



# PRO FLEX®

## 2. MANUFACTURER

### PROMA ADHESIVES Inc.

9801, Parkway, Anjou, Quebec Canada H1J 1P3  
Tel.: 514.852.8585  
Fax: 514.852.8225  
Toll-free: 1 866.51.PROMA (77662)  
Email: info@proma.ca  
Web: www.proma.ca

## 3. PRODUCT DESCRIPTION

PRO FLEX® is an excellent **mid-grade**, single-component, polymer-modified thin-set mortar suitable for interior and exterior installation of institutional, commercial and residential non-vitreous, semi-vitreous, vitreous and impervious tiles including porcelain and most natural stone. Also suitable for the installation of most marble and granite tiles over well-prepared concrete and exterior grade plywood substrates.

### Features

- ♦ For setting non-vitreous, semi-vitreous, vitreous and impervious ceramic and porcelain tiles, mosaics, pavers and quarry tiles
- ♦ For setting most marble, granite and natural stone (see LIMITATIONS)
- ♦ Ideal for use with uncoupling membranes and sheet-applied waterproofing membranes
- ♦ For INTERIOR and EXTERIOR installations
- ♦ For institutional, commercial and residential floor and wall applications
- ♦ Meets or exceeds ANSI A118.4E and ANSI A118.11 requirements
- ♦ Contributes to LEED® objectives and requirements

### Packaging

4.54 kg (10 lb) box, grey; 11.34 kg (25 lb) bag, grey; 22.7 kg (50 lb) bag, grey

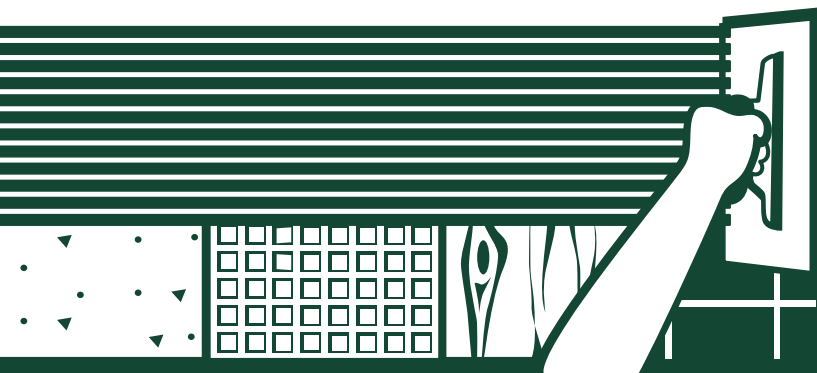


### Suitable Substrates

- ♦ 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
- ♦ PROMA's PRO MBR XD, waterproofing and PRO CBM 2, crack-isolation membranes
- ♦ Gypsum wallboard (INTERIOR dry areas only)
- ♦ OSB boards\*
- ♦ Double layered Exterior Grade Douglas Fir Plywood, certified CANPLY (SELECT or SEL-TF category) CSA 121 compliant, with a minimum of 32 mm (1 1/4") total thickness, for INTERIOR Residential Light-Duty Floors and countertops, in dry areas only
- ♦ Uncoupling membranes (interior use only)
- ♦ Sheet-applied waterproofing and vapor retarder membranes complying to ANSI A118.10 norm (interior use only)
- ♦ Existing ceramic tiles (interior use only)\*\*
- ♦ Cementitious Terrazzo floors\*\*

\* Can be applied over OSB (Oriented Strand Board) for the installation of an approved tile substrate, such as an uncoupling membrane, according to manufacturer's guidelines.

