



PRO GROUT™ XTREME

MORTAR

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

PRO GROUT™ XTREME is an innovative, new-generation, lightweight, unique ALL-IN-ONE reactive resin mortar and grout featuring FUSION technology, which blends multiple key characteristics for the benefit of the end-user. It is water-cleanable, high-performance and durable that outperforms common cementitious mortars and grouts.

Features

- ♦ Use as an INDUSTRIAL-STRENGTH MORTAR for most tile and stone and moisture sensitive stones such as green or red marbles
- ♦ A LIGHTWEIGHT Technology™ formula – 33% lighter in weight than conventional epoxy products
- ♦ 100% silica sand-free – safer for users and the environment
- ♦ Contains Recycled Materials (50% Post-Consumer) – Exceeds LEED® objectives and requirements
- ♦ Inhibits mold and mildew growth
- ♦ A PROMA Super Setting Technology™ product: extended working time, ultra creamy consistency and easy to use for setting tile
- ♦ No VOC
- ♦ For highly resistant industrial, institutional, commercial and residential installations
- ♦ For harsh chemical resistance to highly corrosive chemicals, food products and beverages such as in commercial and institutional kitchens, bottling and food processing plants, hospitals, laboratories, breweries and more
- ♦ For interior use on floors, countertops, walls, and in wet and submerged areas, including water basins, fountains, pools and gang showers
- ♦ Exceeds ANSI A118.3 requirements

Packaging

1 L (0.26 gal) kit; 3 L (0.79 gal) kit



Concrete

Epoxy
Flooring,
Steel

Exterior-Grade
Plywood

Existing VAT, VCT
and Non-Cushioned
Vinyl Sheet Goods

Existing
Tile



Suitable Substrates

- ♦ Dry, completely cured concrete (at least 28 days old)
- ♦ Concrete and masonry blocks
- ♦ Cement backer units (CBU)
- ♦ Cementitious screeds, rendering, leveling coats and mortar beds
- ♦ Gypsum wallboard (INTERIOR dry areas only)
- ♦ Double layered EXTERIOR Grade Douglas Fir Plywood, certified CANPLY (SELECT) or (SEL-TF) CSA 121, minimum 32 mm (1 1/4") total thickness, for INTERIOR Residential Light-duty Floors and countertops, in dry areas only.
- ♦ Existing ceramic tiles (interior use only)*
- ♦ Cementitious and epoxy Terrazzo floors*
- ♦ Old Cut-back adhesive residue*
- ♦ Plastic laminate surfaces (interior countertops only)*
- ♦ Existing VAT and VCT tiles, and non-cushioned vinyl sheet goods
- ♦ Steel*

* With adequate prior preparation as indicated in PROMA's "SURFACE PREPARATION GUIDELINES"



Limitations

- Do not use at temperatures below 15°C (60°F) or above 35°C (95°F).
- Do not apply directly over particleboard, chipboard, presswood, Lauan, masonite, OSB, Gypsum-based leveling and patching compounds and all dimensionally unstable or non-recommended substrate materials.
- Do not use where high moisture and hydrostatic conditions and/or recurring moisture problems exist.

4. TECHNICAL DATA

Applicable Standards

For Additional Information, please refer to the most recent TCNA handbook for ceramic tile installation or the TTMAC Specification Guide 09 30 00 Tile Installation Manual, or visit our website at www.proma.ca.

WORKING PROPERTIES (@23° C [73° F] and 50% RH)

Pot life	> 1 hour
Initial cure	16-18 hours
Final cure	21 days
Lead time prior to light foot traffic	24 hours
Lead time prior to normal traffic	72 hours
Lead time prior to heavy or industrial traffic	7 days
Lead time prior immersion or freeze/thaw	21 days

PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH)

VOC content	0 g/L
Compressive Strength per ANSI A118.3 tests (at 7 days)	≥ 6800 psi (47 MPa)
Tensile strength	≥ 1000 psi (6.9 MPa)
Bond Strength quarry tile to quarry tile	≥ 1180 psi (8.1 MPa)
Linear shrinkage (%) ASTM C531 @ 7 days	< 0.20%
Approximate coverage (based on 3 L [0.79 U.S. gal] kit)	
Notched trowel	Coverage
4 x 4 mm (5/32" x 5/32") v-notch trowel	3.9 m² (45 ft²)
6 x 6 x 6 mm (1/4" x 1/4" x 1/4")	1.86 m² (20 ft²)
Shelf life	
24 months if kept in its original unopened packaging and stored in a dry location.	

