

## DESCRIPTION

TREMcrete NWP is a unique brushable penetrative fine cementitious coating specially designed for waterproofing and protection of old and new concrete against positive and negative water pressure. TREMcrete NWP prevents the penetration of water and other liquids into the concrete by causing reactions that produce non-soluble cementitious formations within the pores and capillaries of concrete. These formations grow in the presence of water, blocking pores, capillaries and minor shrinkage cracks, thus waterproofing concrete.

## USAGE/PURPOSE

- ☐ Concrete Water Reservoirs
- ☐ Water Treatment and Sewage Plants
- ☐ Swimming Pools
- ☐ Roof Decks
- ☐ Underground Tunnels
- ☐ Foundations
- ☐ Chemical and Fertilizer Plants
- ☐ Bridge Pylons, Beams and Decks

## PACKAGING

20kg Bag

## APPEARANCE

Grey powder

## SHELF LIFE

12 months when stored as recommended in original unopened packaging.

## STORAGE

Store in original, undamaged packaging in a clean, dry, protected location.



## FEATURES & BENEFITS

- ☐ Significantly increases impermeability of concrete
- ☐ Resists extreme hydrostatic pressure from either positive or negative surface of the concrete slab
- ☐ Can be applied to the positive and negative side of the concrete surface
- ☐ Can seal hairline cracks up to 0.5mm
- ☐ Enhances the properties of the concrete against reinforcement corrosion
- ☐ Significantly reduces chloride penetration
- ☐ Allows concrete to breathe
- ☐ Does not require a dry surface
- ☐ Potable Water approved for use by AWQC
- ☐ Withstands a water head of 50 metres.

## TYPICAL PHYSICAL PROPERTIES

PROPERTY	STANDARD	TYPICAL VALUES
Grain Size		Max 0.6mm
Layer Thickness		3mm-5.0mm
Fresh Wet Density		Approx 2200 kg/m <sup>3</sup>
Mixing Water per 20kg Pail		3.3-3.7 litres
Working Time		30 minutes
Temperature for Application		5 to 40°C
Final Hardening		4-8 hours
Impermeability	DIN 1048	Waterproof
Chloride ion diffusion	NT Build 443-1955-11	Reduced approx 2 times (1.53 E <sup>-11</sup> )
Impact Abrasion	AS/NZS 4469.9.2003	Resistance is significantly increased
Compressive Strength (MPa)	AS/NZS 2350.11-2001	1 day: 21.7 7 days: 40.5 28 days: 43.5
Flexural Strength (MPa)	ASTM Designation: C348-97	28 days: 5.5
Bond Strength (MPa)		28 days: 4.5
Carbonation	"Colourmetric Method"	Resistance is significantly increased
Water Absorption		Decreased by approx 3 times
Steel Reinforcement	"Polarisation curves method"	Steel corrosion is inhibited
Crack Resistance	"Ring Method"	Crack resistance
Acidic Medium Resistance at pH 3-4		Approx 2 times higher than conventional Portland cement mortar

## SURFACE PREPARATION:

- ❑ Remove any weak, spalling, unconsolidated concrete and any existing coating(s) which may contribute to adhesion issues. If repair mortar is required, please refer to the TREMcrete HBM product data sheet.
- ❑ If steel reinforcement is exposed, all rust, loose material and other contaminants which may contribute to bonding or corrosion issues shall be totally removed and treated accordingly.
- ❑ All concrete surfaces are to be prepared by high pressure water blasting, wire brushing or grit blasting to create a rough surface and to open the pore structure of the concrete.
- ❑ Totally remove any dust, debris and loose material which may contribute to adhesion issues before priming of the concrete substrate.
- ❑ Any surface imperfections are to be repaired with a suitable cementitious re-profiling mortar such as TREMcrete HB Ultra.
- ❑ TREMcrete HB Ultra is to be used for all fillets, and the negative waterproofing detail application.

