



Keracolor FF



**High performance,
polymer-modified,
water-repellent,
cement-based grout
with DropEffect®
technology for joints
up to 6 mm**



CLASSIFICATION IN COMPLIANCE WITH EN 13888

Keracolor FF is an improved (2) cementitious (C) grout (G), with reduced water absorption (W) and high abrasion resistance (A), classified as CG2WA.

WHERE TO USE

Grouting interior and exterior floor and wall tiling (single fired, double fired, klinker, porcelain tile, etc.), stone material (natural stones, marble, granite, agglomerates, etc.), glass and marble mosaics.

Some application examples

- Grouting floor and wall ceramic tiles in interiors.
- Grouting swimming pools.
- Grouting particularly smooth and glossy floor surfaces (smooth and polished porcelain, pre-smoothened and polished marble, glazed tiles).
- Grouting ceramic tile industrial flooring where resistance to chemical agents is not required (garages, warehouses, etc.).

TECHNICAL CHARACTERISTICS

Keracolor FF is a blend of cement, very fine-graded aggregates, special polymers, additives and pigments. The use of special hydrophobic additives (DropEffect® technology) gives grouting mortars highly water-repellent properties, making them less prone to dirtiness and with excellent durability. The following features are obtained when mixed with the right water ratio and used correctly:

- water-repellent and droplet-effect;

- good compressive and flexural strength, good resistance to freeze/thaw cycles, and therefore good durability;
- a smooth final surface with low water absorption, therefore easy to clean;
- very good abrasion resistance;
- low shrinkage, therefore absence of cracks and fissures;
- good resistance to acids with pH >3;
- excellent value for performance.

When mixing **Keracolor FF** with **Fugolastic**, a special synthetic resin-based polymeric additive, the final characteristics are improved for use even under harsh conditions (grouting façades, swimming pools, bathrooms, floors with heavy traffic).

For further information consult the **Fugolastic** technical data sheet.

RECOMMENDATIONS

- Do not mix **Keracolor FF** with cement or any other products. Never add water to the mixture that is beginning to set.
- Do not blend different colours of grout together as there is a risk of colour inconsistency and lack of uniformity of the final shade once the grout has set.
- Never mix **Keracolor FF** with salty or dirty water.
- Use the product in temperatures between +5°C and +35°C.
- The amount of mix water must be precisely measured. Excess water could induce the appearance of a whitish coat over the surface (efflorescence). Different colour tones could result if mixtures with different water ratios are prepared. Efflorescence over the surface is due to the formation of calcium carbonate and could also

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be caused by residual moisture contained in adhesives, not fully hydrated grouts, in substrates not adequately dried, or in substrates not adequately protected from rising damp.

- After filling the joints, do not sprinkle **Keracolor FF** powder onto the grout as this can cause uneven colour and reduce the mechanical strength.
- Expansion joints and movement joints in floors and walls should never be filled with **Keracolor FF**, but with the appropriate flexible MAPEI sealant.
- The surface of some ceramic tiles or stone materials are rough or contain micro-porosities. It is recommended to carry out a sample test to verify cleanability and when necessary, apply a protective treatment over the surface, but avoiding penetration into the joints. When grouting a swimming pool which is due to be disinfected through saline electrolysis please use **Ultracolor Plus** or **Kerapoxy**.

APPLICATION PROCEDURE

Preparing the joints

Before grouting, wait until the installation mortar or the adhesive has completely hardened. Verify that the waiting time indicated on the relevant technical data sheet has elapsed. The joints must be clean, free of dust and raked back to at least 2/3 of the tile thickness. Excess adhesive or mortar should be removed whilst still fresh. Wet the joints with clean water when using very porous ceramic tiles in high temperatures and in the presence of wind.

Preparing the mix

While stirring, pour **Keracolor FF** into a clean, rust-free container containing 23-30% by weight, dependant on grout colour, of clean water or **Fugolastic** (if required in the application). When grouting floors, the mixture can be made thinner by adding more water (approx. 25-32% by weight). Mix with a low speed mixer to avoid excess formation of air bubbles, to a smooth consistency. Wait 2-3 minutes and briefly re-stir before use. Use the mixture within 2 hours of preparation.