Chemical resistance: ACIDS

Type	Concentration	Degree of Resistance
Vinegar	2.5%	A
	5%	A
	10%	C
Hydrochloric Acid	10%	A
	30%	A
Chromic Acid	20%	C
Citric Acid	10%	A
Formic Acid	2.5%	A
	10%	C
Lactic Acid	2.5%	A
	5%	A
Nitric Acid	10%	A
	50%	C
Aleic Acid		C
Phosphoric Acid	50%	A
	75%	B
Sulfuric Acid	1.5%	A
	10%	A
	96%	C
Tannic Acid	10%	A
Oxalic Acid	10%	A

Chemical resistance: BASIC AND SALT SOLUTIONS

Type	Concentration	Degree of Resistance
Ammonia Solution	25%	A
Caustic Soda	50%	A
Hypochlorite Solution	10%	C
Act. CL 6.4 g / L		A
Act. CL 165 g / L		A

Chemical resistance: SOLVENTS

Type	Degree of Resistance
Acetone	C
Ethylene Glycol	B
Glycerol	A
Perchloroethylene	C
Carbon Tetrachloride	B
Ethyl Alcohol	A
Trichloroethane	C
Chloroform	C
Methylene Chloride	C
Tetrahydrofuran	C
Toluene	C
Carbon Disulfide	B
Mineral Spirits	A
Benzene	C
Methylcellulosolve	C
Xylene	C

Chemical resistance: OILS AND COMBUSTIBLE PRODUCTS

Type	Degree of Resistance
Gasoline	A
Turpentine	A
Diesel Fuel	A
Peanut Oil	A
Tar	A
Olive Oil	A
Heating Oil	A

A – Excellent resistance
 B – Good resistance (a prolonged contact could cause deterioration)
 C – Poor or no resistance





5. INSTALLATION

Surface Preparation

(Refer to PROMA Surface Preparation Guidelines for complete details)

- ◆ All supporting surfaces must be structurally sound, solid, stable, level, plumb and true.
- ◆ Surfaces must be clean and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any deleterious substance and debris which may prevent or reduce adhesion.
- ◆ Acids, concentrated alkaline conditions and cleaning chemical residues must be neutralized or removed.
- ◆ All concrete substrates must be completely cured (at least 28 days old) and slightly textured.
- ◆ On grade or below grade concrete slabs must be installed over an effective vapor barrier.
- ◆ All concrete substrates must be dry and free of hydrostatic conditions and/or extreme moisture problems. Perform a calcium chloride moisture emission test (ASTM F-1869) on the concrete substrate before proceeding with the installation of the floor.
- ◆ Smooth concrete substrate surfaces must be mechanically roughened in accordance with an engineer-approved procedure (shotblasting, scarification, grinding, sand or waterblasting, etc) to provide sufficient surface texture and profile for adequate bonding of the product.
- ◆ For ceramic and porcelain tiles up to 30 x 30 cm (12" x 12"), the structural design of the wood substrate must not allow a deflection greater than L/360 when tested to 136 kg (300 lb) concentrated loads in accordance with ASTM C627 Standard test method. For square and rectangular tiles with one edge dimension 38 cm (15") and 45 cm (18") up to 58 x 58 cm (23" x 23") the maximum deflection should not exceed L/540 unless an effective CIM (crack isolation membrane) is used in the installation system. **For tiles 60 x 60 cm (24" x 24") or larger and for ALL dimension stone installation, the maximum deflection must not exceed L/720.**

Ambient and Surface Temperatures

- ◆ Ideally, for best performance and ease-of-application, room and surface temperatures should be set and maintained at about 22°C (72°F).
- ◆ IN HOT OR WARM CLIMATIC CONDITIONS, epoxy mortars harden and set faster, allowing less time for installation and adjustments. Precautions must be taken to ensure that the epoxy does not flash set. Cooling the epoxy mixture by placing the mixed-epoxy bucket over an ice bed or inside a larger cold water container will help slow down the epoxy setting process and aid in prolonging the available installation time.

- ◆ Conversely, COLD WEATHER TILING DOES STIFFEN THE EPOXY, making it harder to spread with a longer open time. In this case, placing the SEALED UNOPENED UNITS of epoxy mortar in HOT water during 15 to 20 minutes will loosen-up the epoxy, making it easier to mix and spread while reducing the open time.
- ◆ When opting for any of these procedures, caution must be exercised to avoid ice or water from entering into the epoxy mortar mixture.

Caution

Wear rubber gloves, safety glasses and protective clothing. Avoid contact with skin and eyes during handling, mixing, application and cleaning. Wash hands with soap and water often, especially after mixing, at break time and before meals. **EYE CONTACT:** Flush eyes thoroughly with water. If irritation persists, seek medical attention. **SKIN CONTACT:** Discard contaminated clothing. Wash skin with soap and water. If irritation persists, seek medical attention.

Mixing

Note: In order to obtain the maximum strength and performance and a uniform color spread, it is essential that the ENTIRE contents of each of the (3) three components be mixed and used together.

1. Pour and scrape the ENTIRE content of Part A (resin) into the mixing pail.
2. Pour and scrape the ENTIRE content of Part B (hardener) into the mixing pail.
3. Blend this A and B mixture using a low-speed mixer (approx. 300 RPM) to a homogeneous consistency (30 seconds).
4. Slowly add entire package of powder, while mechanically mixing.
5. Mix until a uniform color and consistency paste is achieved. (Approximately 2 minutes). DO NOT OVER-MIX as this may cause the product to stiffen and substantially shorten its working time.
6. Wash tools with water immediately after use or it will be impossible to do so once the product has cured.



