Pro Cemix™

Polymer- Modified, Fast-Setting, Shrinkage-Free, Pre-blended Calcium Aluminate Cement-Based Mortar-Bed and Concrete Repair Mortar Mix

Pro Cemix™ is a polymer-modified fast-setting, pre-blended, calcium aluminate cement-based mortar bed and screed mix designed for concrete repair and for building new screeds. When mixed exclusively with water, this mortar provides a high compressive strength, shrinkage-free screed with a residual moisture content of less than 2.5% after 24 hours. Pro Cemix™ is also used to repair concrete holes and fill trenches up to 10 cm (4") deep; slope shower pans from 10 mm (3/8") up to 50 mm (2") thick; and build new mortar beds up to 50 mm (2") thick. Pro Cemix allows foot traffic and ceramic tile installation after 3 hours and floor covering installation after 24 hours making it an ideal product for quick turn-around projects such as retail and commercial centers, hospitals, airports and manufacturing plants.

Uses

- **Generates high compressive strengths – up to 37.2 MPa (5,400 psi)**
- **Shrinkage-free**
- **FAST-SETTING: install tile or apply self-leveling or patching compounds after 3-4 hours and floor coverings after 24-48 hours**
- **Ideal for high-traffic areas requiring a short down time, including shopping malls, supermarkets, hospitals, airports, etc.**
- **For resurfacing and renovating interior horizontal concrete substrates**
- **Mix only with water**
- **Compatible with all setting materials, adhesives and floor coverings including wood flooring**
- **For building cement floor screeds and mortar-beds up to 50 mm (2") thick**
- **For building wire-reinforced "Floating" cement-mortar screeds 35 mm (1-3/8") thick (minimum) or more**
- **For interior concrete slab repairs and levelling**
- **For use over a radiant heating floor slab system**
- **For building fast-setting sloped shower- floor concrete bases from 10 mm (3/8") or up to 10 cm (4") thick**
- **For filling holes and trenches up to 10 cm (4") deep**
- **For interior commercial and residential applications**
- **Made with 70% recycled content**
- **Contributes to LEED® objectives and requirements**

CONCRETE

Suitable Substrate

- **Dry, completely cured concrete (at least 28 days old) free of hydrostatic or rising moisture conditions.***

** For concrete slab repairs or for installing bonded mortar beds and screeds, the substrate surface must be roughly textured enough to allow adequate bonding.*

Packaging

22.7 kg (50 lb) bag

Limitations

- For interior installation only
- Do not use at temperatures below 10°C (50°F) or above 35°C (95°F).
- Do not use on vertical surfaces.
- Do not install where ice melting chemicals may be used.
- Do not mix with other cements, lime, plaster, or similar materials.
- Do not Featheredge- Minimum mortar thickness: 10 mm (3/8") . For thin repairs and levelling, use Pro Plan or Pro Patch instead (See respective product data sheets for details)
- Do not use for applications requiring a thickness greater than 50 mm (2").
- Do not use directly over a substrate subject to hydrostatic or rising moisture conditions or over an unstable substrate such as plywood, particleboard, pressed-wood, OSB, Masonite, lauan, asbestos board, gypsum-based patching and levelling compounds, epoxy coatings or steel. In such cases, a 40 mils thick polyethylene film (ASTM C 171/D 4397) or tar-felt [CSA A 123.3 – (Type 1)] must be installed before installing a free-floating Pro Cemix™ reinforced screed of at least 35 mm (1 3/8") thick with non-corrosive [50 x 50 mm (2"X 2") CSA G 30.5-M or ASTM A 185 M] wire-fabric reinforcement.
- Avoid contact with Aluminium and metal sidings, railings, bars, windows and accessories. Insulate such areas by applying an appropriate epoxy coating.
- Protect re-bars, posts and structural elements with an effective epoxy resin coating (Contact PROMA's Technical Service Department for proper advice and recommendations)
- Do not apply over any type of cushioned flooring.
- Do not leave permanently without floor covering or exposed as a wear surface material.
- **Do not attempt to accelerate drying and curing through forced ventilation, fans, blowers or auxiliary heaters. Avoid overheating floors from the basement during cold season construction.**

Pro Cemix™ (continued)

Surface Preparation *(Refer to Proma Surface Preparation Guidelines for complete details)*

Note: Pro SuperPrime™ can be used to ready nearly any surface for Proma leveling underlayments and toppings without the need for scarifying or shotblasting, saving valuable time and money (see respective technical data sheet for details).

