

TG410E

TILE GROUT (HIGH PERFORMANCE)

EN13888 CG2 WA COMPLIANT TILING GROUT

PRODUCT DESCRIPTION

OPTIMIX TG410E is a decorative high quality polymer modified cementitious mortar for tile grouting and joint filling. The product is strong, hard wearing and waterproof. It complies with the highest level of EN 13888 CG2 WA.

OPTIMIX TG410E is available in a range of colours and the following textures to match most common joint widths, depths and architectural preferences.

Grade	Recommended Joint Width	Recommended Depth
TG410E – F (Fine Texture)	1mm – 5mm	>3mm
TG410E (Standard Texture)	3mm – 10mm	>3mm
TG410E – C (Coarse Texture)	5mm – 15mm	>5mm

Each of these is also available as an ‘S’ grade with enhanced efflorescence resistance.

OPTIMIX TG410E is easy to mix and apply with a good pot life and open time yet quick to dry and easy to clean. This allows for consistent finishing with speedy application and finishing over large areas.



TYPICAL USAGE

- For general purpose interior & exterior works
- Suitable for use in potable water tanks, swimming pools and similar clean areas
- Ideal for post grouting of papered tiles
- Suitable for use around wall and floor tiles
- Will give excellent results with natural stone, Terrazzo, Reconstituted & Homogeneous tiles
- Ideal for MiC factory and on site works

FEATURES AND BENEFITS

- Rigid Durable Surface Finish
- Consistent Colour, Quality and Performance
- Highly Efflorescence Resistant
- Resistant to Mould Growth
- Simple and Easy to Use
- Thixotropic and Extended Pot Life
- Complies with HK Waterworks Reg. Schedule 2
- Low VOC – complies with HK EPD regulation
- Local Production – can contribute to BEA

TECHNICAL DATA

Mixing

	TG410E – F	TG410E	TG410E – C
Water Demand (per 25 kg bag)	7.25 - 7.75 L (29 - 31 %)	5.5 – 6.0 L (22 - 24 %)	5.0 - 5.5 L (20 - 22 %)
Mixing Method	Forced Action Mixer e.g. Low Speed (~500 rpm) Drill & Paddle		
Mixing Time	Mix for 5 minutes or until homogeneous and lump-free, Leave to stand for 5 minutes, briefly re-mix before use		

Performance ¹⁾

Product Characteristics ¹⁾	Specification	OPTIMIX TG410E	Test Method
Abrasion Resistance (mm ³)	≤ 1000	143	EN12808 – 2
Flexural Strength (Dry Curing) (MPa)	≥ 2.5	6.0	EN12808 – 3, ANSI A118.6 & ASTM C109
Flexural Strength (Freeze-Thaw) (MPa)	≥ 2.5	5.0	
Compressive Strength (Dry Curing) (MPa)	≥ 15	30	
Compressive Strength (Freeze-Thaw) (MPa)	≥ 15	25	
Linear Shrinkage (mm/m)	≤ 3.0	~ 1.4	EN12808 – 4
Water Absorption after 30 minutes (g)	≤ 2.0	0.8	EN12808 – 5 & ANSI A118.6
Water Absorption after 240 minutes (g)	≤ 5.0	1.5	
28 days Water Absorption (50%RH to Wet)	< 10 %	3 %	
28 days Water Absorption (Wet to Dry)	< 12 %	7 %	
Tensile Adhesion Strength (N)	> 950	~1,500	BS5980
Extent of Mould Growth	No Growth	No Growth	BS5980
Pot Life @ 30°C	> 30 minutes	~ 45 minutes	In House Test
Potable Water	HK Waterworks Regulation Schedule 2	Comply	BS6920:2014

Environmental Data

Volatile Organic Compounds (VOC)	≤ 10 g/L
Potential BEAM points	Product is manufactured within 800km of Hong Kong project sites
Packaging Composition	Paper bags incorporating 40% recycled paper

Packaging and Yield ²⁾

Wet Density (kg/m ³)	~ 1,800
Coverage (per m ²)	1.5kg x joint width x tile depth x $\frac{(\text{tile length} + \text{tile width})}{(\text{tile length} \times \text{tile width})}$
Yield (per 25kg bag)	~ 17 L
Packing Size (per bag)	2 kg or 25 kg
Shelf Life	12 months

Notes

- Typical results achieved in laboratory conditions and for reference only.
Actual results on site will vary with ambient, substrate and tile conditions.
- Approximate figures make no account for wastage of any kind.





INSTALLATION GUIDE

(Refer to Method Statement for more details)

SURFACE PREPARATION

Tile surface and joint must be clean and free from standing water, damp or dry to the touch, clean, free from loose particles, dust, oil, grease and other contaminants which may affect the bond or the appearance of the material.