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



Concrete

Uncoupling  
MembranesExterior-Grade  
PlywoodExisting  
Tile



## Limitations

- Do not use at temperatures below 10°C (50°F) or above 35°C (95°F).
- Do not apply directly over particleboard, chipboard, presswood, Lauan, masonite, Gypsum-based leveling and patching compounds and all dimensionally unstable or non-recommended substrate materials.
- Do not use for direct tile installation over structural OSB (Oriented Strand Board). The product can be used to install uncoupling membrane, cementitious backer board, or fiber-cement board over OSB according to the tile substrate manufacturer's recommendations.
- Do not use for the installation of green marble and other moisture sensitive stones that react to standard cement mortars and setting materials containing water. Instead, for setting these stones use **EXCLUSIVELY** PRO GROUT XTREME™ or PRO SEAL & SET™ 100 NS see the respective technical data sheet for more details). For the installation of white, pastel or translucent marble, use PRO FLEX® White.
- Do not use for installing glass tiles. For such installation, set tiles instead with PRO HPX® or PRO SUPERLITE™ MORTAR (see respective technical data sheets for more details). **Note:** If the glass tile has an epoxy finish backing and no synthetic mesh, set tiles exclusively with PRO GROUT XTREME™ White (see respective technical data sheet).
- Do not use for installations submitted to prolonged water contact or immersion (such as pools, fountains, steam rooms and spas). In such cases, set tiles instead with either a mixture of PRO BOND™ and PRO BOND PLUS™ additive; or with PRO HPX® or PRO P-151 RAPID™ (see respective technical data sheets for details).
- Do not use where high moisture and hydrostatic conditions and/or recurring moisture problems exist.
- When using PRO FLEX® over a radiant heating system (previously checked for good functioning), turn the system off 24 hours prior to the installation and wait at least 2 weeks before turning it back on.

## 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](http://www.proma.ca).

| PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH) |               |
|-------------------------------------------------|---------------|
| Pot life                                        | > 1 hour      |
| Open time                                       | ≥ 20 minutes  |
| Initial cure                                    | 16-18 hours   |
| Final cure                                      | 28 days       |
| Adjustability                                   | 35-45 minutes |

| MECHANICAL PROPERTIES (@23° C [73° F] and 50% RH)                                        |                                                                                    |                      |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------|
| VOC content                                                                              |                                                                                    | 0 g/L                |
| ANSI A118.4 E – EXTENDED OPEN TIME                                                       |                                                                                    |                      |
| Specification                                                                            |                                                                                    | Results              |
| ≥ 75 psi (0.5 MPa) @30 minutes                                                           |                                                                                    | PASSED               |
| Shear strength per ANSI A118.4 tests (at 28 days)                                        |                                                                                    |                      |
| Test                                                                                     | Specification                                                                      | Results              |
| Porcelain tiles                                                                          | > 200 psi (1.3 MPa)                                                                | ≥ 325 psi (2.2 MPa)  |
| Quarry tile to quarry tile                                                               | > 150 psi (1.03 MPa)                                                               | > 300 psi (2.06 MPa) |
| Shear strength per ANSI A118.11 tests (at 28 days)                                       |                                                                                    |                      |
| Test                                                                                     | Specification                                                                      | Results              |
| Quarry tile to plywood                                                                   | > 150 psi (1.03 MPa)                                                               | > 228 psi (1.57 MPa) |
| Shelf life                                                                               |                                                                                    |                      |
| 22.7 kg (50 lb) <b>plastic bag</b> , grey;<br>11.34 kg (25 lb) <b>plastic bag</b> , grey | 24 months if kept in its original unopened packaging and stored in a dry location. |                      |
| 4.54 kg (10 lb) box, grey                                                                | 12 months if kept in its original unopened packaging and stored in a dry location. |                      |
| Approximate coverage per 22.7 kg (50 lb) bag                                             |                                                                                    |                      |
| Notched trowel                                                                           |                                                                                    | Coverage             |
| 6 x 6 x 6 mm (1/4" x 1/4" x 1/4")                                                        |                                                                                    | 80 ft² (7.5 m²)      |
| 6 x 10 x 6 mm (1/4" x 3/8" x 1/4")                                                       |                                                                                    | 65 ft² (6.0 m²)      |

## 5. INSTALLATION

### Surface Preparation

(Refer to PROMA Surface Preparation Guidelines for complete details)

