



# Maxifuga



**High performance cementitious mortar, for grouting joints between tiles and stone materials from 4 to 20 mm in industrial floors subject to heavy loads**

## **CLASSIFICATION IN COMPLIANCE WITH EN 13888**

**Maxifuga** is a CG2-classified improved cementitious mortar for tile joints.

## **WHERE TO USE**

Internal and external grouting of floors in all types of ceramic tiles (single-fired, klinker, porcelain, etc.), terracotta and stone (natural stone, porphyry, granite, agglomerates, etc.).

## **Some application examples**

- Grouting thick ceramic tiles in industrial floors.
- Grouting joints in floors subject to heavy loads (supermarkets, factories, railway stations, etc.).
- Grouting joints in external porphyry and stone materials.

## **TECHNICAL CHARACTERISTICS**

**Maxifuga** is made up of a blend of cement, graded aggregates and special additives.

When mixed with water in the proportions recommended and correctly applied, it forms a grouting mortar with the following characteristics:

- high mechanical strength;
- good resistance to freeze/thaw cycles, therefore with high durability;
- good resistance to abrasion;
- low shrinkage rate, therefore free from cracks and crazing;

- good resistance to acids with pH > 3.

## **RECOMMENDATIONS**

- Do not mix **Maxifuga** with cement or other products and do not add water once the mix has started to set.
- Never mix **Maxifuga** with salt-water or dirty water.
- Use the product at temperatures between +5°C and +35°C.
- The mixing water must be measured out carefully; too much may result in the formation of a whitish patine on the surface of the joints (efflorescence). If the product is mixed at different mixing ratios or if products from different production batches are used, there may be a variation in colour. The formation of efflorescence on the surface of the joints is due to either the formation of calcium carbonate, residual humidity in adhesives or mortar which have not completely hydrated or substrates which have not dried off sufficiently or which are not adequately protected against rising damp.
- When resistance to acids or extreme cleanliness is required, use a suitable anti-acid grouting mortar (e.g. **Kerapoxy**).
- Expansion and fraction joints on walls and floors must never be filled with **Maxifuga**; use a suitable MAPEI flexible sealant.
- In certain cases, the surface of the tiles or stone may be either rough or show signs of micro-porosity, which makes final cleaning more difficult. We recommend



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carrying out a preliminary test to check how easy it is to clean the surface and, where necessary, to apply a protective treatment on the surface, making sure that it does not penetrate into the joints.

## APPLICATION PROCEDURE

### Preparation of the joints

Before starting to grout the joints, wait until the bedding mortar or the adhesive has completely set. Make sure that the waiting times indicated in the Technical Data Sheets have been observed.

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.

With very absorbent tiles, in the case of high temperatures or in windy conditions, dampen the joints with clean water.

### Preparation of the mix

While stirring, pour **Maxifuga** into a clean, rust-free container with 18-19% by weight of clean water.

Stir the mix, preferably with a low-speed mixer to avoid drawing in air, until a smooth paste is obtained.

Let the mix stand for 2-3 minutes, and stir again briefly before use. Use the mix within 2 hours of its preparation.

### Application

Fill the joints with the **Maxifuga** mix using a special MAPEI trowel or rubber rake, without leaving any gaps or steps. Remove any excess **Maxifuga** from the surface, by moving the trowel or rake diagonally across the joints while the mix is still fresh.

### Finishing of the joint surface

When the mix loses its workability and becomes matt, which usually takes place after 10-20 minutes, clean off the residual **Maxifuga** with a hard, damp sponge (e.g. a MAPEI sponge), working in a diagonal direction to the joints. Rinse the sponge frequently, using two different containers of water: one to remove the excess mix from the sponge, and the other, containing clean water, to rinse the sponge. This operation may also be carried out with a special machine with a sponge belt.

To make removal of the hardened product from the tiles easier, a dampened Scotch-Brite® pad or a rotating, single-head polisher may be used before cleaning with the sponge.

If the cleaning operation is carried out too soon (the mix is still too fresh), some of the grout may be removed from the joints which makes them more prone to changes in colour. On the other hand, if the grout has already set, it will have to be cleaned mechanically which may cause scratching to the surface of the tiles. If grouting is carried out in extremely hot, dry or windy weather, we recommend dampening the joints filled with **Maxifuga** after a few hours.

Damp curing of **Maxifuga** improves its final characteristics in all cases.

If a powdery film forms on the surface of the floor, final cleaning may be carried out with a clean, dry cloth.

After the final cleaning operation, if the surface still has traces of **Maxifuga** due to incorrect application, it may be cleaned down with an acid cleaner (e.g. **Keranet**), by following the relevant instructions, at least 10 days after grouting the joints. Only use **Keranet** on surfaces which are resistant to acid, and never use it on marble or limestone material.

### SET TO LIGHT FOOT TRAFFIC

Floors are ready for foot traffic after approx. 24 hours.

### READY FOR USE

The floors may be put into service after 7 days.

