



Brushbond TGP* (Formerly Tegraproof C)

Crystalline capillary waterproofing for concrete substrates

Uses

Brushbond TGP is an economical cementitious coating system designed for waterproofing concrete against low (less than 1 bar) positive or negative hydrostatic water pressure in a wide variety of structures such as:

- Sewage treatment and water treatment plants
- Water tanks
- Concrete pipes
- Manholes

Advantages

- Penetrates concrete, seals capillary tracts and hairline cracks
- Contains no chlorides
- Easy to apply, cost effective in use
- Can be applied to new or old concrete in both interior and exterior locations
- Suitable above or below ground
- Surface damage will not affect the system

Description

Brushbond TGP crystalline capillary waterproofing system is a blend of proprietary Portland cements, quartz aggregates and specialised chemicals. In the presence of moisture, the active chemical additives in Brushbond TGP penetrate concrete and react chemically with free lime to produce insoluble crystals.

This crystalline growth reduces concrete porosity by blocking capillaries and filling hairline cracks caused by shrinkage or expansion. Unlike membrane types of waterproofing which only provide a surface barrier, Brushbond TGP continues to produce crystals in the presence of water therefore providing long lasting impermeability.

Instructions for use

Preparation

Old concrete

Concrete surfaces must be clean, sound and free from any contamination. Cleaning can be achieved by high pressure water jetting.

High pressure water jetting is the preferred method of surface preparation because mechanical cleaning, surface saturation and substrate roughening are simultaneously achieved. All surfaces to receive Brushbond TGP must be pre-dampened.

New concrete

Following stripping of formwork, water jet or acid etch as above to remove all traces of form oil and surface laitance. Remove all debris from the work area before proceeding with thorough saturation (with clean potable water) of the area prior to the next stage of the works.

Mixing

Slurry consistency

Add clean potable water to Brushbond TGP at the rate of 8.25 litres per 25 kg bag of Brushbond TGP. Mix thoroughly using a slow speed drill (300 to 500 rpm) and recommended mixing paddle until a creamy consistency is achieved.

For mortar consistency, reduce water addition to 3.75 to 4.4 litres of clean potable water per 25 kg of Brushbond TGP, following mixing instructions identified above.

Do not mix more material than can be safely used in 20 minutes at 25°C @ 50% RH. If the mixture thickens, re-stir to reduce consistency, do not add water.

Application

Dry shake for newly poured concrete

Use Brushbond TGP directly from the bag. Wearing rubber gloves, distribute the powder evenly by hand over freshly poured concrete at the rate of 1.2 to 1.3kg/m² per application, before final trowelling works. It is recommended to evenly distribute 50% of the powder in one direction with the remaining 50% at right angles to the first application.

Release the powder as close to the wet concrete as possible, this will minimise powder loss during windy conditions. For large areas, a rotary type spreader may prove beneficial.

Two applications are recommended, with a roughened finish on the first application providing adequate adhesion of the second application. Finally, trowel finish to the desired profile.

Brushbond TGP*

Slurry coat for existing concrete

Brushbond TGP slurry coat can be applied with a soft brush, broom, or plaster sprayer. Ensure the slurry is worked well into openings, rough surfaces, joints and routed out areas. Make the second application when the first coat has reached initial set (usually within one hour dependent upon temperature). If the first coat has dried out, moisten the surface prior to applying the second coat.

Active water leaks should be pre-sealed by using a rapid setting plugging mortar Renderoc Plug (see separate data sheet), prior to application of Brushbond TGP.

Curing and protection

Brushbond TGP applications must be kept moist for a minimum of 48 hours therefore following initial set, curing by water spraying is recommended. The treated surface shall be 'fog' sprayed a minimum of 3 to 4 times daily for the 48 hour period.

In warmer climates, it is recommended to spray more frequently whereby the treated surface is kept constantly moist. It is important to keep the treated substrate moist to allow crystal formation to occur. Protect surfaces from foot traffic for 48 hours or heavy traffic for 7 days.

Freshly applied Brushbond TGP must be protected from extreme weather conditions such as strong winds, high temperatures, rain and freezing for a period of not less than 48 hours following application.

Cleaning

Immediately following the application of Brushbond TGP, clean all tools and equipment with clean water. Cured material can only be removed mechanically.

Limitations

- Brushbond TGP should not be used when the temperature is 5°C and falling. Full activation and effectiveness of Brushbond TGP may require 2-3 weeks following application.
- Brushbond TGP is not to be used to seal leaking cracks in a structure. Refer to Fosroc's Nitofill injection range.



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Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Estimating

Supply

Brushbond TGP : 25 kg bags

Coverage

Brushbond TGP : 1 to 1.5 kg/m² per application (brush)
1.2 to 1.3 kg/m² per application (dry shake)

Actual coverage rates will depend upon the profile and porosity of the substrate.

Storage

Shelf life

The shelf life of Brushbond TGP is 6 months if in original unopened packs stored below 35°C in a shaded, dry environment.

Precautions

Health and safety

Brushbond TGP contains chemicals which may cause irritation to the eyes, respiratory system and skin. Goggles, rubber gloves and long sleeved garments are strongly recommended when using Brushbond TGP. Avoid inhalation of dust, if necessary, wear suitable respiratory protective equipment.

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† See separate data sheet

Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service. All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the recent version. Refer to www.fosroc.com.

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