- Protect from any direct forced-air ventilation, wind, drafts or heat radiation source, such as direct sunlight, during and after the installation, for a minimum of 24 hours. **Do not overheat floors from the basement during cold season construction. These conditions could cause the product to cure too rapidly and affect its performance.**
- The substrate must be sound, stable and built in accordance with good engineering practice to adequately withstand the required loads and perform the required usage according the building design and purpose once the work is completed.
- When using Pro Cemix mixture with a radiant heating floor system (previously checked for good functioning), turn the system off 24 hours prior to installation and wait at least 48 hours after application before turning it back on.
- All concrete substrates must be completely cured (at least 28 days old), solid, sound and have a direct tensile cohesive strength greater than 1.2 MPa (175 psi) when tested in accordance with ACI 503 R – (Appendix A) procedure [or 0.9 MPa (128 psi) when tested in accordance with CAN/CSA A23.2-6B procedure.]
- For concrete repairs, bonded mortar-beds and screeds, the substrate surface must be clean, slightly profiled and /or sufficiently textured and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any deleterious substance and debris which might prevent or reduce adhesion.
- Acids, concentrated alkaline conditions and cleaning chemical residues must be neutralized or removed.
- On grade or below grade concrete slabs must be installed over an effective vapor barrier.
- For bonded screeds and mortar-beds, the concrete substrates must be completely cured and free of hydrostatic conditions and/or extreme moisture problems. When Pro Cemix mixture is used as a floor-covering or wood flooring substrate underlay, perform a calcium chloride moisture emission test (ASTM F-1869) on the new concrete repair screed or mortar bed once cured before proceeding with the installation of the flooring adhesive or tile setting mortar. For Wood flooring and resilient floor covering installations, the vapour-moisture emission from the screed or concrete underlay must not exceed 1,36 kg per 93 m^2 (3 lb per 1 000 sq. ft.) per 24 hours at time of installation. Do not prime, repair, level or patch the substrate nor install any floor covering materials until moisture problems and conditions have been addressed to meet these requirements.
- Smooth concrete substrate surfaces for repairs and for bonded mortar-beds and screeds must be mechanically roughened in accordance with an engineer-approved procedure (Shot-blasting, scarification, grinding, sand or water-blasting, etc) to completely remove all paint, loosely bonded toppings, loose particles and contaminants and to provide sufficient surface texture and profile (+ 3mm or equal to a CSP 6 profile on the ICRI scale) for the adequate bonding of the levelling mortar products.
- Pre-wet the concrete substrate to complete saturation with water removing the excess to provide a (SSD) saturated surface dry condition OR prime the surface with Pro Prime LP™ PRIMER [DILUTED 1:3 with water] to prevent the fresh leveling screed or mortar from uncontrollably loosing its mixing water despite the substrate. (See technical data sheet for details)
- Remove all excess water from the surface prior to applying Pro Cemix slurry, mortar or screed.

Note: Install expansion and control joints where required in accordance with trade requirements and best recommended practice.

Mixing

1. Use only clean mixing tools, mixers and containers.
2. Use a low speed mixer suited for mortars and concrete.
3. In a clean mortar mixer or container, measure and poor **2.38 L (2.5 quarts [0.63 gal US gal])** of clean cold water and gradually add **22.7 kg (50 lb) of Pro Cemix** powder, while mixing slowly and repeatedly. Do not add more cement, water or other ingredients. In hot weather conditions, use ice-cold water for mixing to better control working time and setting time.
4. The water ratio must be correctly measured. Too much water will delay curing and setting, and water may resurface during the smoothing process. Not enough water will result in an incomplete hydration of the screed, reducing its strength and ultimate performance. In hot weather conditions, use ice-cold water for mixing to better control working time and setting time.
5. Mix until the product is homogeneous and firm (not exceeding 3 minutes): the mixture is considered right and ready when it can be readily balled-up by hand without dripping.
6. Do not let the mixture sit in the mixer.
7. Use the product within the shortest possible delay (approximately within 30 minutes).
8. Stir mix frequently by hand to keep pail mixtures homogeneous.
9. Clean mixer, working tools and hands with water while product is still fresh.

Application

Note: Close all doors, windows and openings and protect work from wind, cross-ventilation and heat radiation source, such as direct sunlight, during and after the installation. If heating elements are included in the flooring system, it is **ESSENTIAL** that wire fabric reinforcement be incorporated into the screed.

Do not overheat floors from basement during cold weather construction.

CONCRETE REPAIR, ramps, slopes and bonded screeds.

1. Prime reinforcing steel with an appropriate epoxy primer (consult the technical department for the appropriate PROMA product recommendation).
2. Before applying the Pro Cemix, pre-wet the existing concrete surface to saturation with water without leaving any excess water on the surface to provide a (SSD) saturated surface dry condition OR use Pro Prime LP primer diluted 1:3 with water (see respective technical data sheet for details)
3. Prepare and brush or broom-apply a slurry coat consisting of a wet mixture (1:1 ratio) of Pro Set Plus and Pro Cemix (powder) directly onto the wet (SSD) substrate immediately while placing the mortar bed or screed. **Important Note:** Apply the concrete repair mortar onto the WET SLURRY before it dries.
4. Scrub the prepared mortar onto the substrate filling all pores and voids to promote a positive bond and complete coverage of the substrate.