### Cleaning

Tools and containers may be cleaned using plenty of water if the grouting mortar is still fresh.

### CONSUMPTION

The consumption of **Maxifuga** varies according to the size of the joints and the size and thickness of the tiles. The following table illustrates a number of examples of consumption in kg/m<sup>2</sup>.

### PACKAGING

25 kg sacks.

### COLOURS AVAILABLE

**Maxifuga** is available in a dark cement-grey colour.

### STORAGE

**Maxifuga** may be stored for up to 12 months in its original packaging in a dry place.

Manufactured in compliance with the regulations of the 2003/53/EC Directive.

### SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Maxifuga** contains cement which, in contact with sweat or other body fluids, produces an irritating alkaline reaction and a sensitising reaction in those who suffer from such a complaint.

Use protective gloves and goggles.

For further information, please refer to the Safety Data Sheet.

FOR PROFESSIONALS.

### 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.*



Application of Maxifuga using a rake



Cleaning surface with Scotch Brite® pad

## TECHNICAL DATA (typical values)

In compliance with standards:

- European EN 13888 as CG2
- American ANSI A 118.6 - 1999

### PRODUCT DETAILS

<b>Consistency:</b>	granulated powder
<b>Colour:</b>	dark cement-grey
<b>Bulk density (kg/cm<sup>3</sup>):</b>	1300 - 1500
<b>Dry solids content (%):</b>	100
<b>Storage:</b>	12 months in original packaging in a dry place
<b>Hazard classification according to EC 99/45:</b>	irritant. Before using refer to the "Safety instructions for the preparation and application" paragraph and the information on the packing and Safety Data Sheet
<b>Customs class:</b>	3824 50 90

### APPLICATION DATA at +23°C - 50% R.H.

<b>Mixing ratio:</b>	100 parts <b>Maxifuga</b> to 18-19 parts in weight of water
<b>Consistency of mix:</b>	fluid paste
<b>Density of mix (kg/m<sup>3</sup>):</b>	2000
<b>pH of mix:</b>	approx. 13
<b>Pot life of mix:</b>	approx. 2 hours
<b>Application temperature range:</b>	from +5°C to +35°C
<b>Waiting time for grouting after laying:</b> - tiled floors bonded with normal adhesive: - tiled floors bonded with quick-setting adhesive: - floors laid with mortar:	24 hours 3-4 hours 7-10 days
<b>Waiting time before finishing operation:</b>	10-20 minutes
<b>Set to light foot traffic:</b>	24 hours
<b>Ready for use:</b>	7 days

### FINAL PERFORMANCE

**Flexural strength after 28 days (EN 12808-3):**  
**Compressive strength after 28 days (EN 12808-3):**  
**Flexural strength after freeze/thaw cycles (EN 12808-3):**  
**Compressive strength after freeze/thaw cycles (EN 12808-3):**  
**Abrasion resistance (EN 12808-2):**  
**Shrinkage (EN 12808-4):**  
**Water absorption after 30 minutes (EN 12808-5):**  
**Water absorption after 4 hours (EN 12808-5):**

In compliance with  
European Standard  
EN 13888 (CG2)

<b>Resistance to humidity:</b>	excellent
<b>Resistance to ageing:</b>	excellent
<b>Resistance to solvents, oil and alkalis:</b>	excellent
<b>Resistance to acids:</b>	good if pH > 3
<b>Resistance to temperature:</b>	from -30°C to +80°C

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CONSUMPTION TABLE					
The amount of Maxifuga required per m <sup>2</sup> of floor covering depends on the size of the tiles to be laid and the size of the joints					
Size of tiles (mm)	Width of joints (mm)				
	5	8	10	15	20
150 x 150 x 10	1.2	1.8	2.3	3.4	4.6
150 x 150 x 12	1.4	2.2	2.7	4.1	5.4
150 x 150 x 14	1.6	2.5	3.2	4.8	6.4
200 x 200 x 12	1.0	1.6	2.1	3.1	4.2
200 x 200 x 18	1.5	2.4	3.1	4.6	6.2
120 x 240 x 12	1.3	2.1	2.6	3.8	5.2
120 x 240 x 18	1.9	3.1	3.8	5.7	7.6
120 x 240 x 20	2.1	3.4	4.3	6.4	8.6
250 x 250 x 20	1.4	2.2	2.7	4.1	5.4
300 x 300 x 20	1.2	1.8	2.3	3.4	4.6

### FORMULA TO CALCULATE THE CONSUMPTION RATE:

$$\frac{(A + B)}{(A \times B)} \times C \times D \times 1.7 = \frac{\text{kg}}{\text{m}^2}$$

A = length of tile (in mm)

C = thickness of tile (in mm)

B = width of tile (in mm)

D = width of joint (in mm)

**All relevant references of the product are available upon request**



**BUILDING THE FUTURE**

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MAPEI SUISSE SA



MAPEI Kft. - HUNGARY



MAPEI s.r.o. - CZECH REP.



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