Mixing Pail, Part A (resin)



Mixing Pail, Part B (hardener)



Mixing



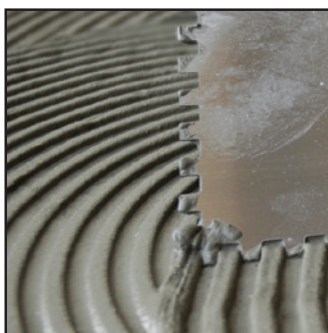
Adding powder



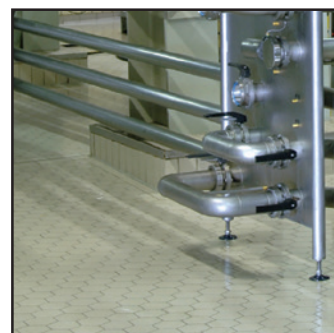
Mixing



Application



Application





Application

1. Use the appropriate notched trowel with sufficient profile depth to achieve 80% minimum mortar contact with the back face of the tiles. (95% for commercial and industrial floors and for shower applications) (Refer to ANSI A108.6 specifications, TCNA HANDBOOK for CERAMIC TILE INSTALLATION and TTMAC's Specification Guide 09 30 00 Tile Installation Manual.
2. Using the flat edge of the trowel, pressure-apply a thin spread of epoxy mortar to the substrate and immediately keep proceeding using the notched edge of the trowel by spreading and combing additional epoxy material in a continuous ONE Directional ridged pattern. On walls and paneling, spread strips of epoxy mortar in a horizontal direction. Do not spread more material than can be covered with tiles within 5 to 10 minutes maximum (approx. 10 sq ft [0.93 m²]) at normal 22°C (72°F) room and substrate temperature.
3. Do not soak tiles before installation nor set tiles on a partially hardened epoxy mortar bed. Do not allow any hardening to occur before placing tiles, since hardened or cured epoxy mortar is almost impossible to remove.
4. Pressure-set tiles firmly into the freshly combed epoxy mortar bed in a slight push/pull motion directionally across mortar ridges before skinning occurs to achieve good tile-to-epoxy mortar contact.
5. Each tile must be well embedded with the maximum coverage with corners and edges fully supported.
6. Make tile alignments and adjustments immediately following setting and beat-in.
7. Clean joints and tile face, removing smudges immediately as you go, using a damp towel before material hardens. Do not leave any residual material to remain on the tile surface as it may be extremely difficult to remove once hardened.
8. At normal 22°C (72°F) room and substrate temperature conditions, do not disturb, grout or walk over tiles for at least 24 hours after installation. In cooler temperature conditions, a longer curing time may be required before even allowing the only occasional stepping on tiles.
9. Wash tools with water and hands with soap and water while material is still fresh.

For application as a GROUT, reference PRO GROUT™ XTREME "Grout" data sheet for details (Grout Products/High-Performance Grout).

Note: All expansion and control joints must be carried through from substrate to final flooring and filled with an industry-approved flexible sealant in accordance with ANSI A108.01 and TCNA detail EJ171 or TTMAC detail 301MJ. Do not fill or cover expansion and control joints with installation material. Contact PROMA's technical department for additional information.

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Curing and Grouting

- ♦ **General:** Protect tile-work from weather, freezing, and continuous water condition or immersion during installation and for at least 14 days after this installation is completed.
- ♦ **Floor Traffic:** Prohibit all traffic and stepping on floors for at least 24 hours. Light foot traffic may be allowed after 24 hours, Normal traffic after 72 hours and heavy Industrial traffic after 7 days from installation.
- ♦ **Food Stains and Chemical Exposure:** Protect floors, walls and counter tops from food products and mild chemicals for at least 10 days.
- ♦ **Walls:** Protect walls from impact and vibration for at least 24 hours (or as required by the setting mortar or adhesive instructions).
- ♦ Protect from industrial acids and alkalis for at least 14 days.
- ♦ Routine Maintenance soaps and detergents: Refrain from using routine maintenance soaps and detergents for at least 72 hours after installation.

Note: Since temperature and humidity (during and after the tile installation) affect the curing time of all cement-based and epoxy products, allow for extended cure and protection delays when temperatures are below 15°C (60°F).

Cleaning

Clean tools with water immediately after use or it will be impossible to do so once the product has cured.

Health and Safety

Refer to the Material Safety Data Sheet (MSDS) for complete details.

6. AVAILABILITY AND COST

PROMA products are widely available in Canada and the Northeast United States. To find a distributor of PROMA products, call **toll-free: 1.866.51.PROMA (77662).**

7. WARRANTY

PROMA warrants that this product is manufactured using quality raw materials and is of merchantable quality and suitable for the purpose for which it was intended. PROMA's liability under this warranty shall be limited to the replacement of its product proven to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising from the use of or the inability to use this product.

8. MAINTENANCE

Product requires no special maintenance. Do not leave without floor covering or exposed as a resurfacing material.

9. TECHNICAL SERVICE

For more detailed information on this product, please contact our technical department for proper recommendations and job field assistance. **Toll-free: 1.866.51.PROMA (77662).**

10. FILING SYSTEM

Additional information is available upon request, or by visiting **www.proma.ca**.

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