Be sure to remove any tile adhesive present at the surface of the joint as this may remain visible after grouting, especially if there is a big contrast in colour between the grout and the adhesive.

Highly absorbent tiles or substrates may benefit from pre-wetting with clean water and allowing to become dry before installation starts.

Grouting should not be started until the tile fixing has achieved enough strength. Unless a fast set adhesive has been used then a minimum of 24 hours is normal.

MIXING

Mix one bag of **OPTIMIX TG410E** dry powder with potable water in accordance with the adjacent table to achieve the desired consistency. Mechanical mixing with a slow speed drill and paddle is recommended.

Apply the powder to the water and mix for about 5 minutes or until a lump free homogeneous mix is achieved. Allow the mix to stand for 3 minutes and mix briefly again just before use.

APPLICATION

Apply the **OPTIMIX TG410E** using a rubber squeegee or rubber trowel to fill the joints in a diagonal motion. Vary the direction of the trowel passing over the same joint a few times and use light trowel pressure. This will help the product fill the joint completely and to remove excess material from the surface as work progresses.

FINISHING AND CURING

Once the grout surface begins to dry, then the grout and the surrounding tile surface can be cleaned. This should be done at regular intervals during the installation using a damp cloth or sponge.

Joints can be further smoothed using a gloved finger or with a pointing tool. Any imperfections which cannot be remedied immediately should be removed and re-grouted before the grout hardens.

N.B. Be consistent in the application procedure over the whole grouted surface and use the minimum of water in the cloth or sponge when cleaning. Excessive or inconsistent wiping and wetting can lead to variations in finish, colour and surface hardness.

No special curing is required but for reference curing is considered complete after 21 days at or above 23°C / 80%RH.

LIMITATIONS

Optimix does not recommend the use of acid based cleaners, however if cleaners are used then installation trials with and without the cleaner should be used to ensure the results are acceptable.

As a colourful and decorative wet applied product **OPTIMIX TG410E** is susceptible to contamination from dirty water, tools, substrates plus localized and extensive airborne dust from other trades. Care should be taken to protect the wet surface accordingly.

As a cement based material **OPTIMIX TG410E** is affected by its environment before, during and after its installation. Thus some colour variation is natural part of the appearance achieved.

HEALTH AND SAFETY

OPTIMIX TG410E is alkaline in nature and can cause irritations to persons with sensitive skin. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective gloves and masks while handling the product. If contact with eyes, rinse immediately with plenty of clean water and seek medical advice. This product is non-toxic and is not flammable.

STORAGE

Store the products in a cool and dry place with the original unopened bags on pallets with plastic wrapping. Protect from direct sunlight, rainfall and exposure to high humidity conditions. Avoid excessive stacking of pallets. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging and reduce shelf life.

COLOUR CHART ³⁾⁴⁾

顏色組別 Colour Group 1		另有更多顏色可供選擇 More colours are available	
#00 白色 White		#20 杏色 Almond	
#10 淺灰色 Light Grey		#22 桃紅色 Peach	
#12 灰色 Grey		#30 骨色 Bone	
#14 深灰色 Dark Grey		#32 淺黃色 Buff	
顏色組別 Colour Group 2			
#16 礮灰色 Charcoal		#62 粉紅色 Pink	
#26 橙色 Orange		#64 玫瑰色 Rose	
#34 黃色 Yellow		#70 黃褐色 Tan	
#50 淺綠色 Light Green		#72 咖啡色 Chocolate	
#52 蘋果綠色 Apple Green		#74 紅棕色 Brick	
#54 綠色 Green		#76 棕色 Brown	
#60 乳白色 Opal		#80 淺藍色 Light Blue	
顏色組別 Colour Group 3			
#82 藍色 Blue		#90 黑色 Black	

*售價或按顏色組別而有不同 Price varies according to the colour group

ALTERNATIVE PRODUCTS

Other similar products in the Optimix range include:

- **TG410ES** Tile Grout (High Performance) with Enhanced Efflorescence Resistance
- **TA314** Tile Adhesive (2-in-1 Fix and Grout)



Notes:

- The above colours are for general reference only. Final colour might vary because of various factors and conditions, e.g. site conditions, installation skills, tile characteristics, water dosage in mixing, cleaning steps and curing conditions.
- Trial is recommended to verify the application and final colour of the product prior to applying in large scale, especially for stainable tiles and stones.

Important Note: The information contained herein is, the best of our knowledge, true and reliable and is supported by the present state of our knowledge. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives as the conditions of use and any labour involved are beyond our control.



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