



PRO HPX®

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 HPX® is a revolutionary **premium-quality**, extreme-performance, flexible, anti-fracture, slump resistant, polymer-modified mortar that gives you the power of a two-part system in a one-part product. PRO HPX is the only polymer-modified mortar that can truly replace expensive two-part systems for installations requiring extreme bond strength and flexibility; interior, exterior, freeze/thaw and heavy-traffic durability; water-submerged performance ... nearly any environment is suitable for PRO HPX! Install tile or stone of almost any type or size over the widest range of substrates bridging cracks in plane up to 1/4" (6 mm). **Strong, yet extremely flexible, PRO HPX is the only polymer-modified mortar for the toughest installations, even gaining strength over time when submerged under water!**

Features

- ♦ Use over the widest range of suitable substrates
- ♦ For **sag-slump resistant** wall, floor and countertop installations of large-format and heavy tile and stone
- ♦ For setting non-vitreous, semi-vitreous, vitreous and impervious ceramic and porcelain tiles, mosaics, pavers, glass tiles and quarry tiles
- ♦ For setting most marble, granite and natural stone (see LIMITATIONS)
- ♦ Use for interior, exterior, freeze/thaw, water-submerged, and other demanding installations such as pools, shopping malls, airports, etc.
- ♦ For institutional, commercial and residential floor and wall applications
- ♦ Install over cracks in plane up to 1/4" (6 mm)
- ♦ For use over a radiant floor heating system
- ♦ For installing interior/exterior brick veneer
- ♦ Exceeds ANSI A118.4E, ANSI A118.11 and ANSI A118.15E requirements
- ♦ Contributes to LEED® objectives and requirements



Concrete Exterior-Grade Plywood Cutback Adhesive Residue Existing VAT, VCT and Non-Cushioned Vinyl Sheet Goods Existing Tile

Packaging

4.54 kg (10 lb) box, white;
 22.7 kg (50 lb) **plastic bag**,
 grey or white



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)
- ♦ 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
- ♦ Radiant heating system
- ♦ Existing ceramic tiles (interior use only)*
- ♦ Cementitious Terrazzo floors*
- ♦ Old Cut-back adhesive residue*
- ♦ Plastic laminate surfaces (interior countertops only)*
- ♦ Existing VAT and VCT tiles, and non-cushioned vinyl sheet goods*

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

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, OSB, Gypsum-based leveling and patching compounds and all dimensionally unstable or non-recommended substrate materials.
- 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 HPX White.
- Do not use for installing glass tile with an epoxy finish backing and no synthetic mesh. For such installation, use PRO GROUT XTREME White instead (see respective technical data sheet for details).
- Do not use where high moisture and hydrostatic conditions and/or recurring moisture problems exist.
- When using PRO HPX 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.

PHYSICAL PROPERTIES (@23° C [73° F] and 50% RH)	
Pot life	≥ 1 hour
Open time	≥15 minutes
Initial cure	18-24 hours
Final cure	28 days
Adjustability	35-45 minutes
Time required before water immersion (once grouted)	>14 days

MECHANICAL PROPERTIES (@23° C [73° F] and 50% RH)		
VOC content	0 g/L	
ANSI A118.4 E / 118.15 E – EXTENDED OPEN TIME		
Specification	Results	
≥ 75 psi (0.5 MPa) @30 minutes	PASSED	
Shear strength per ANSI A118.15 tests (at 28 days)		
Test	Specification	Results
Porcelain tiles	> 400 psi (2.8 MPa)	> 450 psi (3.1 MPa)
Quarry tile to quarry tile	> 150 psi (1.03 MPa)	> 450 psi (3.1 MPa)
Shear strength per ANSI A118.11 tests (at 28 days)		
Test	Specification	Results
Quarry tile to plywood	> 150 psi (1.03 MPa)	> 350 psi (2.4 MPa)
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)	
19 x 16 x 8 mm (3/4" x 5/8" x 5/16") U-notch trowel	27 ft² (2.5 m²)	
Shelf life		
22.7 kg (50 lb) plastic bag, grey or white	24 months if kept in its original unopened packaging and stored in a dry location.	
4.54 kg (10 lb) box, white	12 months if kept in its original unopened packaging and stored in a dry location.	

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.**

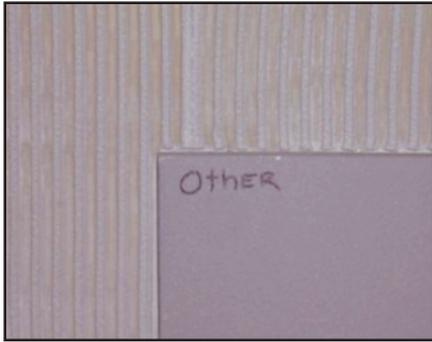
Note: Do not overheat floors or basement during cold season construction. These conditions could cause the product to cure too rapidly and affect its performance.



PRO HPX vs. The Competition

PRO HPX is a **revolutionary** polymer-modified thin-set mortar that has no equal. In side-by-side tests with competing products, PRO HPX is easier to apply, more flexible and has unbeatable strength - **See for yourself below!**

Competing Polymer-Modified Thin-Set Mortar



Competing polymer-modified products vary in performance, sometimes providing weak bonds to difficult substrates, such as plywood.

PRO HPX



PRO HPX creates tenacious bonds to all approved substrates, performing as good or better than a two-component system in even the most demanding installations!



Mixing

Mixing Ratio: 2 3/4 parts powder to 1 part water

1. Use clean mixing-tools and containers.
2. In a clean mixing container, measure and pour **5.5 L [5.7 quarts / 1.4 US gal]** of cool clean water and gradually add 22.7 kg (50 lb) of PRO HPX 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.

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. **For floors, it is highly recommended to back-butter each individual large-format tile completely with fresh mortar and to apply them without delay over the freshly-applied ridged mortar bed to ensure proper transfer.**
3. Do not spread more mortar than can be covered with tiles within 15 minutes.
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 48 hours.
- ♦ Allow at least 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.

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