

PLANICRETE LATEX

Synthetic-rubber latex for cement mixes



WHERE TO USE

- As an admixture to improve the mechanical and adhesive characteristics of cement-based screeds, renders, thin plasters, etc.
- As an admixture for highly adhesive cement bonding slurries.
- As an admixture to improve the waterproofing characteristics of cement-based screeds, renders, thin plasters, etc.

Some application examples

- High strength cement screeds for interior and exterior use.
- High strength cement renders for interiors and exteriors.
- Adhesive cement slurries for bonding screeds (also with **Topcem** and **Topcem Pronto**).
- Adhesive shotcretes for bonding renders.
- Cement mortars for filling holes, reconstructing damaged areas and finishing surfaces on buildings and precast elements in concrete.

TECHNICAL CHARACTERISTICS

Planicrete Latex is a water dispersion of a special synthetic elastomer, totally resistant to alkaline saponification. It is a fluid, white latex which, when mixed with aggregates and Portland cement, improves their plasticity, water retention capacity and trowellability in general. After setting and final curing, cement mixes modified with **Planicrete Latex** have a stronger bond to all surfaces, have better resistance to flexure and abrasion, are more impermeable and become resistant to freeze-thaw cycles. They are also more flexible and have better chemical resistance to diluted acids and alkalis, salt solutions, and oils.

RECOMMENDATIONS

- Do not use pure **Planicrete Latex** as a primer or a slurry: always mix it with Portland cement or, if required, with **Topcem** or **Topcem Pronto**.
- Do not use mixes containing **Planicrete Latex** if the ambient temperature is lower than +5°C or higher than +40°C.
- After application in very warm or windy conditions, protect the surfaces from excessively fast drying.

- The use of **Planicrete Latex** in mortar and concrete nevertheless requires strict observance of all the measures taken to ensure a job well done, especially the use of aggregates with particle sizes suitable for the thickness being applied.
- If mixes with **Planicrete Latex** are prepared in a concrete mixer, never mix for more than 3 minutes, so as to avoid any excessive air entrainment.

APPLICATION PROCEDURE

Preparing the substrate

- The surfaces on which screeds, renders and smoothing layers modified with **Planicrete Latex** are to be laid must be solid, compact and clean.
- Crumbling and loose parts, dust, concrete crusts, traces of oil or form-release agents, paint must be removed by careful sandblasting, brushing or pressure washing with water.
- The substrate must then be thoroughly wetted but no excess water should be left on the surface as it may affect adhesion.

Preparing the Mixes

Adhesive screeds

Planicrete Latex can be used as an admixture for preparation of adhesive interior and exterior screeds.

Recommended mixing ratio:

Planicrete Latex	5-8 kg
Water	up to 15 kg
Portland cement	50 kg
Mixed aggregates (0-8 mm)	150 kg

The aggregate blend must have a diameter appropriate to the screed thickness: a maximum diameter, therefore, of 1/3-1/4 of the thickness of the screed with a limit of 8 mm.

N.B. Before laying, apply a **Planicrete Latex** and cement slurry to ensure perfect adhesion to the existing cement surface. Do not wait for the slurry to dry: cast fresh screed on to fresh slurry.

Renderers

Planicrete Latex can be used as an admix for cement-based wall mortars for both interior and exterior use. The result is very good adhesion to the substrate, better waterproofing and increased resistance to atmospheric agents.

Recommended mixing ratio:

Planicrete Latex	8-10 kg
Water	up to 10 kg
Portland cement	50 kg
Sand	125 kg

Concrete Repair Mortars

Planicrete Latex improves the durability of the mortars and it can be used for making polymer-modified mortars suitable for patching and concrete repair.

Recommended mixing ratio:

Planicrete Latex	6-8 kg
Water	up to 12 kg
Portland cement	50 kg
Sand	125 kg

N.B. Before laying, apply a **Planicrete Latex** and cement slurry to ensure perfect adhesion to the existing cement surface. Do not wait for the slurry to dry: cast fresh screed on to fresh slurry.

Adhesive slurries

Planicrete Latex improves the adhesive bond and it is particularly suitable for making bonding slurries to be applied fresh to fresh before applying screeds and mortars on the existing cement surfaces. The mortar screed must be applied to the primer coat before it dries.

Recommended mixing ratio (part by weight):

Planicrete Latex	1	1
Portland cement	2	1
Water		1
Fine sand		1

N.B. **Planicrete Latex**-based slurry is also suitable as a slurry for laying **Topcem** and **Topcem Pronto** adhesive screeds.

Mixing

Planicrete Latex is used with cement, water and sand/aggregates. The mix-design depends on the applications as described in the previous paragraph.

To ensure good performances use sand and aggregates clean and with appropriate particle size. The recommended dosages of water are for dry sand and aggregates. Should the aggregates be damp or wet, the dosage of water in the mix-design should be decreased.

Dilute **Planicrete Latex** with water in a suitable container in the ratio recommended for the specific application, pour the solution into the concrete mixer and add the cement and aggregates, preferably already mixed or partially mixed so as to avoid lumps, which are difficult to disperse.

Mix for 2-3 minutes until the mix is smooth and even but do not over-mix.

The setting time for mixes containing **Planicrete Latex** as an admix does not differ significantly from normal mixes.



