

Expocrete GP & Expocrete UA



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Expocrete GP & Expocrete UA
CI/SfB: Yr4 August 1998

Two-part epoxy resin mortars

Uses

Expocrete GP — Low slump for general repair work.

Expocrete UA — For use in exceptionally wet conditions and for underwater applications.

Advantages

- Possesses outstanding strength and adhesive powers
- Resistant to physical damage
- Excellent chemical resistance

Description

Expocrete GP's applications include patching spalled or honeycombed vertical surfaces and protecting exposed reinforcement, reinstating damaged arrises, maintaining street furniture and repairing damaged precast units.

Expocrete UA is recommended for fixing slip bricks and for reinstating structures exposed to heavy battering from the sea, such as sea walls and concrete jetties and for repairing submerged steelwork and concrete. Mixed mortar may be transported underwater in polythene bags.

Properties

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| Form: | Two-part compounds — Base: firm putty Hardener: soft putty |
| Solids content: | 100% |
| Fresh wet density: | Expocrete GP: 2070 kg/m ³ Expocrete UA: 2000 kg/m ³ |
| Colour: | Expocrete GP — Base: pale yellow Hardener: black Mixed colour: light grey Expocrete UA — Base: off-white Hardener: black Mixed colour: dark grey |
| Application temperature: | Both Expocrete and Fosroc Primer 13X should not be applied if the surface temperature is below 5°C |
| Pot life: | 30 to 45 minutes at 20°C |
| Water immersion: | Expocrete UA may be applied and cured underwater. Expocrete GP should be allowed to cure prior to permanent water immersion |

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| Cure time: | Initial cure: 24 hours at 20°C Final cure: 7 days at 20°C After 48 hours at 20°C Expocrete compounds will have achieved between 60% to 70% of their final compressive strengths |
| Compressive strength (BS 6319, Pt 2): | After 1 week at 20°C — Expocrete GP: 65 N/mm ² Expocrete UA: 65 N/mm ² |
| Flexural strength (BS 6319, Pt 3): | After 1 week at 20°C — Expocrete GP: 35 N/mm ² Expocrete UA: 35 N/mm ² |
| Tensile strength (BS 6319, Pt 7): | After 1 week at 20°C — Expocrete GP: 13 N/mm ² Expocrete UA: 12 N/mm ² |
| Thermal expansion: | Coefficient of linear expansion: -25°C to +25°C — Expocrete GP: 2.9 x 10 ⁻⁵ per °C Expocrete UA: 3.0 x 10 ⁻⁵ per °C |

Application instructions

Mixing Expocrete

The 1.5 litre packs of Expocrete are suitable for hand mixing (wearing protective gloves) on a flat, clean surface. The mixing surface should be wetted and the whole of the base material spread out approximately 10 to 20 mm thick. All of the hardener should be emptied out onto the middle of the base and the base folded over the hardener and kneaded until the resultant mortar is of an even consistency and uniform colour.

Mixing Fosroc Primer 13X

Pour the contents of the hardener into the base and stir thoroughly. Apply immediately after mixing.

Vertical and overhead repair work

Expocrete GP plus Fosroc Primer 13X: Mechanically clean concrete and exposed steelwork to remove all contamination. Degrease steelwork if necessary. Ensure surfaces are dry and prime with Fosroc Primer 13X, working well into the surface. Allow to dry for 30 minutes before firmly applying Expocrete GP. A smooth surface may be obtained with a damp or heated trowel. Fosroc Primer 13X may be applied to dry or slightly damp, but not wet, surfaces. Expocrete UA may be used on wet surfaces but must be thoroughly worked into the wet surface to obtain complete surface protection and adhesion. Expocrete GP and Expocrete UA should not be applied more than 15 mm thick in one application on vertical surfaces, to prevent slumping.



Horizontal repair work

Expocrete GP: Mechanically clean concrete and exposed steelwork to remove all contamination. Degrease steelwork if necessary. Apply Expocrete GP and work firmly into surface. A smooth surface finish may be obtained with a damp or heated trowel. On cold surfaces Fosroc Primer 13X should be thoroughly brushed into the clean dry surface and allowed to dry for 30 minutes before application of Expocrete GP. In damp or wet conditions, Expocrete UA is recommended in place of Expocrete GP. A maximum practical application of approximately 1 m² is suggested. The minimum applied thickness should be 3 mm and should not be featheredged.

Underwater application

Expocrete UA: Surfaces must be mechanically cleaned, free of weak or loose material, marine growth, rust, scale, etc. Mixed Expocrete UA should be carried in plastic bags to work area and small quantities, approximately 5 mm thick, pressed into position ensuring that all water is expelled from between the repair surface and the Expocrete UA. Mixed mortar should be applied within 30 minutes of mixing. Contact between the mixed mortar and water should be avoided until the point of application. Uncured material should be protected from scouring and displacement by moving water until cured.

Fixing of slip bricks, tiles, etc

Expocrete UA: The concrete surface should be scabbled, wire brushed and washed with clean water. Scrub bond face of brick or tile with clean water and shake to remove excess water. Rub Expocrete UA into the wetted bond surfaces. Apply 25 mm thick sausage of Expocrete UA to the tile. Firmly press tiles onto concrete with twisting action to ensure complete material bed of required thickness (usually 6 to 12 mm). Very thick beds should be made up by previous application of Expocrete UA to the prepared concrete surface. The tiles should be supported for 12 to 48 hours until the Expocrete UA has cured sufficiently to prevent slipping. The use of Expocrete UA is recommended as it

allows the surfaces of the bricks and concrete to be thoroughly washed down immediately prior to fixing.

Cleaning

Expocrete should be removed whilst uncured using water or detergent solution. Cured mortar must be heated with a gas torch and removed with a wire brush. Uncured Fosroc Primer 13X may be removed from brushes with Fosroc Joint Cleaner.

Limitations

Expocrete should not be used when the temperature is below 5°C and falling. Never mix part packs.

Estimating

Expocrete compounds are supplied in 9 x 1.5 litre packs containing base and hardener in separate plastic buckets. Coverage rate is 1 litre/m² per mm thickness.

Storage

Shelf life: All products have a shelf life of 12 months at between 5°C and 20°C and kept in a dry store in the original, unopened packs. Storage at higher temperature may reduce storage life.

Precautions

Health and safety

Expocrete will react exothermically when mixed and left in bulk. The heat generated may be excessive and can lead to vapour emission and splash damage to adjacent surfaces. To eliminate the risk of exotherm, only mix product when ready for use and then apply without delay. Unused residue should be poured on to a disposable impervious surface to allow cure before disposal.

Expocrete contains resins which may cause sensitisation by skin contact. Avoid contact with skin and eyes and inhalation of vapour. Wear suitable protective clothing, gloves and eye/face protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. Do Not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately — **do not** induce vomiting.

For additional information see Product Safety Data Sheet.

Expocrete is the trade mark of Fosroc International Limited



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