

X100 GREEN CONCRETE CURE™

CURE AND HARDENER



TDS 107 – V30 NOV 24

Description

X100 Green Concrete Cure™ is single pack colloidal silicate proprietary solution when applied correctly at the time of the concrete pour is an effective curing regime for concrete. With a performance equivalent to that of water pond curing, X100 Green Concrete Cure™ will significantly reduce the incidence of plastic and dry shrinkage cracking whilst providing a hardened, dust proof concrete.

Applied by low pressure spray apparatus immediately after the freshly placed concrete reaches initial set, X100 Green Concrete Cure™ penetrates the concrete leaving no film or residue on the surface of the concrete, therefore having no adverse effect on subsequent topical applications, providing improved flexibility and efficiencies to a project.

X100 Green Concrete Cure™ is not a membrane forming curing compound, so like water pond curing is not governed by the requirements of AS 3799:1998.

Typical Applications

Examples for areas of use are as follows: All concrete elements can be cured using X100 Green Concrete Cure™ including cast in-situ, pre-cast, shotcrete, decorative and coloured concretes.

Features and Benefits

Some features and benefits of X100 Green Concrete Cure™ include the following:

- Colloidal silicate used to cure concrete.
- Will cure concrete equal to water pond curing.
- Reduces plastic and dry shrinkage cracking.
- Provides a hardened, abrasion resistant, dust-proof surface.
- Retards efflorescence.
- Water based technology.
- Cost effective curing regime.
- Used on horizontal or vertical substrates.
- Doesn't form a membrane - After trade friendly
- Compatible with floor coverings and coating systems including line marking paints.
- Low VOC, environmentally friendly and user safe.
- UV Resistant.
- Minimum site disruption and trafficable after 2 hours.
- HACCP approved.
- Test reports available on request.

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Physical Properties

Appearance	Low viscosity greenish transparent liquid
pH	Ca. 11.3
Flash Point	Not applicable
Relative Density	Ca. 1.08 @ 20°C
Volatile Organic Compounds (VOC) Content	15g 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:

Burnished or Steel Trowelled: Range 5m² – 8m² per litre.

Broom Finish or Open Surface: Range 5m² – 6.5m² per litre

Important Notes:

1. Areas of high porosity have a faster penetration rate. These areas appear dry immediately after spraying and will require additional product.
2. 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.
3. Do NOT apply if rain is forecast within 3 hours of proposed application. If rain occurs within this timeframe of applying the product, please call Oxtek Solutions for technical advice.
4. X100 Green Concrete Cure™ 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.
5. Incidental skin contact should not be hazardous, but ingestion or eye contact should be avoided. It is recommended to wear gloves, eye protection and a painter's mask during application. Refer to MSDS available from www.oxtek.com.au.

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Application Guidelines

In hot and windy conditions, the concrete surface temperature or wind may prematurely dry out the product before it has had adequate opportunity to penetrate the substrate to which it has been applied. It is advisable in such circumstances to mist-wet the surface with water and remove any puddles prior to application on the damp surface. Best practice hot weather concrete placement techniques should be adopted, and the use of Aliphatic alcohol is recommended and will not detrimentally affect the application and performance of X100 Green Concrete Cure™.

Application – After Initial Set:

Apply X100 Green Concrete Cure™ immediately after initial set with low-pressure non-atomising spray apparatus such as a pump-tank or battery pack sprayer, complete with fan spray nozzle. Holding spray tip (eg .019" - .024") 150mm from surface, apply X100 Green Cure™ at minimum rate of 5m² per litre with an overlapping spray pattern of 50%. Begin application at the lowest elevation. For example, walls and slopes should be applied side-to-side, from the bottom up.

After applying at the correct rate, continue to evenly distribute X100 Green Concrete Cure™ over the substrate surface (with a soft broom) not allowing puddle to form or remain. If after one hour the product has not been completely absorbed and puddles are still present, remove with a soft broom, water, or blower.

Please Note: 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.

Additional Notes:

1. The transparent green colour of X100 Green Concrete Cure™ is to provide a visual aid to application and will dissipate upon drying.
2. Restrict access to areas being treated as surface may be slippery until all product has dropped in or removed from surface.
3. Cleaning of the concrete substrate surface to remove these non-penetrative residues by pressure washing, should commence no earlier than 3 hours post completion of the X100 Green Concrete Cure™ application.

Caution: If X100 Green Concrete Cure™ comes into contact with glass or ceramic tiles it should be flushed with water and not be allowed to dry, since glass/tiles will etch. X100 Green Concrete Cure™ will dull the shine on shiny aluminum. Mask and protect any area not to be sprayed.

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Additional Advice and Precautions:

1. Protect areas not intended for coverage. Do not walk product onto any adjacent surfaces as marking may be permanent.
2. Restrict access to areas being treated as surface may be slippery until all product has penetrated the substrate or been removed from surface.

Overcoat Timelines:

If applicable, please refer to the appropriate product manufacturers recommendations and guidelines in relation to surface preparation and application.

Subsequent Covering and Coatings

X100 Green Concrete Cure™ does not provide a vapour or moisture barrier for impervious floor coverings or coatings. Oxtek Solutions distributes and manufactures X200 Densi-Proof™ X220 Moisture Fix™ & X260 Medi-Vet™ that are designed for complete and permanent protection against vapour and water damage potential.

If your building has a finishes schedule for impervious flooring and or coatings, you should consider the use X260 Medi-Vet™ or X200 Densi-Proof™ at time of pour in lieu of X100 Green Concrete Cure™. You will achieve the same cure benefits and have a warranted moisture suppression system.

Alternatively, if it becomes apparent that a moisture barrier is required following the application of X100 Green Concrete Cure™, X220 Moisture Fix™ can be applied to the substrate with minimum surface preparation for a fully warranted moisture barrier system.

Refer to X200 Densi-Proof™, X220 Moisture Fix™ and X260 Medi-Vet™ TDS, available from www.oxtek.com.au.

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Other Important Notes

The American Concrete Institute (ACI) defines curing as, “The process by which hydraulic-cement concrete matures and develops hardened properties over time as a result of the continued hydration of the cement in the presence of sufficient water and heat.”

It is widely regarded within the concrete industry, that water pond curing is deemed as the best curing method available, however, it is often replaced with less effective membrane-forming methods in deference to the logistical and economic difficulties associated with water ponding.

X100 Green Concrete Cure™ is not a membrane forming curing compound, AS3799:1998 “Liquid membrane-forming curing compounds for concrete” is not applicable to this product, nor is it for water pond curing. In the absence of a relevant standard evaluation of X100 Green Concrete Cure™ should be performed using ACI 308R “Guide to Concrete Curing” which states the goal of curing is to improve the hardened properties of concrete.

Storage & Shelf Life

- Must be stored out of direct sunlight.
- Storage temperature range: Max 38°C to Min 3°C.
- Shelf life is 3 years if stored as above in original unopened containers.
- To avoid contamination, decanted product must not be returned to container.
- Recommended usage: within – 30 days of opening.

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

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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.

