KERACOLOR FLEX

High performance, flexible, water repellent contemporary grout for joint widths from 1-6 mm

CLASSIFICATION IN COMPLIANCE WITH EN 13888 AND ISO 13007

Keracolor Flex is an improved (2) cementitious (C) grout (G) with water repellent properties (W) and high abrasion resistance (A) classified as CG2WA.

WHERE TO USE

Keracolor Flex has been specifically developed to complement today's contemporary tile designs and décor. Available in a choice of modern colours for use with a wide range of tiled finishes including ceramic, porcelain, natural stone and glass tiles and mosaics. Once cured the grout provides a fine gently textured surface creating a very appealing contemporary feel.
Keracolor Flex is water repellent and flexible with excellent performance in wet areas and in areas where there is thermal change such as heated tiled floors.

Some application examples

- Grouting floor and wall tiled finishes.
- Grouting kitchens, bathrooms and conservatories.
- Grouting showers, wet rooms and swimming pools.
- Grouting internal or external tiled finishes.
- Grouting glazed ceramic tiles and polished porcelain.
- Grouting tiled finishes with underfloor/undertile heating.
- Grouting external facades.

TECHNICAL CHARACTERISTICS

Keracolor Flex is a blend of specially selected hydraulic binders, very fine graded aggregates, polymers, additives and colorants. High quality hydrophobic additives (Drop Effect® technology) enhance the grout's technical performance imparting water repellent properties to the surface, which reduces dirt pickup and increases the grout's durability and longevity.
When mixed at the correct water ratio and applied appropriately to the joints, the following properties are obtained:
- water repellent surface; - joint widths from 1 to 6 mm;
- good compressive and flexural strengths; - good resistance to freeze/thaw cycles;
- gently textured surface with low water absorption;
- very good resistance to abrasion;
- good resistance to thermal change and vibration;
- for use on heated floors;
- for use on tiled finishes over wooden substrates;
- good resistance to oils, solvents and alkaline cleaning materials.

Keracolor Flex can also be mixed with **Fugolastic**, which further improves the performance of the grout. This high quality polymer additive effectively improves the characteristics of the grout when used on balconies and facades exposed to harsh weather conditions or when used in leisure pools with wave machines or in external locations. For further information refer to the **Fugolastic** technical data sheet. Note: when adding **Fugolastic** the grout may appear darker than when mixed with water alone.

RECOMMENDATIONS / NOTES

• Do not add any additional cements or aggregates to **Keracolor Flex**. Mix only with clean water or **Fugolastic**.
• When mixing the grout, ensure that the correct water ratio is used each time. Over watering the grout may lead to a whitish film (efflorescence) on the surface or a patchy finish. Variation in water ratio from batch to batch may result in differing colour shades.
• Do not use **Keracolor Flex** on kitchen worktops or in other areas where hygiene is important. For these areas use **Kerapoxy Design**, **Kerapoxy** or **Kerapoxy CQ**.
• When grouting with **Keracolor Flex** certain types of tile/mosaic may discolour or stain due to the surface characteristics (micro-porosity). Certain rough textured tiles may also be problematical when grouting. It is recommended that a trial area is carried out and where necessary an appropriate sealer is used with these tiles before grouting. Prevent any sealer from entering the empty grout joints. When grouting natural stone, ensure they are sealed and grouted in strict adherence to the stone manufacturer's / supplier's recommendations.
• Certain types of tile/mosaic including natural stone with softer surfaces or those with metal décor or lustre may become scratched or dulled when using **Keracolor Flex**. It is recommended that a trial area is carried out before commencing grouting.
• Although the grout is produced to exacting quality control measures there will inevitably be small variations in shade from batch to batch. Therefore ensure that grout from the same batch is used in adjacent areas in order to achieve a constant colour shade.
• When cleaning the tiled finish once in service, it is recommended that pH neutral or mildly alkaline detergents only are used. Acidic cleaners will affect the grout surface and may lead to damage and discolouration.
• Highly absorbent tiles may lighten the final colour of the grout. When grouting tiles of different absorbency the grout may optically appear slightly different.
• Never fill an expansion/movement joint with **Keracolor Flex**. Use an appropriate elastic sealant such as **Mapesil AC** or **Mapesil LM**.
• Although **Keracolor Flex** is polymer modified enhancing the grout's resistance to deformation and vibration, all substrates, including wooden substrates, must be firmly supported and be free from deflection.

APPLICATION PROCEDURE

Preparing the joints

Before commencing grouting it is essential that the adhesive or mortar bed is completely hardened and dry. It is also essential that all substrates are cured and dry and that there is no rising damp. The joints must be clean and empty being free from adhesive and loose debris. As necessary rake out the joints to the depth of the tile.
Where the tiles are very absorbent, it is recommended that the tile edges are dampened with clean water prior to applying the grout.

Preparing the mix

Mixing ratio: a 5 kg bag requires between 1.4 and 1.50 litres of water (0.28 to 0.30 litres per kg). When using **Fugolastic**, replace all the mixing water adding 1.4 to 1.5 litres to a 5 kg bag.
Place the required amount of clean water or **Fugolastic** into a clean mixing bucket. Thoroughly shake the bag of powder before use. It is recommended that full units are mixed to minimise colour variations. Slowly add the grout powder from the bag whilst continuously stirring with a mechanical mixer set to a slow speed to avoid entraining air. Mix for approx. 2 minutes until the mix is free from lumps and has an even colour. Allow the grout to stand for a further 2 minutes and then remix the grout thoroughly until a smooth, creamy, streak-free consistency of uniform colour throughout is obtained. This second mix is essential in order to thoroughly disperse all the additives and special colouring agents.
Use the grout within 2 hours (pot life) of mixing at +20°C. Note that higher temperatures, e.g. hot weather, will reduce the pot life of the product. Do not add more water once the grout has begun to set. Do not use below +5°C or above +40°C. If during use, but still within the pot life, the grout appears to stiffen then briefly re-stir - do not be tempted to add more water. Should it be necessary to split the bag into smaller quantities for mixing, it is essential that the same water ratio and mixing method be used to avoid shading. Shake the bag thoroughly before dividing.