**Note:** PRO SUPERPRIME 1C™ or PRO SUPERPRIME™ can be used to ready nearly any surface for PROMA setting materials without the need for scarifying or shotblasting, saving valuable time and money (see respective technical data sheet for 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 either PRIMED with PRO SUPERPRIME or PRO SUPERPRIME 1C primer OR 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.**





## Mixing

### Mixing Ratio: 2 1/2 parts powder to 1 part water

1. Use clean mixing-tools and containers.
2. In a clean mixing container, measure and pour **5.9 L [6.2 quarts / 1.56 US gal]** of cool clean water and gradually add 22.7 kg (50 lb) of PRO FLEX® powder mix, while mixing slowly.
3. Using a low-speed mechanical mixer (150 - 300 rpm), mix until a homogeneous, smooth, lump-free, consistency is achieved.
4. Let the mortar sit approximately 10 minutes; remix without adding any more water or powder-mix.
5. The product is now ready for setting.
6. During the setting, keep the mortar-mix fresh & smooth by periodically re-stirring the content inside the bucket without ever adding water.
7. Clean tools and hands with water while the mortar is still fresh.

**NOTE:** When using PRO FLEX® for the installation of uncoupling membranes, sheet-applied waterproofing and vapor retarder membranes, mix with slightly more water to improve wet transfer behind the membrane. Please contact our technical service department for additional details.

## Application

1. Pressure-apply the mortar with the flat edge of the recommended notched-trowel to promote a positive bond and completely cover the substrate.
2. IMMEDIATELY AS YOU GO (without delay) and before skinning or drying occurs, apply a sufficient mortar layer and, using the notched side of the trowel, ridge in a straight-line directional pattern to achieve an even setting bed. For walls, maintain ridges running in a horizontal directional pattern.
3. Do not spread more mortar than can be covered with tiles within 20 minutes (Approx. 20 sq ft [2 m<sup>2</sup>]).
4. If the mortar dries or skins-over, it must be removed and replaced with fresh mortar.
5. Place tiles firmly with a slight back and forth motion across ridges and tamp tiles repeatedly to achieve at least an 85% mortar contact with the tile back (95% in wet areas, commercial floors and exterior installations and, 100% for natural stone installation).
6. Tiles should be embedded in the mortar to at least 1/3 of their thickness.
7. Remove excess mortar from grout space and wipe-off blotches and smears immediately while mortar is fresh.

## Expansion and Control Joints

- ♦ Install control joints where tiles abut restraining surfaces, around the perimeter of the work and at the base of columns and curbs.
- ♦ Install and space expansion and control joints in all directions in accordance with TCNA HANDBOOK FOR CERAMIC TILE INSTALLATION Detail #EJ-171 recommendations, or TTMAC Specification Guide 09 30 00 Detail #301-MJ recommendations. CAUTION: DO NOT cut EXPANSION JOINTS in after the tiles have been installed. Install tiles normally and stop when the control joint location is reached. Cut the tile if required and resume setting from the opposite side of the joint. Before proceeding further, rake the joint and leave the tile and joint space clean.
- ♦ DO NOT FILL EXPANSION JOINT SPACE UNTIL GROUTING IS COMPLETED on the remainder of the job.
- ♦ Install a suitable industry-approved compressible bead and flexible sealant to caulk expansion and control joints. Follow the sealant manufacturer's installation instructions.

## Curing and Grouting

- ♦ Do not step on floors and protect area from foot traffic for at least 24-48 hours, depending on temperatures and humidity conditions.
- ♦ Protect walls from water contact, impact and vibration for at least 24 hours.
- ♦ Allow at least 16-24 hours from installation before grouting tiles.
- ♦ Protect all new installation from weather and freezing for at least 14-21 days.

**Note:** Extended protection and downtime requirements before grouting may be required depending on temperature and humidity conditions and on the porosity and size of the tile or stone being installed.

## Cleaning

Clean tools and hands with water while the product is still fresh.

## Health and Safety

Refer to the Safety Data Sheet (SDS) 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](http://www.proma.ca)**.

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