

X280 DENSI-PROOF REO PROTECT™

CORROSION PROTECTION AND DURABILITY



TDS 112 – V2U 1-APR-23

Description

X280 Densi-Proof Reo Protect™ a single pack one application spray on system that deeply penetrates new or existing concrete, provides curing, permanent waterproofing, and protection.

X280 Densi-Proof Reo Protect™ has been specifically formulated to prevent conditions that create and/or promote corrosion activity, significantly retarding rust producing reactions of the embedded steel reinforcement.

Adopting the use of X280 Densi-Proof Reo Protect™ at time of the concrete pour as an effective curing regime (equivalent to that of water ponding), will significantly reduce the incidence of dry shrinkage cracking, providing a hardened, denser and dust proof concrete, compatible with subsequent flooring or coating applications.

Typical Applications

Examples for areas of use are as follows: bridges, wharfs, marine walls, culverts, tunnels, water infrastructure, industrial, mining, and concrete structures exposed to a marine environment.

Features and Benefits

Some features and benefits of X280 Densi-Proof Reo Protect™ include the following:

- Prevent or retard any future corrosion.
- Retards existing corrosion.
- Colloidal silicate to cure, densify and harden.
- Permanently waterproofs concrete from any direction.
- Increases surface tensile & compressive strength.
- Reduces dry shrinkage cracking.
- Provides a hardened, abrasion resistant, dust-proof surface.
- Retards efflorescence.
- Stabilise concrete pH.
- Improved chemical resistance and protection.
- Used on horizontal or vertical substrates.
- Resists freeze-thaw damage.
- Moisture barrier for impervious coatings and coverings.
- Low VOC, environmentally friendly and user safe. HACCP approved.
- Increased acid and chemical resistance.
- Lowers chemical reaction potential.
- Will purge contamination if present in existing concrete.
- Resists vapour transmission.
- Compatible with most coatings and line marking paints.
- UV Resistant.
- Minimum site disruption and trafficable after 2 hours.
- Test reports available on request.

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Physical Properties

Appearance	Low viscosity clear liquid
pH	Ca. 11.4
Flash Point	Not applicable
Relative Density	Ca. 1.10 @ 20°C
Volatile Organic Compounds (VOC) Con	>1g per Litre
Viscosity	Low
Odour	Almost none
Initial Boiling Point / Boiling Range	>100°C @ 760 mm Hg
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limits	Not applicable
Auto-ignition Temperature	Product not self-igniting
Solubility	Fully miscible in water

Recommended Substrate Conditions & Preparation

Product Coverage Rates:	Freshly Placed Concrete:	Minimum 5m ² per litre.
	Existing Concrete:	Minimum 5m ² per litre.

Important Notes:

1. Wax, paint, curing compounds or a burnished surface restricting access to concrete's interior must be chemically or mechanically removed for X280 Densi-Proof Reo Protect™ to penetrate the substrate.
2. To test for adequate porosity, apply droplets of water on the concrete surface, if the droplets do not penetrate the concrete within 2 minutes, then X280 Densi-Proof Reo Protect™ will not function as intended and may be ineffective.
3. Areas of high porosity have a faster penetration rate. These areas appear dry immediately after spraying and will require additional product.
4. Do not apply on a frozen substrate or on a falling substrate temperature of below 3°C. Call for advice if applying during colder periods.
5. Do NOT apply if rain is forecast within 3 hours.
6. Before applying any paint, adhesives, or any other coatings, wait a minimum of 24 hours after application with X280 Densi-Proof Reo Protect™ (see Overcoat Timelines). Pressure wash or sand and clean, then check visually to be satisfied purging has completed (if required a second or subsequent coats may be necessary). For further help and advice call our office.

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7. X280 Densi-Proof Reo Protect™ may etch glass/tiles or dull brushed and shiny aluminium and can be difficult to remove from other surfaces once it dries. Cover and mask surrounding surfaces or rinse immediately if sprayed.
8. Concrete being treated must be fit for purpose for the intended function of X280 Densi-Proof Reo Protect™. Structural cracks, active cracks, and faulty control and cold joints will not be repaired with a X280 Densi-Proof Reo Protect™ application.
9. We recommend the wearing of eye protection, gloves, and a painter's face mask during application. Refer to MSDS available from www.oxtek.com.au.

