

KERACOLOR FF

High-performance, polymer-modified cementitious mortar with water-repellent DropEffect® technology for grouting joints up to 6 mm.



CLASSIFICATION IN COMPLIANCE WITH ISO 13007 AND 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-smoothed 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. ® technology) gives grouting mortars highly water-repellent properties, making them less prone to dirt pickup and with excellent durability.

The following features are obtained when mixed with the right water ratio and applied correctly:

- Water-repellent and droplet-effect
- Good compressive and flexural strength, good resistance to freeze/thaw cycles, and therefore good durability
- A smooth easy to clean final surface, with low water absorption
- Very good abrasion resistance
- Low shrinkage, with 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, bathroom, floors with heavy). 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
- Never mix **Keracolor FF** with saline or dirty water
- Use the product in temperatures between +5°C and +40°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 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** 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, while avoiding penetration into the joints

APPLICATION PROCEDURE

Preparation of 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.

Preparation of the mix

While stirring, pour **Keracolor FF** into a clean, rust-free container containing 23-30% by weight, dependant on grout colour, of clean, potable grade 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 air entrapment, producing a smooth consistency mix. Wait 2-3 minutes and briefly re-stir before use.

Use the mixture within 2 hours of preparation.

Application of 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 can be filled 7 days after grouting.

Cleaning

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. Some examples of coverage in kg/m² are shown in the chart overleaf.

PACKAGING

20 kg, 5 kg and 4x5 kg alupack boxes depending on the colour.

COLOURS

Keracolor FF is available in 15 colours from the MAPEI range.

STORAGE

When stored in dry conditions in the original, unopened bags, **Keracolor FF** has a shelf life of 12 months for 20 and 5 kg and 24 months for 4x5 kg alupack boxes.

If stored at high temperature and or high humidity conditions the shelf life may be reduced.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND INSTALLATION

Keracolor FF contains cement that when in contact with sweat or other body fluids causes irritant alkaline reactions and allergic reactions to those predisposed. It can cause damage to eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of 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 Safety Data Sheet.

TECHNICAL DATA (typical values) Conforms to the following standards: – ISO 13007-3 as CG2WA – European EN 13888 as CG2WA – American ANSI A 118.6 - 1999	
PRODUCT IDENTIFICATION	
Type:	fine powder
Colour:	15 colours from the MAPEI range
Bulk density (kg/cm ³):	1000-1400
Dry solids content (%):	100
EMICODE:	EC1 PLUS - very low emission
APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio:	100 parts Keracolor FF with 23-30 parts water by weight depending on the colour
Consistency of mix:	thin paste
Density of mix (kg/m ³):	2000
pH of mix:	approx. 13
Pot life:	approx. 2 hours
Application temperature range:	from +5°C to +40°C
Grouting after installation: – on walls bonded with normal setting adhesive: – on walls bonded with fast setting adhesive: – on walls with mortar: – on floors bonded with normal setting adhesive: – on floors bonded with fast setting adhesive: – on floors with mortar:	4-8 hours 1-2 hours 2-3 days 24 hours 3-4 hours 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): 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):	In compliance with ISO 13007 as CG2WA and with European Norm EN 13888 as CG2WA
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
VOC (SCAQMD 1168):	0 g/l

CONSUMPTION TABLE DEPENDING ON THE SIZE OF THE TILE AND WIDTH OF THE JOINTS (kg/m ²)			
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)

C = thickness of the tile (in mm)

B = width of the tile (in mm)

D = width of the joint (in mm)

COLOUR CHART

100 WHITE	103 MOON 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 DI SIENA	170 CROCUS BLUE
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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

IMPORTANT NOTES

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that installers satisfy themselves that the product and conditions are suitable for the envisaged application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification. The installer should ensure that our latest product data and safety information sheets have been consulted prior to use.

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 other project related documents, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation. The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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

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