Applying the grout

Fill the joints completely with **Keracolor FF** using the appropriate MAPEI trowel or rubber float, making sure the joints are completely compacted, with no unevenness. Remove excess **Keracolor FF**, while still fresh, from the surface moving the float diagonally across joints.

Finishing

When the mixture loses its plasticity and becomes matt, usually after 10-20 minutes, clean excess **Keracolor FF** with a damp hard cellulose sponge (e.g. MAPEI sponge) working diagonally to the joints. Rinse the sponge frequently using two separate buckets of water: one to remove the excess from the sponge and the other with clean water for rinsing out the sponge. Cleaning can also be carried out with a power float. To aid removal of the hardened product from

the tiles, use a dampened Scotch-Brite® pad or a disc-type power float with special abrasive-felt discs.

If cleaning is carried out too early (when the mixture is still plastic), the grout may be dragged from the joint leading to colour variation. On the other hand, if the grout has already hardened, it is necessary to clean the surface mechanically, which could scratch the surface of the tiles.

When applying **Keracolor FF** in extremely hot, dry or windy climates, it is recommended to wet the joints after several hours. Wet curing of **Keracolor FF** always improves its final performance.

Any residual powdery haze can be cleaned from the surface with a clean dry cloth. After the final cleaning, if the surface of the floors or walls are still contaminated with **Keracolor FF**, an acid cleaner can be used (e.g. **Keranet**), following the relevant instructions, at least 10 days after grouting the joints. Use **Keranet** only on acid-resistant surfaces and never on marble or limestone materials.

SET TO LIGHT FOOT TRAFFIC

Floors are set to light foot traffic after approximately 24 hours.

READY FOR USE

Floors are ready for traffic after approx. 7 days. Swimming pools and tanks can be filled 7 days after grouting.

Cleaning

Clean tools and containers with plenty of water before **Keracolor FF** hardens.

CONSUMPTION

Coverage of **Keracolor FF** varies depending on the width of the joints, the size and thickness of the tiles. Please refer to the product calculator to estimate consumption rates at www.mapei.com. Some examples of coverage in kg/m² are shown in the chart overleaf.

PACKAGING

25 kg bags and boxes containing 4x5 alupacks depending on the colour.

COLOURS

Keracolor FF is available in 14 colours from the MAPEI range.

STORAGE

Keracolor FF can be stored 12 months as for 25 kg bags and 24 months as for 5 kg bags in a dry place in original packaging. Always refer to what is written in the packaging. The product complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND INSTALLATION

Keracolor FF contains cement, which when in contact with sweat or other body fluids, may cause an irritant alkaline reactions and allergic reactions to those predisposed. It may cause damage to the eyes. During use, wear protective gloves and goggles and take the usual precautions for



Grouting a glass mosaic (bathroom) with a float



Finishing a glass mosaic with a sponge



Grouting of pre-smoothed and glossed granite floor with rubber float

TECHNICAL DATA (typical values)

In compliance with:

– European EN 13888 as CG2WA
– ISO 13007-3 as CG2WA

PRODUCT IDENTITY

| | |
|------------------------------------|---------------------------------|
| Type: | fine powder |
| Colour: | 14 colours from the MAPEI range |
| Bulk density (kg/m ³): | 1,000-1,400 |
| Dry solids content (%): | 100 |
| EMICODE: | EC1 R Plus - very low emission |