Application (continued)

5. Set, compact , tamp, level and screed the Pro Cemix mortar to the required thickness and finish using the same techniques, tools, floats, levels and straight-edges as for regular cement screeds.
6. Do not featheredge: concrete repairs must be at least 10 mm (3/8") deep. Saw cut perimeter edges.
7. Within 30 minutes maximum from mixing, level and screed the surface with a metal straightedge or scraper while tamping with the float as work progresses.
8. To avoid cracks, splits, overlaps and warps at cold joints or when the work is to be stopped for more than 1 hour, insert several 3 mm (1/8") to 6 mm (1/4") diameter rod size metal dowels, 20 cm (8") to 30 cm (12") long, set horizontally at mid-bed at about every 20 cm (8") to 30 cm (12") gapping distance along the open cold edge of the freshly-applied and fresh mortar-bed.
9. Finish-off the surface to the required texture using a light broom, a wood float or a smooth metal finishing trowel as required.

FLOATING MORTAR BED AND SCREED

1. Build a uniform even sand cleavage bed or if the slab is already smooth and even, lay a 0.76 mm (40 mil) (ASTM C171/D4397) polyethylene sheeting.
2. Dump, spread, compact and tamp the Pro Cemix mortar-bed mixture to approximately + 20 mm (3/4") or about half the usually required standard bed thickness. Insert a corrosion resistant [50 x 50 mm (2" X 2") CSA G 30.5-M or ASTM A 185 M] metal reinforcing fabric and dump, spread, tamp, level and screed the remaining layer to the required slopes, thickness (Minimum 35 mm (1-1/2") and finish using the same techniques, tools, floats, levels and straight-edges as for regular cement screeds..
3. Within 20 minutes from mixing, level and screed the surface with a metal straightedge or scraper while tamping with the float as work progresses.
4. To avoid cracks, splits, overlaps and warps at cold joints or when the work is to be stopped for more than 1 hour, insert several 3 mm (1/8") to 6 mm (1/4") diameter rod size metal dowels, 20 cm (8") to 30 cm (12") long, set horizontally at mid-bed at about every 20 cm (8") to 30 cm (12") gapping distance along the open cold edge of the freshly-applied and fresh mortar-bed.
5. Finish-off the surface to the required texture using a light broom, a wood float or a smooth metal finishing trowel as required.

Curing and Protection

- Do not over-water and protect from rain, weather and freezing until cured (24 hours).
- Protect from foot traffic for at least 3 hours at normal room temperature and humidity conditions.
- Do not allow floors to be exposed to heavy traffic and rolling loads such as forklifts, pallet trucks, loaded dollies, scissor lifts, etc. for a minimum of 48 hours after installation.
- Sanding, smoothing and finishing of the surface can be accomplished after about 1 hour from laying depending on prevailing temperature and humidity conditions.
- Allow at least 3 to 4 hours curing before setting ceramic or stone tiling, patching or self-leveling, and at least 24 hours before laying wood, resilient or carpet flooring.
- For Wood flooring and resilient floor covering installations, ensure that the vapour-moisture emission from the concrete slab and new screed does not exceed 1.36 kg per 93 m^2 (3 lb per 1 000 sq. ft.) per 24 hours when tested in accordance with the calcium chloride moisture emission test (ASTM F-1869) at time of installation.
- Protect from dirt, dust and damage from other trades until fully covered by a floor covering or tiling material.

  Note: Drying time may vary depending on prevailing temperature and humidity conditions. **Do not attempt to accelerate drying and curing through forced ventilation, fans, blowers or auxiliary heaters.**

Pro Cemix™ (continued)

Technical Data for Pro Cemix (@ 23°C [73°F] and 50% RH)

Mixing time: ..... 3 minutes
Working time: ..... 25 minutes
Initial set: ..... 45 minutes
Final set: ..... 60 minutes
VOC Content: ..... 0 g/L
Time before installing floor covering: ..... 24-48 hours
Time before installing ceramic tile: ..... 3-4 hours
Time before applying self-levelers or patching compounds: ..... 3-4 hours
Compressive Strength (ASTM C-109)
28 days ..... 37.2 MPa (5400 psi)
Approximate Coverage per 22.7 kg (50 lb)

Thickness	Coverage
10 mm (3/8")	1.3 m^2 (14.0 ft^2)
25 mm (1")	0.45 m^2 (5.0 ft^2)
50 mm (2")	0.23 m^2 (2.5 ft^2)

Shelf life
6 months if kept in its original unopened packaging and stored in a dry location.
Health and Safety
Refer to the Material Safety Data Sheet (MSDS) for complete details.

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.

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