



**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 and stone material floors where higher resistance to chemical products compared with conventional epoxy grouting compounds is required, and in particular to oleic acids and aromatic hydrocarbons.

**Kerapoxy IEG** allows you to create floors, worktops, etc. in compliance with the HACCP system and the requirements of EC Regulation No. 852/2004 regarding hygiene and foodstuffs.

#### **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 very low emission of volatile organic

compounds, with silica sand and special admixtures. 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.
- 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 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 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 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 is irritant for the eyes and skin. Both component A and B may cause sensitization in those predisposed.

**Kerapoxy IEG** component B is corrosive and may cause burns. During the application it is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemicals. In case of contact with the eyes and the skin wash immediately with plenty of water and seek medical attention. Furthermore, **Kerapoxy IEG** component A is dangerous for aquatic life, do not dispose of it 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 FOR PROFESSIONAL USE ONLY.

## CHEMICAL RESISTANCE OF CERAMIC TILING GROUTED WITH KERAPOXY IEG\*

| PRODUCT                      |  |                 |                    | USE                      |                           |
|------------------------------|--|-----------------|--------------------|--------------------------|---------------------------|
| Group                        | Name                                   | Concentration % | Laboratory benches | INDUSTRIAL FLOORING      |                           |
|                              |  |                 |                    | 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 permanganate                 | 5               | +                  | (+)                      | +                         |
|                              |  | 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 <sub>2</sub> ) | 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 as RG
- ISO 13007-3 as RG

### PRODUCT IDENTITY

|  | component A | component B |
|--|-------------|-------------|
|--|-------------|-------------|

|              |             |             |
|--------------|-------------|-------------|
| Consistency: | thick paste | thick paste |
|--------------|-------------|-------------|

|         |                              |  |
|---------|------------------------------|--|
| Colour: | 113 and 130 from MAPEI range |  |
|---------|------------------------------|--|

|                               |      |      |
|-------------------------------|------|------|
| Density (g/cm <sup>3</sup> ): | 1.65 | 1.61 |
|-------------------------------|------|------|

|                         |     |     |
|-------------------------|-----|-----|
| Dry solids content (%): | 100 | 100 |
|-------------------------|-----|-----|

|                              |             |     |
|------------------------------|-------------|-----|
| Brookfield viscosity (Pa-s): | thick paste | 650 |
|------------------------------|-------------|-----|

|          |                                |  |
|----------|--------------------------------|--|
| EMICODE: | EC1 R Plus - very low emission |  |
|----------|--------------------------------|--|

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

|               |                                     |
|---------------|-------------------------------------|
| Mixing ratio: | component A : component B = 80 : 20 |
|---------------|-------------------------------------|

|                         |            |
|-------------------------|------------|
| Consistency of the mix: | very thick |
|-------------------------|------------|

|                                      |       |
|--------------------------------------|-------|
| Density of mix (kg/m <sup>3</sup> ): | 1,430 |
|--------------------------------------|-------|

|                  |            |
|------------------|------------|
| 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/mm <sup>2</sup> ): | 35 |
|--|----|

|   |    |
|---|----|
| Compressive strength (EN 12808-3) (N/mm <sup>2</sup> ): | 80 |
|---|----|

|                                   |                                |
|-----------------------------------|--------------------------------|
| Abrasion resistance (EN 12808-2): | 147 (loss in mm <sup>3</sup> ) |
|-----------------------------------|--------------------------------|

|                                    |      |
|------------------------------------|------|
| Water absorption (EN 12808-5) (g): | 0.05 |
|------------------------------------|------|

|                         |           |
|-------------------------|-----------|
| Resistance to humidity: | excellent |
|-------------------------|-----------|

|                       |           |
|-----------------------|-----------|
| Resistance to ageing: | excellent |
|-----------------------|-----------|

|                                 |                            |
|---------------------------------|----------------------------|
| Resistance to solvents and oil: | excellent (refer to table) |
|---------------------------------|----------------------------|

|                                  |                            |
|----------------------------------|----------------------------|
| Resistance to acids and alkalis: | excellent (refer to table) |
|----------------------------------|----------------------------|

|                               |                      |
|-------------------------------|----------------------|
| In service temperature range: | from -20°C to +100°C |
|-------------------------------|----------------------|

## CONSUMPTION TABLE DEPENDENT ON 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 (mm)
- B** = width of tile (mm)
- C** = thickness of tile (mm)
- D** = width of joint (mm)



### 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](http://www.mapei.com)



This symbol is used to identify MAPEI products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemein-schaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.



**Our Commitment To The Environment**  
MAPEI products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

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



**Kerapoxy  
IEG**



**BUILDING THE FUTURE**

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