

Pro Cem™

Fast-Setting, Hydraulic Binder, Shrinkage-Free, Concentrated Formula, Mortar Bed and Concrete Repair

Pro Cem is a blend of hydraulic cement, resin, and special admixtures which, when mixed proportionally with aggregates of various sizes (i.e. concrete sand and/or pea gravel), and water, provides a shrinkage-free mortar bed and repair mortar. The Pro Cem mix is ready for tile installation after 3-4 hours, and for resilient floor covering after 24-48 hours. Its residual content after 24 hours is less than 2.5%. Use in place of Portland cement when designing new mortar beds and toppings for renovation or new construction work.

Features

- ◆ High compressive strength – up to 37,2 MPa (5,400 psi)
- ◆ Shrinkage-free
- ◆ FAST-SETTING: install tile after 3-4 hours, and floor coverings after 24-48 hours
- ◆ Mix with job-site aggregates, and with water
- ◆ Compatible with all setting materials, adhesives, and floor coverings
- ◆ Use to build mortar beds up to 10 cm (4")
- ◆ For resurfacing and renovating interior horizontal concrete substrates
- ◆ For use over a radiant floor heating system
- ◆ For building concrete-based showers pan floors from 10 mm (3/8") to 50 mm (2") in thickness.
- ◆ For interior commercial and residential applications
- ◆ Contributes to LEED® objectives and requirements

Suitable Substrates

- ◆ Dry, completely cured concrete (at least 28 days old)

Packaging

20 kg (44 lb) bag

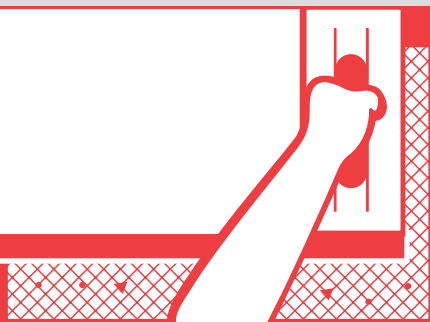


Limitations

- ◆ 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 use for applications of less than 10 mm (3/8") in thickness. Use instead the PRO PLAN or PRO PATCH (see respective technical data sheets for details).
- ◆ Do not use for applications requiring a thickness greater than 50 mm (2"). In such cases, follow proper recommendations as described in the MIXING paragraph (see option 2).
- ◆ Do not use directly over a substrate that is subject to hydrostatic pressure, humidity problems or over an unstable substrate such as plywood, particleboard, presswood, asbestos board or steel. In such cases, a vapor barrier of either polyethylene sheeting or tar-paper must be installed before a floating concrete screed of a minimum thickness of 35 mm (1 3/8") with wire netting reinforcement is built.
- ◆ Do not apply on any type of cushioned flooring.
- ◆ Do not leave without floor covering or exposed as a resurfacing material.

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

- ◆ All supporting surfaces must be structurally sound, solid, stable, level, plumb, level and true to a tolerance in plane of 1/4" in 10'-0" (6 mm in 3 m) in accordance with ANSI A108 Specifications requirements.
- ◆ 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), solid, sound, slightly textured 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.
- ◆ 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 (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 for the adequate bonding of the subsequent leveling and/or tile setting mortar products.
- ◆ Remove excess water from the surface prior to applying the PRO CEM.



CONCRETE



Pro Cem™ (continued)

Mixing

Mixing Ratios:

Option 1: 6 mm (1/4") to 50 mm (2") screed		
Pro Cem	Sand	Gravel 1/4"
20 kg (44 lb)	60 kg (132 lb)	—
Option 2: 50 mm (2") to 100 mm (4") screed		
Pro Cem	Sand	Gravel 1/4"
20 kg (44 lb)	60 kg (132 lb)	30 kg (66 lb)

- It is recommended to use a mixer suited for mortars and cements.
- Start by blending the sand with the various sizes of aggregates. Do not mix only with larger aggregates. The volume of the larger aggregates must not exceed the thickness of the concrete screed by more than 1/3".
- First mix the sand, the aggregates and the PRO CEM before adding them to water. Do not mix for more than 3 minutes. The quantity of water required varies depending on the proportion of the total volume of aggregates contained in the mix and of their degree of humidity (the quantity of water to be 10% of the powder ratio).
- Measure and mix the sand, the aggregates, the PRO CEM and water either with the use of a mechanical mixer or with a shovel for a maximum of 3 minutes.
- Water dosage must be correct. Too much water will delay curing and setting, and water may resurface during the smoothing process. Not enough water will result in an insufficient hydration of the screed diminishing its strength and resistance.
- Do not let sit in the mixer. Use product as quickly as possible (within 30 minutes).
- Stir the mix frequently in the pail to keep the product homogeneous.
- Clean working tools and hands with water while product is still fresh.

Application

- Pre-wet the existing concrete surface with water prior applying the PRO CEM, without leaving any excess water on the surface OR use PRO PRIME LP primer, diluted 1:3 with water (see respective technical data sheet for more details) for that purpose.
- For a better adhesion, apply a primer coat composed of PRO SET PLUS additive and PRO CEM mix (option 1) at a ratio of 1:1. Apply with a broom or brush.
- Install the PRO CEM mix in the same way you would install regular cement screed. Apply, pack, screed and level to the desired thickness.
- If there are heating elements, it is ESSENTIAL to install a wire netting reinforcement.
- The surface should be leveled, with a metal scraper, as work progresses, and within 20 minutes of the mixing time.
- Should the work be interrupted for more than 1 hour and in order to avoid the formation of cracks, crevices or overlapping, install metal rods every 20 cm (8") to 30 cm (12"). These rods should be 20 cm (8") to 30 cm (12") long and 3 mm (1/8") to 6 mm (1/4") in diameter.
- Finish the surface texture as desired using a steel trowel or a wood float.

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

- Do not wet the new screed during hardening period (24 hours).
- A minimum of 3 hours should be allocated prior to permitting light foot traffic.
- Sanding and smoothing may be done approximately 1 hour after installation, depending on the humidity level and the temperature of the room.
- Resilient floor coverings and wood parquet may be installed after 24 hours, while ceramic tiles may be installed after only 3-4 hours.
- Ensure that the moisture content of the screed does not exceed 2.5% prior to installing a resilient floor covering or other water sensitive material.

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.

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

Mixing time:	3 minutes
Working time:	25 minutes
Initial cure:	45 minutes
Final cure:	60 minutes
VOC Content:	0 g/L
Compression strength (ASTM C-109) @ 28 days	Up to 37,2 MPa (5,400 psi)
Approximate coverage per 20 kg (44 lb) bag	
Thickness (Option 1)	Coverage
6 mm (1/4")	7.15 m ² (77 ft ²)
25 mm (1")	1.79 m ² (19.3 ft ²)
50 mm (2")	0.9 m ² (9.7 ft ²)
Thickness (Option 2)	Coverage
50 mm (2")	1.21 m ² (13.0 ft ²)
75 mm (3")	0.9 m ² (9.7 ft ²)
100 mm (4")	0.6 m ² (6.4 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.

Contact Information

PROMA Adhesives Inc.

8500 Ernest-Cormier, Anjou, Quebec Canada H1J 1B4

Tel.: 514.852.8585

Fax: 514.852.8225

Toll-free: 1 866.51.PROMA (77662)

Email: info@proma.ca