



# PRO COMPLETE™ SET **eco**

**SILICA SAND FREE! / SAG-SLUMP RESISTANT**

## 2. MANUFACTURER

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## 3. PRODUCT DESCRIPTION

PRO COMPLETE™ SET ECO is an **ECOLOGICAL, 100% silica sand-free, universal, sag-s slump resistant, lightweight**, highly polymer-modified and ultra-creamy thin-set mortar for institutional, commercial and residential installations of non-vitreous, semi-vitreous, vitreous and impervious tiles, including porcelain, most natural stone and large-format and heavy tile and stone. PRO COMPLETE™ SET ECO contains lightweight recycled glass aggregates in place of silica sand to provide a **safer, ecological and more sustainable solution** to traditional thin-set mortars, while offering exceptional versatility and performance, outstanding sag-s slump resistance, and super-creamy and easy application characteristics. **PRO COMPLETE™ SET ECO is ideally suited for use with leveling clips and lippage control systems, and can be used with uncoupling membranes. PRO COMPLETE™ SET ECO contains PROMA's SUPER SETTING TECHNOLOGY, which offers extended open time, ultra-creamy consistency and exceptional mortar transfer.** Also, a 45 lb (20.4 kg) bag of PRO COMPLETE™ SET ECO offers the **SAME VOLUME/COVERAGE** as a 50 lb (22.7 kg) bag of conventional mortar, allowing for easier carrying and transport.

### Features

- ◆ 100% silica sand-free – safer for users and the environment
- ◆ Contains over 50% recycled content – a more ecological and sustainable solution to traditional thin-set mortars
- ◆ Lightweight – easier to carry and transport
- ◆ Ideal for use with leveling clips and lippage control systems, providing easy adjustability
- ◆ Super creamy and easy to apply
- ◆ Extended open time
- ◆ Exceptional contact with tile and substrate
- ◆ For sag-s slump resistant wall, floor and countertop installations of large-format and heavy tile and stone, with or without leveling clips and lippage control systems
- ◆ 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 setting EXTRA-LARGE / EXTRA-THIN units (above 24" x 24" [60 x 60 cm] and less than 3/16" [5 mm] thickness)
- ◆ Ideal for use with uncoupling membranes and sheet-applied waterproofing membranes
- ◆ For INTERIOR institutional, commercial and residential floor and wall applications
- ◆ Meets or exceeds ANSI A118.4, ANSI A118.4 E, ANSI A118.4 T and ANSI A118.11 requirements
- ◆ Contains Recycled Materials (51% Post-Consumer) – Exceeds LEED® and WELL® objectives and requirements

### Packaging

20.4 kg (45 lb) **plastic bag**, gray or white



Concrete    Uncoupling Membranes    Exterior-Grade Plywood    Cutback Adhesive Residue    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
- ♦ 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
- ♦ Uncoupling membranes
- ♦ Sheet-applied waterproofing and vapor retarder membranes complying to ANSI A118.10 norm
- ♦ Existing ceramic tiles\*
- ♦ Cementitious Terrazzo floors\*
- ♦ Old Cut-back adhesive residue\*
- ♦ Existing VAT and VCT tiles, and non-cushioned vinyl sheet goods\*

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

### Limitations

- ♦ For setting EXTRA-LARGE / EXTRA-THIN units (above 24" x 24" [60 x 60 cm] and less than 3/16" [5 mm] thickness), please contact our Technical Service Department for appropriate recommendations.
- ♦ Do not use at temperatures below 10°C (50°F) or above 35°C (95°F).
- ♦ Use for INTERIOR applications only.
- ♦ 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 COMPLETE™ SET ECO White.
- ♦ Do not use for installing glass tiles. For such installation, set tiles instead with a mixture of PRO HPX® or PRO SUPERLITE™ MORTAR (see respective technical data sheets for 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 COMPLETE™ SET ECO 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	≥ 30 minutes
Initial cure	> 24 hours
Final cure	28 days
Adjustability	35-45 minutes

MECHANICAL PROPERTIES (@23° C [73° F] and 50% RH)		
VOC content	0 g/L	
Recycled content	51% recycled content (23 lb per 45 lb bag)	
Silica sand content	0%	
Silica quartz content	< 0.1%	
ANSI A118.4 E - EXTENDED OPEN TIME		
Test	Specification	Results
On concrete	> 75 psi (0.5 MPa)	≥ 250 psi (1.7 MPa)
Sag resistance per ANSI A118.4 T tests (at 28 days)		
Test	Specification	Results
On concrete	< 0.02 in (0.5 mm)	< 0.01 in (0.3 mm)
Shear strength per ANSI A118.4 tests (at 28 days)		
Test	Specification	Results
Porcelain tiles	> 200 psi (1.3 MPa)	> 300 psi (2.1 MPa)
Quarry tile to quarry tile	> 150 psi (1.03 MPa)	> 300 psi (2.1 MPa)
Shear strength per ANSI A118.11 tests (at 28 days)		
Test	Specification	Results
Quarry tile to plywood	> 150 psi (1.03 MPa)	> 250 psi (1.7 MPa)
Shelf life		
20.4 kg (45 lb) plastic bag, grey or white	24 months if kept in its original unopened packaging and stored in a dry location.	

Approximate coverage per 20.4 kg (45 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)
12 x 12 x 12 mm (1/2" x 1/2" x 1/2")	40 ft² (3.7 m²)
19 x 14 x 10 mm (3/4" x 9/16" x 3/8") U-notch trowel	35 ft² (3.2 m²)
19 x 16 x 8 mm (3/4" x 5/8" x 5/16") U-notch trowel	27 ft² (2.5 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.**

**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.

### Mixing

**Mixing Ratio: 2 1/3 – 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 **6.1–7.0L (6.4–7.4 quarts / 1.6–1.85 US gal)** of cool clean water and gradually add 20.4 kg (45 lb) of PRO COMPLETE™ SET ECO 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

Select a notched trowel that provides a depth that exceeds 80% mortar contact with tile and substrate for interior applications, and exceeds 95% for commercial floor and wet area applications (reference 'approximate coverage' table for trowel recommendations). **Back-buttering of tiles may be required to achieve these results.**

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. **When using with leveling clips and lippage control systems, it is 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 30 minutes.
4. If the mortar dries or skins-over, it must be removed and replaced with fresh mortar.
5. Place tiles firmly into mortar with a slight back and forth motion to collapse ridges, then tamp tiles repeatedly to achieve mortar coverage as stated above.
6. Tiles should be embedded in the mortar to at least 1/3 of their thickness. Lift tiles periodically to ensure proper mortar contact is being maintained with tile and substrate.
7. Remove excess mortar from grout space and wipe-off blotches and smears immediately while mortar is fresh.

**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.**

### 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 24 hours from installation before grouting tiles.

**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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