



Opticolor™ Stain-Free Grout

**Optimum-Performance,
Stain-Free* Grout**



DESCRIPTION

Opticolor is an improved, water-cleanable, reaction resin grout with chemical and stain resistance. It is a nonsagging, efflorescence-free grout with no shrinkage. *Opticolor* provides color uniformity, stain resistance and durability beyond that of cement grouts. In addition, it is easy to maintain, will clean to the original color and contains BioBlock™ technology.

FEATURES AND BENEFITS

- Stain-free* grout
- No sealer required
- Easy to apply

INDUSTRY STANDARDS AND APPROVALS

ISO 13007: Classification RG

ANSI: Meets A118.3 requirements

<u>LEED Points Contribution</u>	<u>LEED Points</u>
MR Credit 5, Regional Materials**	Up to 2 points
IEQ Credit 4.1, Low-Emitting Materials – Adhesives & Sealants	1 point
IEQ Credit 4.3, Low-Emitting Materials – Flooring Systems	1 point

** *Using this product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.*

* *With immediate cleaning and proper maintenance, Opticolor stain-free grout is resistant to staining when exposed to most common household goods and cleaning agents. Long-term exposure to any material can increase the potential for staining grout.*

WHERE TO USE (see “Limitations” section)

- For grout joints from 1/16" to 3/8" (1,5 to 10 mm)
- For grouting interior and exterior installations* on floors, walls and countertops
- For grouting most commercial and residential applications
- For grouting of ceramic floor/wall tile, glass tile, quarry tile, porcelain tile, pavers, marble, granite, slate and agglomerate tile
- For use in wet-area applications, such as showers, swimming pools, fountains and steam rooms
- High-performance, stain-resistant, color-consistent and durable; can also be used to re-grout

LIMITATIONS

- Do not use in areas subject to harsh chemicals or exposed to aggressive cleaning regimens. In addition, do not use in kennels, veterinary clinics or industrial applications exposed to high temperatures, high-volume food processing or mineral acids. Contact MAPEI's Technical Services Department for recommendations for these installations.
- When used on exterior installations, color variations may occur over time, especially with lighter shades due to ultraviolet rays or environmental contaminants.

Consult MAPEI's Technical Services Department for recommendations regarding installation over substrates and conditions not listed.



SURFACE PREPARATION

- Because *Opticolor* contains aggregate, soft-polished marble, limestone, granite and delicate glazed or glass tiles might be scratched during application. In addition, because of its reactive resin formulation, *Opticolor* may darken the color of porous stone. Before installation, a mockup is required to ensure desired results.
- The application of a grout release over certain types of porcelain or textured surface tiles or stone may be advantageous where a fine surface porosity might trap fine cement particles or color pigments. Seek the advice of the tile or stone manufacturer and site-test (mock up) on separate samples before grouting.
- Before grouting, make sure the tiles or stones are firmly set and the adhesive or mortar is completely dry.
- Remove all spacers, pegs, ropes and strings.
- Grout joints must be clean and free of standing water, dust, dirt and foreign matter. Remove excess adhesive or mortar from the joint area so that 2/3 of the depth of the tile is left available for grouting.
- Clean the tile or stone surface to remove dust, dirt, mortar, adhesive and other contaminants that may cause grout discoloration.
- Note: Marble, granite, limestone, agglomerated stone and slate are natural products consisting of a vast combination of minerals and chemicals that may cause the material to behave or react in a manner beyond our control. Therefore, determine the suitability of all materials before proceeding with the installation. To ensure desired results, a mockup installation is required before the actual installation.

See MAPEI's "Surface Preparation Requirements" document for tile and stone system installations at www.mapei.com for additional information.

MIXING

Note: Choose all appropriate safety equipment before use. Refer to Material Safety Data Sheet (MSDS) for more information.

- One 2.25-lb. (1,02 kg) Part C is needed for mixing with a small kit.
 - One 9-lb. (4,08 kg) Part C is needed for mixing with a medium kit.
 - Four 9-lb. (4,08 kg) Part C's are needed for mixing with a large kit.
1. Always mix complete units. Partial mixing will result in uncured grout. Do not add other materials to this mixture. To ensure uniform results, use kits with the same batch or lot numbers.
 2. In a clean container, mix all of Part A and all of Part B. Allow enough time for all the material in the Part A and Part B containers to flow completely out. Mix using a

low-speed mixer at about 300 rpm, until a homogenous, consistent color is obtained. Do not overmix.

3. Add Part C (powder) to the Part A and Part B mixture. Mix using a low-speed mixer at about 300 rpm.
4. Using a margin trowel, occasionally scrape the bottom and sides of the mixing container so that all parts are mixed evenly.
5. Mix thoroughly until a homogenous, consistent color is obtained.
6. Avoid prolonged mixing, which may cause air entrapment and shorten the pot life.
7. Do not place the lid on the container after material has been mixed.
8. Wash hands and all tools immediately with water before epoxy hardens. *Opticolor* is extremely difficult to remove once it has cured.

PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. The temperature of the tilework must be maintained at between 50°F and 100°F (10°C and 38°C) while grouting and until *Opticolor* has hardened sufficiently (after 24 to 72 hours).
3. Application and cleanup procedures for an entire unit should be completed in about 45 minutes to 1 hour at 73°F (23°C).
4. Remove mixed product from the container and place in small piles on the tile surface. (If grouting a wall, place on kraft paper laid on the floor.) *Opticolor* is a thermosetting product, so it sets up faster in a container or in a large mass.
5. Use a hard-rubber float with a sharp edge to force the grout into the joints in a continuous manner, leaving it flush with the tile edge.
6. Be certain that all joints are well-compacted and are free of voids and gaps. Fill the joints with the maximum amount of grout possible.
7. Thoroughly remove excess *Opticolor* from the face of the tile before the epoxy loses its plasticity or begins to set. Hold the rubber float at a 90° angle to the tile surface and drag the float across the tile surface diagonally to the grout lines, leaving as little epoxy grout on the tile surface as possible.
8. Clean tiles immediately after applying each unit of *Opticolor*. Grout and clean in small areas. Do not attempt to use more than one unit before cleaning tiles. Do not allow *Opticolor* to harden on the tile surface. On large projects, working in teams of 2 to 3 people will simplify the installation.
9. Apply a liberal amount of cold water to the freshly grouted area. Scrub the tile surface diagonally to the

Product Performance Properties

ISO 13007 Classification

Classification Code	Test Characteristic	Classification Requirement
RG (resin grout)	Abrasion resistance*	Less than or equal to 0.015 cu. in. (250 mm ³)
	Flexural strength*	Greater than 4,350 psi (30 MPa)
	Compressive strength*	Greater than 6,525 psi (45 MPa)
	Shrinkage*	Less than 0.06 in./3.28 ft. (1.5 mm/m)
	Water absorption*	Less than 0.0002 lb. (0.1 g)

* 28-day cure

ANSI Specification

Test Method	ANSI Specification	Test Results
ANSI A118.3 (5.1) – water cleanability	80 minutes	Pass
ANSI A118.3 (5.2)		
– initial setting time	> 2 hours	Pass
– service setting time	< 7 days	Pass
ANSI A118.3 (5.3) – shrinkage	< 0.25%	Pass
ANSI A118.3 (5.4) – sag	No change	Pass
ANSI A118.3 (5.5) – quarry shear bond	> 1,000 psi (6,90 MPa)	Pass
ANSI A118.3 (5.6) – compressive strength	> 3,500 psi (24,1 MPa)	Pass
ANSI A118.3 (5.7) – tensile strength	> 1,000 psi (6,90 MPa)	Pass
ANSI A118.3 (5.8) – thermal shock	> 500 psi (3,45 MPa)	Pass

Shelf Life and Application Properties at 73°F (23°C) and 50% relative humidity

Shelf life	2 years
Protect from:	
light traffic†	12 hours
heavy traffic†	48 hours
Full cure†	10 to 14 days
Colors	Available in MAPEI's pallet of 36 designer colors. Refer to MAPEI's grout color chart. Sample grout color chips are available upon request.

† Protection and cure times will vary depending on ambient temperature, substrate temperature, and humidity.

Packaging

Product Code	Size
40037000	Small kit
40038000	Medium kit
40039000	Large kit
4XX32000††	Bag of colorant: 2.25 lbs. (1,02 kg)
4XX41000††	Bag of colorant: 9 lbs. (4,08 kg)

†† "XX" is reserved for the two-digit color code.

Small kit (yield of 0.2 U.S. gal. [0,76 L] when mixed with Part C) =

- 1 Part A container
- 1 Part B container
- Gloves
- Cleaning sponge
- Scrubpad
- Instruction sheet

Medium kit (yield of 0.8 U.S. gal. [3,03 L] when mixed with Part C) =

- 1 Part A container
- 1 Part B container
- Gloves
- Cleaning sponge
- Scrubpad
- Instruction sheet

Large kit (yield of 3.2 U.S. gals. [12,1 L] when mixed with Part C) =

- 4 Part A containers
- 4 Part B containers
- 4 pairs of gloves
- 2 cleaning sponges
- 4 scrubpads
- Instruction sheet

Part C powder, sold separately

- Case of 4 bags measuring 2.25 lbs. (1,02 kg) each, or
- Case of 2 bags measuring 9 lbs. (4,08 kg) each

CHEMICAL RESISTANCE

Chemical resistance data is in accordance with ASTM C267-1982. Chemical resistance refers to chemicals' potential to deteriorate product.

