



# Kerapoxy IEG



**Two-component,  
extremely high  
chemical resistance  
epoxy grout for  
tile joints at least  
3 mm wide**

**CLASSIFICATION ACCORDING TO EN 13888**  
Kerapoxy IEG is an RG-class reactive (R) grout for tile joints (G).

#### WHERE TO USE

Acid resistant grouting with extremely high chemical resistance, for ceramic floors where higher resistance to chemical products compared with conventional epoxy grouting compounds is required, and in particular to oleic acids and aromatic hydrocarbons.

#### Some application examples

- Grouting ceramic floor coverings in ham curers, especially in the areas where trimming, boning and curing are carried out, where the grout comes into contact with animal fats for long periods and is subject to frequent washing with high-pressure jets of hot water.
- Grouting ceramic floors in sausage factories, especially where cooking takes place (mortadella, etc.) where the grout is subject to the combined action of oleic acid and high temperatures.
- Grouting ceramic floors in oil mills.
- Grouting ceramic floors in pickling factories.

#### TECHNICAL CHARACTERISTICS

Kerapoxy IEG is a two-component, epoxy resin-based product with silica sand and special additives. It forms highly compact tile joints with excellent resistance to chemical products and which are very easy to clean,

according to a formula developed in MAPEI's own research laboratories.

When applied correctly, it forms tile joints with the following characteristics:

- extremely high mechanical strength and resistance to chemicals, higher than conventional epoxy grout;
- smooth, compact final surface which is non-absorbent and easy to clean, to guarantee a high level of hygiene;
- easy to work with and finish off;
- high degree of hardness, excellent resistance to heavy traffic;
- no shrinkage and, therefore, no cracking.

#### RECOMMENDATIONS

- Use a flexible sealant from the MAPEI range for flexible expansion joints or for joints subject to movement.
- Kerapoxy IEG does not guarantee perfect bonding if the edges of the tiles are wet or contaminated with cement, dust, oil, grease, etc. during grouting;
- Do not add water or solvents to Kerapoxy IEG to increase workability.
- Use the product at temperatures of between +12°C and +30°C. However, at temperatures below +15°C application may be more 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.
- The modulus of elasticity of **Kerapoxy IEG** is higher compared with Kerapoxy: therefore, more expansion joints must be included.

## 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 IEG** is not harmed by damp from the base, but the joints must not be wet when grouting.

### Preparation of the mix

Pour the catalyst (component B) into the container with part 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 IEG** 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.

The surrounding temperature and the temperature of the tiles have a considerable influence on setting times, workability and cleaning of **Kerapoxy IEG**.

### Finish

After grouting with **Kerapoxy IEG**, floors and finishes must be carried out while still "fresh", by forming an emulsion with water. Solvents must not be used, a further advantage for the environment and user.

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 IEG** 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.

## SET TO LIGHT FOOT TRAFFIC

Floors may be stepped on after 24 hours at +23°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 IEG** has set, they may only be cleaned mechanically.

## CONSUMPTION

The consumption of **Kerapoxy IEG** varies according to the size of the joints and the shape of the tiles, and must be calculated by considering a density of 1430 kg/m<sup>3</sup>. The table below shows approximate consumption levels in kg/m<sup>2</sup> of some types of floor, according to the size and thickness of the tiles.

## PACKAGING

**Kerapoxy IEG** is supplied in pre-dosed packages. It is contained in drums 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 IEG** is available in colours 113 and 130 from MAPEI range.

## STORAGE

**Kerapoxy IEG** 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 IEG** (component A) irritates the eyes, respiratory tract and the skin.

**Kerapoxy IEG** (component B) is corrosive. If it comes into contact with the eyes or skin, it may cause serious burns.

May cause allergic reactions if it comes into contact with the skin. If the product comes into contact with the eyes, rinse off well and immediately with plenty of clean water and seek medical advice. We recommend the use of suitable protective gloves and protection for the eyes and face.