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

| | |
|--|--|
| Mixing ratio: | 100 parts of Keracolor FF with 23-30 parts of water by weight depending on the colour |
| Consistency of mix: | fluid paste |
| Density of the mix (kg/m ³): | 2,000 |
| pH of mix: | approx. 13 |
| Pot life of mix: | approx. 2 hours |
| Application temperature: | from +5°C to +35°C |
| Grouting after installation: | |
| – on walls bonded with normal setting adhesive: | 4-8 hours |
| – on walls bonded with fast setting adhesive: | 1-2 hours |
| – on walls laid with mortar: | 2-3 days |
| – on floors bonded with normal setting adhesive: | 24 hours |
| – on floors bonded with fast setting adhesive: | 3-4 hours |
| – on floors laid with mortar: | 7-10 days |
| Waiting time for finishing: | 10-20 minutes |
| Set to light foot traffic: | 24 hours |
| Ready for use: | 7 days |

FINAL PERFORMANCES

| | |
|---|--|
| Flexural strength after 28 days (EN 12808-3): | } In compliance with European Norm EN 13888 as CG2WA |
| 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 min. (EN 12808-5): | |
| Water absorption after 4 hours (EN 12808-5): | |
| Resistance to moisture: | excellent |
| Resistance to ageing: | excellent |
| Resistance to solvents, oils and alkali: | excellent |
| Resistance to acids: | good if pH > 3 |
| Resistance to temperature: | from –30°C to +80°C |



Grouting single-fired tiles with a float



Finishing with a Scotch-Brite® pad



An example of a grouted mosaic tile kitchen

Keracolor FF

| | | | | | | | | | | | | | | |
|---------------------|------------------|------------------------|---------------------------|------------------------|------------------------|-----------------------|--------------------|--------------------|-----------------------|--------------------|------------------|----------------------|--------------------------|------------------------|
| | 100 WHITE | 111 SILVER GREY | 110 MANHATTAN 2000 | 112 MEDIUM GREY | 113 CEMENT GREY | 114 ANTHRACITE | 130 JASMINE | 131 VANILLA | 132 BEIGE 2000 | 141 CARAMEL | 142 BROWN | 144 CHOCOLATE | 145 TERRA DISIEVA | 170 CROCUS BLUE |
| Keracolor FF | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

N.B.: Due to the printing processes involved, the colours should be taken as merely indicative of the shades of the actual product



CONSUMPTION TABLE DEPENDING ON THE SIZE OF THE TILE AND WIDTH OF THE JOINTS (kg/m²)

| Size of the tile (mm) | Width of the joint (mm) | | |
|-----------------------|-------------------------|-----|-----|
| | 2 | 3 | 5 |
| 75x150x6 | 0.4 | 0.5 | 0.9 |
| 100x100x7 | 0.4 | 0.6 | 1.1 |
| 100x100x9 | 0.5 | 0.8 | 1.4 |
| 150x150x6 | 0.2 | 0.4 | 0.6 |
| 200x200x7 | 0.2 | 0.3 | 0.5 |
| 200x200x9 | 0.3 | 0.4 | 0.7 |
| 300x300x10 | | 0.3 | 0.5 |
| 300x300x20 | | 0.6 | 1.0 |
| 300x600x10 | | 0.2 | 0.4 |
| 400x400x10 | | 0.2 | 0.4 |
| 500x500x10 | | | 0.3 |
| 600x600x10 | | | 0.3 |
| 750x750x10 | | | 0.2 |
| 100x600x9 | | | 0.8 |
| 150x600x9 | | | 0.6 |
| 150x900x9 | | | 0.5 |
| 150x1200x10 | | | 0.6 |
| 225x450x9 | | | 0.5 |
| 225x900x9 | | | 0.4 |
| 250x900x9 | | | 0.3 |
| 250x1200x10 | | | 0.4 |
| 600x600x5 | | | 0.1 |
| 600x600x3 | | | 0.1 |

CONSUMPTION CALCULATION FORMULA:

$$\frac{(A + B)}{(A \times B)} \times C \times D \times 1.5 = \frac{\text{kg}}{\text{m}^2}$$

A = length of tile (in mm)

B = width of the tile (in mm)

C = thickness of the tile (in mm)

D = width of the joint (in mm)

handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention.

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.

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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**



This symbol is used to identify Mapei products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft 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



An example of a grouted double-fired tile floor



BUILDING THE FUTURE