Adhesive render admixed with Planicrete Latex



Application of cementitious grout with Planicrete Latex admix



Application of cementitious screed with Planicrete Latex admix



Floor patching: application of slurry



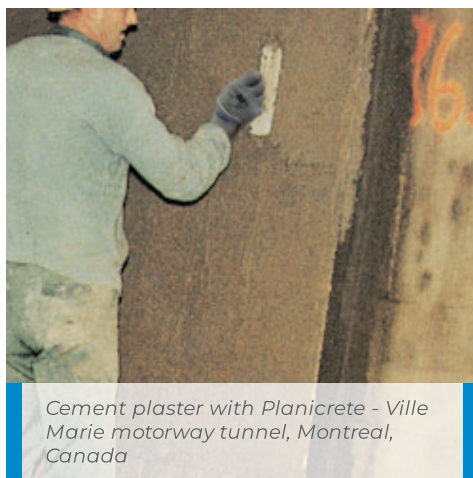
Floor patching: application of mortar



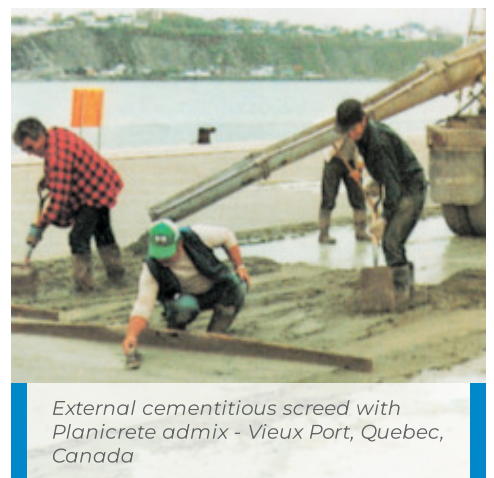
Floor patching: final smoothing



Base-keying mortar layer with Planicrete Latex admix



Cement plaster with Planicrete - Ville Marie motorway tunnel, Montreal, Canada



External cementitious screed with Planicrete admix - Vieux Port, Quebec, Canada

PRECAUTIONS TO BE TAKEN AFTER THE APPLICATION OF PLANICRETE LATEX

After application, especially in very warm or windy weather conditions, mortars made with **Planicrete Latex** as an admix must be cured carefully to avoid fast water evaporation, which could cause surface cracks due to plastic shrinkage. Protect surfaces with **Mapecure** for optimum curing.

CLEANING

Tools used for mixing and applying slurries or mortars made with **Planicrete Latex** as an admix can be cleaned with water before setting begins. After hardening, they can only be cleaned by mechanical means.

PACKAGING

Planicrete Latex is available in drums of 18, 25 and 200 kg.

STORAGE

12 months in unopened original packing. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Planicrete Latex is not considered as dangerous according to the current regulation regarding the classification of mixtures. It is however recommended to use protective gloves, eyes protection and to take the usual precaution taken when handling chemical products.

For further and complete information about a safety use of our product, please refer to our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)			
PRODUCT IDENTITY			
Consistency:	liquid emulsion		
Colour:	white		
Density (g/cm³):	approx. 1.0		
pH:	9-10		
Dry solids content (%):	47±1		
APPLICATION DATA (+20°C – 50% R.H.)			
Mixing ratio:	see paragraph “Preparing the mixes”		
Application temperature:	from +5°C to +40°C		
Final cure-time:	depending on mix ratio		
FINAL PERFORMANCES			
Typical density of mix (kg/m³):	approx. 2,000		
Compressive strength according to EN 12190 (MPa): - after 1 day: - after 7 days: - after 28 days:	Adhesive Screed	Render	Concrete Repair Mortar
	40	25	25
	50	40	45
	60	55	60

Flexural strength according to EN 196-1 (MPa): - after 1 day: - after 7 days: - after 28 days:	Adhesive Screed	Render	Concrete Repair Mortar
	2.0	2.0	2.5
	5.0	6.0	6.0
	7.0	8.0	7.5
Compressive strength according to BS 6319: Part 2: 1983 (N/mm ²) - after 1 day: - after 7 days: - after 28 days:	Concrete Repair Mortar		
	31		
	51		
	55		
Flexural strength according to BS 6319: Part 3: 1983 (N/mm ²) - after 1 day: - after 7 days: - after 28 days:	Concrete Repair Mortar		
	6.2		
	9.8		
	10.6		
Bond strength according to HKHA/MTS (2010/2012) Specification Part D Clause 2.1.14 (N/mm ²) - after 1 day: - after 7 days: - after 28 days:	Concrete Repair Mortar		
	1.7		
	2.2		
	2.5		
Tensile strength according to HKHA/MTS (2010/2012) Specification Part D Clause 2.1.3 (N/mm ²) - after 1 day: - after 7 days: - after 28 days:	Concrete Repair Mortar		
	3.1		
	4.6		
	5.9		
Adhesion to substrate measured by pull-off test on concrete according to EN 1542 mod. (MPa): - after 28 days:	approx. 1.5		
Resistance to damp:	excellent		
Resistance to ageing:	excellent		
Resistance to solvents and oils:	mediocre		
Resistance to acids and alkalis:	fair		

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com.hk

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the MAPEI product installation.

For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com.hk
All relevant references of the product are available upon request



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