Applying the grout

Using a clean rubber grout float or squeegee work the grout thoroughly into the joint ensuring that the joints are completely filled with no trapped air. Whilst still fresh, strike off excess grout diagonally to the grout lines removing as much material from the tile face as possible. Do not grout areas that cannot be washed off within 10 to 20 minutes.

Finishing

As soon as the grout loses its sheen and turns matt, usually after 10 to 20 minutes, wash off the excess grout using a dampened sponge working diagonally to the joints. For best results use a hard cellulose sponge (Mapei sponge). On certain tile finishes the use of a fine scotchbrite pad will aid grout removal. Smooth the joints to achieve a closed compacted neat surface finish. Rinse the sponge frequently and always use clean water. On larger floor areas, cleaning can also be carried out with a power float. After the initial wash a thin film may remain on the tiles. Wash this off once again with a clean sponge. Any residue remaining after this can be removed with a soft dry cloth once the grout has hardened sufficiently in the joint. It is essential that cleaning is carried out at the correct time; washing off too early may drag the grout from the joints whereas washing off too late may require excessive scrubbing, which may lead to discolouration on drying (removal of surface polymers) or scratching of the tiles if abrasive materials are used.

Note: If the surface of the tile remains contaminated after cleaning due to ineffective washing, then an acid based cleaner (e.g. **Keranet**) can be used strictly in accordance with the relevant instructions. Allow the grout to cure for a minimum of 10 days before this process is attempted. The acid cleaner is likely to cause discolouration within the grout if the

recommended application and rinsing procedures are not followed. Do not use acidic cleaners with acid sensitive materials and never with marble, travertine or limestone.

SET TO LIGHT FOOT TRAFFIC

Floors can be subjected to light foot traffic after approx. 24 hours.

READY FOR USE

Floors are ready for full service conditions after approx. 7 days. Showers can be used after approx. 48 hours and swimming pools can be filled approx. 7 days after grouting where the pool has been refurbished or after 3 weeks for new build pools.

Cleaning

Always remove excess grout from the tile face as work proceeds. Once the grout has hardened it can only be removed mechanically or with acid based cleaners. Clean tools and hands with clean water and soap as necessary.

CONSUMPTION

The consumption of **Keracolor Flex** depends on the joint dimensions, i.e. width and depth, as well as the surface area of the tile. Some examples of coverage are shown in the table above.

PACKAGING

5 kg AluPak bags either singly or in boxes of 4.

COLOURS

Keracolor Flex is available in 7 contemporary colours: pearl (321), oyster (318), white sand (316), pebble (317), limestone (299), sand storm (319) and soft stone (320).

STORAGE

The product should remain useable up to 24 months in the original unopened Alu-Pak packaging from the date of manufacture when stored dry in frost-free conditions above +5°C and below +30°C. Store away from direct sunlight and keep off the ground. When stored at high temperatures or in areas of high humidity, the shelf life may be reduced. Use opened packaging promptly.
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 Flex contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. We recommend the use of protective gloves and goggles and to take the usual precautions for handling chemical products. In case of contact with 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 Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA

TECHNICAL DATA (typical values) In compliance with:	– European EN 13888 as CG2WA – ISO 13007-3 as CG2WA
PRODUCT IDENTITY	
Type:	fine powder
Colour:	7 colours from the MAPEI range
Bulk density (kg/m³):	1,000-1,400

Dry solids content (%):	100
EMICODE:	EC1 Plus - very low emission
APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio:	100 parts of **Keracolor FF** with 28-30 parts of water by weight depending on the colour
Consistency of mix:	fluid paste
Density of the mix (kg/m³):	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: – on walls bonded with fast setting adhesive: – on walls laid with mortar: – on floors bonded with normal setting adhesive: – on floors bonded with fast setting adhesive: – on floors laid 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 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

CONSUMPTION PER 5 KG BAG OF GROUT (APPROX.)			
Size of tile (mm)	Width of joint (mm)		
	2	4	6
20 x 20 x 4	3.9 m²	-	-
100 x 100 x 6	13.1 m²	6.5 m²	3.2 m²
150 x 150 x 6	19.5 m²	9.8 m²	4.8 m²
200 x 200 x 8	19.5 m²	9.8 m²	4.8 m²
300 x 300 x 10	23.4 m²	11.7 m²	5.7 m²
600 x 600 x 12	39.0 m²	19.5 m²	9.5 m²

Note: These values do not allow for waste. The minimum joint width on floors should be 3 mm. Consumption calculation formula: (A+B)/(AxB) x C x D x 1.5 = kg/m².
A = tile length (mm), B = tile width (mm), C = tile thickness (mm), D = joint width (mm)

GROUTS and SEALANTS	299 LIMESTONE	316 WHITE SAND	317 PEBBLE	318 OYSTER	319 SAND STONE	320 SOFT STONE	321 PEARL
Keracolor Flex	●	●	●	●	●	●	●

Due to limitations in the printing process, colours should be taken as merely indicative of the shades of the actual product

N.B.

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 the end users 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.
End users 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.co.uk

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2812-5-2018 (UK)