This chart is a general guide for *Opticolor* applications. Resistance tests on chemicals other than those listed may be conducted, upon request, by MAPEI's Technical Services Department. It may take 90 to 120 days for test results.

Testing conditions: 73°F (23°C), 7-day cure, 28-day immersion, no change of chemical agent

Results:

R = Recommended

NR = Not Recommended

Chemical Name	Splash Exposure (30 minutes)	Intermittent Exposure (24 hours)	Continuous Exposure (7 days)
5% acetic acid (vinegar)	R	R	NR
10% oxalic acid	R	R	R
50% tannic acid	R	R	R*
80% phosphoric acid (soda)	R	R	R
20% sulfuric acid	R	R	R
5% benzoic acid	R	R	R
50% tartaric acid	R	R	R
5% lactic acid	R	R	R
1% potassium permanganate	R*	R*	R*
10% potassium permanganate	R*	R*	R*
Chloroform	R	NR	NR
3% formic acid	R	R	R
5% citric acid	R	R	R
Sodium hypochlorite	R	R	R
45% potassium hydroxide	R	R	R
Mineral water	R	R	R
Methanol	R	NR	NR
10% ethanol	R	R	R
96% ethanol	R	R	R
Isopropanol	R	R	R
Methyl ethyl ketone	R	NR	NR
Methylene chloride	R	NR	NR
Toluene	R	NR	NR
Xylene	R	R	NR

* *Materials will stain if left exposed.*

joint line using a nonwoven nylon white scouring pad (use a more aggressive pad if tile has an abrasive surface). Apply enough pressure on the pad to loosen any film without removing grout from the joints. Rinse pads frequently while cleaning. Note: Be careful not to get any water in the ungrouted joints.

10. To remove loosened grout residue, drag a clean sponge diagonally across the tile surface. Use one side of the sponge for each pass over the tile, rinsing the sponge following second pass.
11. Do not allow excess water to remain on the tile surface, which would allow a film to form on the surface that would be difficult to remove once hardened. For wall applications: If the grout exhibits sagging or bleeding during the initial wash, wait an additional 10 to 15 minutes to complete the cleaning.
12. In certain applications, a terry-cloth towel substituted for the sponge may work more effectively for removing loosened grout residue.

Note: Change the cleaning water frequently to prevent putting residue back on the tile surface. Rinse the scrubpad and sponge frequently while cleaning. Be careful not to get any water in empty, un-grouted joints.

13. A final wash can be performed about 1 hour after the initial wash if residue is observed on the dry tile surface. Follow the same process as referenced in the section above using clean water.
14. To aid in the cleaning process, 1 U.S. oz. (30 mL) of a clear dishwashing soap may be added (if needed) to a pail of 3 U.S. gals. (11,4 L) of clean water; then use a clean white scrubpad to loosen any remaining grout residue.
15. Important: Check the installation the following day to make sure it is completely clean. For tacky residue found within 24 hours of installation, follow the above instructions for final cleaning.

Approximate Product Coverages*

For small kit (yield of 0.2 U.S. gal. [0,76 L] when mixed with Part C). Coverages in sq. ft. (m²).

Tile Size	Grout Joint Width			
	1/16" (1,5 mm)	1/8" (3 mm)	1/4" (6 mm)	3/8" (10 mm)
1" x 1" x 1/4" (25 x 25 x 6 mm)	11 (1,02)	6 (0,56)	4 (0,37)	3 (0,28)
2" x 2" x 1/4" (50 x 50 x 6 mm)	22 (2,04)	11 (1,02)	6 (0,56)	4 (0,37)
4-1/4" x 4-1/4" x 1/4" (108 x 108 x 6 mm)	45 (4,18)	23 (2,14)	12 (1,11)	8 (0,74)
4" x 8" x 1/2" (100 x 200 x 12 mm)	28 (2,60)	14 (1,30)	7 (0,65)	5 (0,46)
6" x 6" x 1/2" (150 x 150 x 12 mm)	31 (2,88)	16 (1,49)	8 (0,74)	6 (0,56)
8" x 8" x 3/8" (200 x 200 x 10 mm)	55 (5,11)	28 (2,60)	14 (1,30)	10 (0,93)
12" x 12" x 1/2" (300 x 300 x 12 mm)	62 (5,76)	31 (2,88)	16 (1,49)	11 (1,02)
16" x 16" x 3/8" (406 x 406 x 10 mm)	110 (10,2)	55 (5,11)	28 (2,60)	19 (1,77)
24" x 24" x 3/8" (610 x 610 x 10 mm)	165 (15,3)	83 (7,71)	42 (3,90)	28 (2,60)

For medium kit (yield of 0.8 U.S. gal. [3,03 L] when mixed with Part C). Coverages in sq. ft. (m²).