Application Guidelines

Note:

In hot climates, mist-wet the surface with water and remove any puddles prior to application. Use best practice hot weather concrete placement techniques. The use of Aliphatic alcohol is recommended in hot and windy conditions and will not detrimentally affect the application and performance of X280 Densi-Proof Reo Protect™.

Already-Set Concrete:

X280 Densi-Proof Reo Protect™ is to be applied to a clean and absorbent substrate from any standing or pooling water on the surface. Please note: on occasions, the concrete may be of poor quality and be very porous, which may require additional product to ensure that there is enough product to complete the capillary chemical gel forming reaction.

At Time of Pour:

X280 Densi-Proof Reo Protect™ is ideally applied to the newly-poured concrete surface as soon as is practical following its surface finishing phase.

Should site conditions require the surface to be walked on, for application, concrete should be allowed the time to adequately set, so as not to imprint or mark its surface during application.

Please Note: If application is more than 4 hours after initial set, the benefits of using this product as an effective curing regime will be reduced (subject to climatic conditions).

Application:

Apply X280 Densi-Proof Reo Protect™ using low-pressure non-atomising spray apparatus such as a pump-tank or battery pack sprayer, complete with fan spray nozzle or by airless spray unit set at 800psi. Holding spray tip (eg .019" - .024") 150mm from surface, apply X280 Densi-Proof Reo Protect™ at minimum rate of 5m² per litre with an overlapping spray pattern of 50%. Using a soft broom sweep and spread-out puddled product as it penetrates.

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Note:

Always begin application at the lowest elevation. For example, walls and slopes should be applied side-to-side, from the bottom up.

Do not allow product to puddle dry on the surface. If product gels on the surface remove with a squeegee.

Overcoat Timelines:

Line marking paints and other coatings can be installed 14 days from the date of concrete placement X280 Densi-Proof Reo Protect™ application.

If the X280 Densi-Proof Reo Protect™ is applied to a substrate that is older than 14 days, line marking paints and coatings can be installed 24 hours post application.

Subsequent Coverings and Coatings:

A simple preparation of sanding or blue pad is recommended to remove any laitance, efflorescence or any purged contamination off the concrete surface to prepare the substrate for any coatings, sealers or flooring systems. Always follow the coating, adhesive or covering manufacturers recommendations and requirements.

Hot and Cold Temperatures:

In hot or windy conditions, the concrete surface temperature or wind may dry out the product prematurely before it has a chance to drop in thoroughly, in this case it is advisable to mist spray the surface with water and apply X280 Densi-Proof Reo Protect™ whilst the surface is damp but not puddled. This also helps with a relaxation of surface tension allowing a more efficient and faster penetration as well as premature evaporation or drying out. X280 Densi-Proof Reo Protect™ should not be applied if the ambient temperature is below 3°C and falling. X280 Densi-Proof Reo Protect™ is not affected at all by temperature change after 24 hours, not even in freeze thaw conditions.

Additional Advice and Precautions:

1. If the existing concrete's moisture content is higher than 75%, all of the above procedures should be followed, however, there is normally a problem some where, like broken pipes, hydrostatic pressure etc for old concrete to remain this wet. This cause should be investigated. Contact Oxtek for further information as an additional coat or change of application procedure may be required.
2. Protect areas not intended for coverage. Do not walk product onto any adjacent surfaces as marking may be permanent.
3. Restrict access to areas being treated as surface may be slippery until all product has penetrated the substrate or been removed from surface.

Available in 5, 15, 200 and 1,000 litre containers.

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Warranty Request & Registration

Warranties are available on request subject to satisfying our Terms & Conditions and by agreeing to our product application criteria. An issued warranty is project specific and will require a consultation and a registered specification number. A request for warranty must be registered prior to commencement of the project.

We have technical expertise and experience to help and consult on your future projects or assist your existing projects maintain time and budget. Call or email the Oxtek Solutions Head Office to arrange assistance and advice anywhere within Australia, New Zealand, or Asia.

Call +61 3 9798 7534 or email reception@oxtek.com.au.

NB: Concrete Substrates of 15 years or older will not be covered under an Oxtek Solutions warranty.

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Memberships & Certifications

Oxtek Solutions are actively committed towards best practice and environmentally friendly systems and procedures within the concrete and flooring industries.

We are proud to support this through our memberships and affiliations with the following industry bodies.



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