## PRIMING

- ❑ TREMcrete Activator is to be applied as a primer on the concrete surface to passivate the steel reinforcement embedded beneath the concrete and completely harden the surface, creating an appropriate adhesion platform and thus the increased bond strength of TREMcrete NWP.
- ❑ Apply TREMcrete Activator at the rate of 3-5m<sup>2</sup> per litre on the dry touch concrete substrate. Allow the TREMcrete Activator to be touch dry to a wet dull lustre and puddle free. An additional coat(s) may be required depending on the porosity of the concrete substrate.

## MIXING INSTRUCTIONS

- ❑ Normal clean water required is 3.3 – 3.7 litres per 20kg bag of TREMcrete NWP.
- ❑ Place the minimum required amount of clean water into a clean mixing bucket.
- ❑ While mixing slowly, gradually add TREMcrete NWP. If necessary, add additional clean water until a mix of the desired workability is obtained.
- ❑ Once the desired consistency is obtained, mix product for a further 2 – 3 minutes. The working time for TREMcrete NWP is 30 minutes.
- ❑ Low sheer mechanical mixer is suitable.
- ❑ It is highly recommended to mix the full 20kg bag of TREMcrete NWP for all applications.

## WATER SEEPAGE

Before the application of TREMcrete NWP, all water seepage must be stopped by using TREMcrete Plug – please refer to the TREMcrete Plug product data sheet for application. Water seepage, no matter the flow, may not allow TREMcrete NWP to cure and perform to its required capabilities.

## APPLICATION

### Positive application (3mm applied thickness):

- ❑ Apply TREMcrete NWP by trowel, brush or spray method.
- ❑ When applying by trowel, firmly press TREMcrete NWP onto the concrete surface to push the product into the open pores and to ensure maximum adhesion onto the concrete surface.
- ❑ When applying by spray, ensure to firmly brush or trowel immediately after spraying to remove possible trapped air within the product and to ensure maximum adhesion onto the concrete surface.

- ❑ If other coatings or finishes are to be applied over the TREMcrete NWP and require a roughened surface, it is suggested to lightly brush the surface of TREMcrete NWP whilst still wet.

### Negative application (5mm applied thickness):

- ❑ Apply TREMcrete NWP by trowel, brush or spray method.
- ❑ When applying by trowel, firmly press TREMcrete NWP onto the concrete surface to push the product into the open pores and to ensure maximum adhesion onto the concrete surface.
- ❑ When applying by spray, ensure to firmly brush or trowel immediately after spraying to remove possible trapped air within the product and to ensure maximum adhesion onto the concrete surface.
- ❑ If other coatings or finishes are to be applied over the TREMcrete NWP and require a roughened surface, it is suggested to lightly brush the surface of TREMcrete NWP whilst still wet.
- ❑ Please consult with a Tremco Technical Sales Representative regarding the negative application detail on all joints & floor to wall junctions.

♦ Please note, application requirements may change depending on environment where TREMcrete NWP is to be applied.

♦ On potable water applications, prior to first filling, it is within best practice to wash down the fully cured TREMcrete NWP. Tainted water may occur if the full curing process has not been achieved.

## CURING

- ❑ After application, TREMcrete NWP must be provided suitable protection against weather conditions (sun, wind, rain and frost) for a minimum of 5 days. To greatly assist in the curing process, plastic sheeting or damp hessian is suggested to protect all treated surfaces.
- ❑ Curing times may vary depending on weather and environmental conditions.
- ❑ Finishes containing Portland cement may be applied over TREMcrete NWP following the curing period, however other paint and coating finishes should not be applied before 28 days.

## COVERAGE

Applied Thickness (mm)	Approximate m <sup>2</sup> per 20kg Bag
3.0	3.5 - 4m <sup>2</sup>
5.0	2 - 2.5m <sup>2</sup>

## HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

## TECHNICAL SERVICE

TREMCO has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

## GUARANTEE/WARRANTY

TREMCO products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with TREMCO written instructions and (b) in any application recommended by TREMCO, but which is proved to be defective, will be replaced free of charge.

Any information provided by TREMCO in this document in relation to TREMCO's goods or their use is given in good faith and is believed by TREMCO to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. TREMCO makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.