Tile Size	Grout Joint Width			
	1/16" (1,5 mm)	1/8" (3 mm)	1/4" (6 mm)	3/8" (10 mm)
1" x 1" x 1/4" (25 x 25 x 6 mm)	45 (4,18)	24 (2,23)	14 (1,30)	11 (1,02)
2" x 2" x 1/4" (50 x 50 x 6 mm)	86 (7,99)	45 (4,18)	24 (2,23)	18 (1,67)
4-1/4" x 4-1/4" x 1/4" (108 x 108 x 6 mm)	178 (16,5)	91 (8,45)	48 (4,46)	33 (3,07)
4" x 8" x 1/2" (100 x 200 x 12 mm)	112 (10,4)	57 (5,30)	29 (2,69)	20 (1,86)
6" x 6" x 1/2" (150 x 150 x 12 mm)	125 (11,6)	64 (5,95)	33 (3,07)	22 (2,04)
8" x 8" x 3/8" (200 x 200 x 10 mm)	222 (20,6)	112 (10,4)	57 (5,30)	39 (3,62)
12" x 12" x 1/2" (300 x 300 x 12 mm)	248 (23,0)	125 (11,6)	64 (5,95)	43 (3,99)
16" x 16" x 3/8" (406 x 406 x 10 mm)	441 (41,0)	222 (20,6)	112 (10,4)	76 (7,06)
24" x 24" x 3/8" (610 x 610 x 10 mm)	660 (61,3)	331 (30,7)	167 (15,5)	112 (10,4)

For large kit (yield of 3.2 U.S. gals. [12,1 L] when mixed with Part C). Coverages in sq. ft. (m²).

Tile Size	Grout Joint Width			
	1/16" (1,5 mm)	1/8" (3 mm)	1/4" (6 mm)	3/8" (10 mm)
1" x 1" x 1/4" (25 x 25 x 6 mm)	180 (16,7)	98 (9,10)	57 (5,30)	44 (4,09)
2" x 2" x 1/4" (50 x 50 x 6 mm)	344 (32,0)	180 (16,7)	98 (9,10)	71 (6,60)
4-1/4" x 4-1/4" x 1/4" (108 x 108 x 6 mm)	714 (66,3)	365 (33,9)	190 (17,6)	132 (12,3)
4" x 8" x 1/2" (100 x 200 x 12 mm)	446 (41,4)	227 (21,1)	118 (11,0)	81 (7,53)
6" x 6" x 1/2" (150 x 150 x 12 mm)	501 (46,5)	254 (23,6)	131 (12,2)	90 (8,36)
8" x 8" x 3/8" (200 x 200 x 10 mm)	886 (82,3)	448 (41,6)	229 (21,3)	156 (14,5)
12" x 12" x 1/2" (300 x 300 x 12 mm)	993 (92,3)	501 (46,5)	254 (23,6)	172 (16,0)
16" x 16" x 3/8" (406 x 406 x 10 mm)	1762 (164)	886 (82,3)	448 (41,6)	302 (28,1)
24" x 24" x 3/8" (610 x 610 x 10 mm)	2639 (245)	1324 (123)	667 (62,0)	448 (41,6)

* Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to actual tile size and thickness, exact joint width, job conditions and grouting methods. When grouting abrasive or slip-resistant floor tiles, anticipated coverage can be dramatically decreased. Consult MAPEI's Technical Service Department for approximate coverages not shown in the above table.

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PROTECTION

- Because propane gas heaters will yellow epoxy, refrain from using such heaters or properly vent all exhaust.
- Do not step on freshly cleaned tiles. Permanent damage to the grout could result.
- Grouted floors can be opened to light foot traffic after 12 hours at temperatures above 73°F (23°C).
- Do not expose to cleaners for 7 days.

MAINTENANCE

- Grout must be fully cured before regular cleaning.
- MAPEI grout products are produced to the highest quality of standards. To maintain a clean tile surface, use a neutral-pH cleaner for maintaining the floor, followed by a clean-water rinse.
- Do not use harsh chemicals to maintain the tile surface. Before proceeding with cleaning, consult the cleaner's manufacturer for compatibility, use and application instructions. Remove or rinse fatty acid residue from the grout surface to avoid potential grout deterioration caused by prolonged exposure.

Refer to the MSDS for specific data related to VOCs, health and safety, and handling of product.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



MAPEI Headquarters of the Americas
1144 East Newport Center Drive
Deerfield Beach, Florida 33442
Phone: 1-888-US-MAPEI
(1-888-876-2734)

Technical Services
1-800-992-6273 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service
1-800-42-MAPEI (1-800-426-2734)

For the most current **BEST-BACKED™** product data and warranty information, visit www.mapei.com.

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