**Kerapoxy IEG** is hazardous for the environment. Do not dispose of it in the

## RESISTANCE TO CHEMICALS OF CERAMIC GROUTED WITH KERAPOXY IEG

PRODUCT		FINAL USE			
Group	Name	Concentration %	Laboratory benches	INDUSTRIAL FLOORS	
				Continuous use	Intermittent use
				(+20°C)	(+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	-	-	-
	Neat oleic acid		(+)	-	(+)
	Phosphoric acid	50	+	+	+
		75	+	(+)	+
	Sulphuric acid	1.5	+	+	+
		50	+	+	+
		96	-	-	-
	Tannic acid	10	+	+	+
	Tartaric acid	10	+	+	+
	Oxalic acid	10	+	+	+
Alkalis	Ammonium solution	25	+	+	+
	Caustic soda	50	+	+	+
	Sodium hypochlorite solution:				
	Active chlorine:	6.4 g/l	+	(+)	+
	Active chlorine:	162 g/l	-	-	(+)
	Potassium permanganate	5	+	+	+
		10	+	(+)	+
	Potassium hydroxide	50	+	+	+
Sodium bisulphite	10	+	+	+	
Saturated solution at +20°C	Sodium hyposulphate		+	+	+
	Calcium chloride		+	+	+
	Iron chloride		+	+	+
	Sodium chloride		+	+	+
	Sodium chromate		+	+	+
	Sugar		+	+	+
	Aluminium sulphate		+	+	+
Oil and fuels	Petrol, fuels		+	(+)	(+)
	Turpentine		+	+	+
	Diesel fuel		+	+	+
	Tar oil		+	+	+
	Olive oil		+	+	+
	Light fuel oil		+	+	+
	Petrol		+	+	+
Solvents	Acetone		(+)	(+)	+
	Glycol		+	+	+
	Glycerine		+	+	+
	Methylcellulose		-	-	-
	Perchloroethylene		-	-	-
	Carbon tetrachloride		(+)	-	(+)
	Ethanol		+	+	+
	Trichloroethylene		-	-	-
	Chloroform		-	-	-
	Methylene chloride		-	-	-
	Tetrahydrofuran		-	-	-
	Toluene		-	-	-
	Carbon sulphate		(+)	-	(+)
	Benzene solvent		+	+	+
	Benzol		(+)	-	(+)
	Trichloroethane		(+)	-	(+)
	Xylene		(+)	-	(+)
	Corrosive sublimate (HgCl <sub>2</sub> )	5	+	+	+
	Hydrogen peroxide	1	+	+	+
		10	+	+	+
	25	+	+	+	

Key: + excellent resistance

(+) good resistance

- poor resistance

**TECHNICAL DATA (typical values)**

Conforms to the following standards:

- European: EN 13888 (RG)
- ISO 13007-3 (RG)

**PRODUCT DETAILS**

	<b>component A</b>	<b>component B</b>
<b>Consistency:</b>	thick paste	thick paste
<b>Colour:</b>	113, 130 from MAPEI range	
<b>Density (g/cm<sup>3</sup>):</b>	1.65	1.61
<b>Dry solids content (%):</b>	100	100
<b>Brookfield viscosity (mPa-s):</b>	thick paste	27,000
<b>Storage:</b>	24 months in 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.	
<b>Hazard classification according to EC 1999/45:</b>	irritant, hazardous for the environment	corrosive
	Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet	
<b>Customs class:</b>	3506 99 00	

**APPLICATION DATA (at +23°C and 50% R.H.)**

<b>Mixing ratio:</b>	component A : component B = 80 : 20
<b>Consistency of the mix:</b>	very thick
<b>Density of mix (kg/m<sup>3</sup>):</b>	1,430
<b>Pot life of mix:</b>	45 minutes
<b>Application temperature range:</b>	from +12°C to +30°C
<b>Set to light foot traffic:</b>	24 hours
<b>Ready for use:</b>	4 days

**FINAL PERFORMANCE**

<b>Flexural strength (EN 12808-3) (N/mm<sup>2</sup>):</b>	35
<b>Compressive strength (EN 12808-3) (N/mm<sup>2</sup>):</b>	80
<b>Abrasion resistance (EN 12808-2):</b>	147 (loss in mm <sup>3</sup> )
<b>Shrinkage (EN 12808-4) (mm/m):</b>	0.80
<b>Water absorption (EN 12808-5) (g):</b>	0.05
<b>Resistance to humidity:</b>	excellent
<b>Resistance to ageing:</b>	excellent
<b>Resistance to solvents and oil:</b>	excellent (refer to table)
<b>Resistance to acids and alkalis:</b>	excellent (refer to table)
<b>In service temperature range:</b>	from -20°C to +100°C

**CONSUMPTION TABLE ACCORDING TO THE SIZE OF THE TILES  
AND WIDTH OF THE JOINTS (kg/m<sup>2</sup>)**

Size of the tile (mm)	Width of the joint (mm):			
	3	5	8	10
75 X 150 X 6	0.5	0.9	–	–
100 X 100 X 6	0.5	0.9	–	–
100 X 100 X 10	0.9	1.4	–	–
100 X 200 X 6	0.4	0.6	–	–
100 X 200 X 10	–	1.1	1.7	2.1
150 X 150 X 6	0.3	0.6	–	–
200 X 200 X 8	0.3	0.6	–	–
120 X 240 X 12	–	1.1	1.7	2.1
250 X 250 X 12	–	0.7	1.1	1.4
250 X 330 X 8	0.2	0.4	0.6	0.8
300 X 300 X 8	0.2	0.4	0.6	0.8
300 X 300 X 10	0.3	0.5	0.8	1.0
300 X 600 X 10	0.2	0.4	0.6	0.7
330 X 330 X 10	0.3	0.4	0.7	0.9
400 X 400 X 10	0.2	0.4	0.6	0.7
450 X 450 X 12	–	0.4	0.6	0.8
500 X 500 X 12	–	0.3	0.5	0.7
600 X 600 X 12	–	0.3	0.5	0.6

**FORMULA TO CALCULATE THE CONSUMPTION RATE:**

$$\frac{(A + B)}{(A \times B)} \times C \times D \times 1.4 = \frac{\text{kg}}{\text{m}^2}$$

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

environment, it must be treated as hazardous waste.

PRODUCT FOR PROFESSIONAL USE.

**WARNING**

While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use

*this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**



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