

1600 UPG

ULTRA PERFORMANCE GROUT

DESCRIPTION

Flextile 1600 Ultra Performance Grout is a premium polymer modified, pre-sealed colour-consistent grout. Its unique fast-setting formulation ensures colour uniformity without efflorescence, is suitable for grouting both Wall and Floor tiles, and develops superior flexural and compressive strengths exceeding ANSI A118.7 requirements. Pre-sealed for reduced permeability, increased stain resistance as well as resistance to mold and mildew. 1600 UPG is formulated to be VOC-free.

BASIC USES

- For grouting all types of ceramic and porcelain tile, pavers, granite, slate, mosaics or brick on wall or floor applications where joint width is 1.5 mm (1/16") to 25 mm (1").
- For both interior and exterior residential, institutional, and heavy service commercial floor and wall applications in dry or wet areas.
- For swimming pools, spas, and other water immersion applications.

FEATURES

- Colour uniformity and Efflorescence-free
- For both Wall & Floor tile use
- Through Seal Technology provides improved stain resistance and ensures easier maintenance
- VOC-free - Independently tested to meet LEED v4 requirements.
- Ultra strong
- Fast-setting - allows for foot traffic within 3 - 4 hours
- With FlexFresh™ Technology that helps to inhibit the growth of mildew, fungus and other odour causing bacteria in construction materials

TECHNICAL DATA at 23°C (73°F) and 50% humidity

Exceeds ANSI A118.6 & A118.7 requirements

Description	ANSI SPEC.	TYPICAL RESULT
Compressive Strength	MPa (psi)	MPa (psi)
3 hrs		10.4 to 13.8 (1000 to 2000)
24 hrs		13.8 to 20.7 (2000 to 3000)
7 days		27.6 to 31.0 (4000 to 4500)
28 days	> 20.7 (3000)	31.0 to 34.4 (4500 to 5000)
Shrinkage, 7 day	< 0.2 %	< 0.2 %
Water absorption humidity to immersion	< 5.0 %	< 5.0 %
Water absorption immersion to dry	< 7.5 %	< 7.0 %

Typical Physical Properties

Pot Life	30 minutes to 1 hr
Initial Cure	2-3 hrs
Final Cure	28 days
Cleanability	With water before material dries
VOCs	0 g/L
Shelf Life	1 year from production date when stored in dry, heated conditions

LEED Points Contribution	LEED Points
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

*May be eligible

LIMITATIONS

- Do not mix with latex grout additives, as this grout contains polymer additives.
- Use only on surfaces which are maintained at a temperature above 10°C (50°F) and below 35°C (95°F) during application and for at least 48 hours after application.
- Do not use when a highly chemical-resistant grout is required or where extra-heavy impact or abrasion resistance is required - instead, use FlexEpoxy 100, 100%-solids epoxy grout.
- Some types of glazed ceramic tiles, marble, granite and marble agglomerates can be permanently stained, scratched, dulled or damaged when grouted with pigmented grout or sanded grout formulas. Do a test patch prior to installation. Check with tile manufacturer to see if pre-sealing of tile is required. As various external factors beyond Flextile's control such as general site conditions and cleanliness, water quality and quantity used in mixing and cleanup, site temperatures and humidity levels, and mixing, application & cleaning techniques may come into play, absolute colour shading and texture consistency cannot be guaranteed.

Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:



Exposure Scenario	Individual VOCs of Concern		Formaldehyde		TVOC
	Criterion	Compliant?	Criterion	Compliant?	Range
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤0.5 mg/m³
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤0.5 mg/m³

Standards & Codes Recognizing CDPH Standard Method V1.2 (partial list)

- USGBC LEED Version 4, BD&C, ID&C
- The WELL Building Standard
- ANSI/GBI 01, Green Building Assessment Protocol



■ INSTALLATION

PREPARATORY WORK

Ceramic tile surfaces must be clean and setting materials must be adequately cured prior to grouting. Remove spacers and rake out high ridges of setting material from tile joints prior to grouting to ensure uniform grout thickness. Tile joints must be clean and free of dirt, dust or other foreign matter prior to grouting. Do a test patch to see if pre-sealing of tile is required to avoid staining of the tile.

APPLICATION

Mix Flextile 1600 Ultra Performance Grout with approximately 17-20% volume by weight of cool, clean water (1.9 - 2.3 L / 2 - 2.4 US qts) to 11.3 kg / 25 lbs of grout and mix by hand or use a slow speed mixer (maximum 150-RPM).

Mix with the following proportions:

Water	Flextile Ultra Performance Grout
2.0 L (2.1 U.S. qts).	11.3 kg (25 lbs).

Use immediately, do not slake.

Do not use excess water for mixing, as this will negatively affect the final cure and appearance of the grout. Dampen surface of tile slightly with clean water before grouting to make spreading of grout easier. Spread grout with a hard rubber float, working diagonally to joints and using wrist action to fully pack the joints.

Holding the float at 90° to the tile surface, use diagonal passes to remove excess grout from the surface. Finished grout joint should be flush with the edge of the square-edged tile, or tooled to the glazed edge of cushion-edged tile. Allow grout to sit until firm in the joints, approximately 20 to 30 minutes.

Use 2 buckets of clean water for cleaning, one for the initial cleaning, removing the excess grout, and the other for slight moistening of the grout sponge in final cleanup. Avoid leaving any excess water on the surface of grout joints during clean-up.

DO NOT use excess water for mixing or for cleanup as this can cause discoloration and soft/powdery joints. Within 1 to 2 hrs after application, buff the grouted surface with cheesecloth or a clean, dry cotton cloth if a haze is visible on the tile surface.

■ CURING

Cure for a minimum of 3 hours prior to exposure to regular foot traffic. Protect from rain or water immersion until thoroughly dry. Sealing of the grout once cured is not required, although compatible breathable sealers may be used to further enhance stain resistance. Follow the recommendations and instructions of the sealer manufacturer. 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. Grout must be cured for at least 3 days prior to regular maintenance and cleaning.

■ CAUTION

Freshly mixed cement, mortar, concrete or grout may cause skin injury. Avoid extended contact with skin where possible and wash exposed skin areas promptly with water. If any cement or cement mixtures get into the eye, rinse immediately and repeatedly with water and get prompt medical attention. Keep out of reach of children.

■ SAFETY

Refer to Flextile Material Safety Data Sheet for detailed health and safety information available at flextile.net

■ AVAILABILITY AND COSTS

Flextile 1600 Ultra Performance Grout is available from Flextile Ltd. and its distributors in 11.3 kg (25lb) bags
Cost: Data supplied upon request.

■ WARRANTY

Flextile warrants that this product is of merchantable quality and is suitable for the purpose for which it is intended. Flextile's liability under this warranty shall be limited to replacement of its product found to be defective or, at its option, a refund of the purchase price.

■ MAINTENANCE

No maintenance is required except where damages result from unforeseen circumstances. Repair procedures shall be directed by Flextile or its distributors.

■ TECHNICAL SERVICES

Flextile maintains a well-equipped laboratory able to test its products in conjunction with the products with which they are used. Technical assistance for use of Flextile products is available upon request.

■ RELATED REFERENCES

Current editions of TTMAC 09 30 00 & TCNA Ceramic Tile Installation Manuals.

