbon tetrachloride		(+)	–	(+)
	Ethyl alcohol		+	(+)	+
	Trichloroethylene		–	–	–
	Chloroform		–	–	–
	Methylene chloride		–	–	–
	Tetrahydrofurane		–	–	–
	Toluene		–	–	–
	Carbon sulphide		(+)	–	(+)
	White spirit		+	+	+
	Benzene		–	–	–
	Trichloroethane		–	–	–
	Xylene		–	–	–
	Mercuric chloride ($HgCl_2$)	5	+	+	+
	Hydrogen peroxide	1	+	+	+
		10	+	+	+
		25	+	(+)	+

Legend: + excellent resistance (+) good resistance – poor resistance

**** Evaluated in compliance with EN 12808-1 standards***

TECHNICAL DATA (typical values)

Conforms to the following standards: – European: EN 13888 (RG)
– ISO 13007-3 (RG)

PRODUCT IDENTITY		
	component A	**component B**
Consistency:	thick paste	thick liquid
Colour:	113 from the MAPEI range	
Density (g/cm³):	1.64	0.97
Dry solids content (%):	100	100
Brookfield viscosity (mPa·s):	3,500,000	900

APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio:	component A : component B = 9 : 1
Consistency of the mix:	very paste
Density of mix (kg/m³):	1,550
Pot life of mix:	45 minutes
Application temperature range:	from +12°C to +30°C
Set to light foot traffic:	24 hours
Ready for use:	4 days

FINAL PERFORMANCE	
Flexural strength (EN 12808-3) (N/mm²):	31
Compressive strength (EN 12808-3) (N/mm²):	58
Abrasion resistance (EN 12808-2):	147 (loss in mm³)
Shrinkage (EN 12808-4) (mm/m):	0.80
Water absorption (EN 12808-5) (g):	0.05
Resistance to humidity:	excellent
Resistance to ageing:	excellent
Resistance to solvents and oils:	very good (refer to table)
Resistance to acids and alkalis:	excellent (refer to table)
In service temperature range:	from -12°C to +100°C

Cleaning off Kerapoxy P with water and a single head rotary machine with Scotch-Brite®

Cleaning off the flooring surface with a rubber rakel

CONSUMPTION TABLE ACCORDING TO THE SIZE OF THE TILES AND WIDTH OF THE JOINTS (kg/m²)

Size of the tile (mm)	Width of the joint (mm):			
	3	5	8	10
75 x 150 x 6	0.6	1.0	–	–
100 x 100 x 6	0.6	1.0	–	–
100 x 100 x 10	1.0	1.6	–	–
100 x 200 x 6	0.5	0.8	–	–
100 x 200 x 10	–	1.2	2.0	2.4
150 x 150 x 6	0.4	0.7	–	–
200 x 200 x 8	0.4	0.7	–	–
120 x 240 x 12	–	1.2	2.0	2.4
250 x 250 x 12	–	0.8	1.3	1.6
250 x 330 x 8	0.3	0.5	0.8	0.9
300 x 300 x 8	0.3	0.5	0.7	0.9
300 x 300 x 10	0.4	0.6	0.9	1.1
300 x 600 x 10	0.3	0.4	0.7	0.8
330 x 330 x 10	0.3	0.5	0.8	1.0
400 x 400 x 10	0.3	0.4	0.7	0.8
450 x 450 x 12	–	0.5	0.7	0.9
500 x 500 x 12	–	0.4	0.6	0.8
600 x 600 x 12	–	0.4	0.5	0.7

FORMULA TO CALCULATE THE CONSUMPTION RATE:

$$\frac{(A + B)}{(A \times B)} \times C \times D \times 1.6 = \frac{kg}{m^2}$$

A = length of tile (in mm)
B = width of tile (in mm)
C = thickness of tile (in mm)
D = width of joint (in mm)

chemicals. If the product comes into contact with the eyes or the skin wash immediately with plenty of water and seek medical attention.
Furthermore, **Kerapoxy P** component A and B are dangerous for aquatic life, do not dispose of the product in the environment.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

WARNING
Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

All relevant references for the product are available upon request and from www.mapei.com

Kerapoxy P

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MAPEI®

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