X-20 COOLROOM & FREEZER™

ENHANCED CONCRETE PROTECTION FOR COLD STORAGE

TDS 116 – V1Y JUN 2025

Description

X-20 Coolroom & Freezer™ a single pack one application spray on system when applied correctly, deeply penetrates new or existing concrete, provides curing, permanent waterproofing, and surface protection from bacteria. With PROVEN TESTED safe silver ion antimicrobial additive X-20 Coolroom & Freezer™ is designed to protect concrete from E coli & MRSA. The application of X-20 Coolroom & Freezer™ is designed to at the time of pour, cure concrete and provide the hardened properties equivalent to that of water pond curing, permanently waterproof concrete from any direction, making the concrete impermeable and increasing its longevity whilst providing surface protection from contamination.

Adopting the use of X-20 Coolroom & Freezer™ at time of the concrete pour as an effective curing regime, will significantly reduce the incidence of dry shrinkage cracking, providing a hardened, denser and dust proof concrete, compatible with line marking paint and other coating products.

X-20 Coolroom & Freezer™ provides enhanced antimicrobial surface protection and ease of cleaning against acids, oils, water-based stains, chemicals, body fluids, wine, grease, and others.

Typical Applications

Examples for areas of use are as follows: warehousing, cool rooms & freezers.

Features and Benefits

Some features and benefits of X-20 Coolroom & Freezer™ include the following

- Antimicrobial formulation offers protection from E. coli & MRSA.
- Colloidal silicate used to cure, densify, harden, and permanently waterproof concrete.
- Increases surface tensile & compressive strength.
- Resists freeze thaw damage.
- Eliminates moulds and odours.
- Reduces dry shrinkage cracking.
- Provides a hardened, abrasion resistant, dust-proof surface.
- Retards efflorescence.
- Resists surface staining, resist surface erosion, extending concrete life.
- Stabilises pH.
- Improved chemical resistance and protection.
- Acid and effluent resistant.
- Low VOC, environmentally friendly and user safe.
- Substantially reduces cleaning water usage.
- Used on horizontal or vertical substrates.
- Temporary hydrophobic beading.
- Doesn’t form a membrane - After trade friendly.
- Compatible with 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 blue liquid
pH	Ca. 11.4
Flash Point	Not applicable
Relative Density	Ca. 1.13 @ 20°C
Volatile Organic Compounds (VOC) Content	6g per Litre
Viscosity	Low
Odour	Almost none
Initial Boling 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 5m² per litre.
	Existing Concrete:	Minimum 5m² 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 X-20 Coolroom & Freezer™ 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 X-20 Coolroom & Freezer™ 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 application of X-20 Coolroom & Freezer.
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. Do NOT apply if rain is forecast within 24 hours.
5. When applying line marking paint on X-20 Coolroom & Freezer™ treated concrete always follow the paint manufacturers surface preparation requirements (see Overcoat Timelines).
6. X-20 Coolroom & Freezer™ 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.
7. 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 X-20 Coolroom & Freezer™.

On Already-Set Concrete:

X-20 Coolroom & Freezer™ 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 application of X-20 Coolroom & Freezer to ensure that there is enough product to complete the capillary chemical gel forming reaction.

At Time of Pour:

X-20 Coolroom & Freezer™ 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 X-20 Coolroom & Freezer™ 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 X-20 Coolroom & Freezer™ 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.

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.

Excess Product Removal:

Should non-penetrative residues of the X-20 Coolroom & Freezer™ product fail to be removed from the substrate surface in-line with the application methodologies documented above, a slippery gel may form which will require to be removed to avoid a potential slip hazard.

A simple cleaning by pressure washing (domestic or garden nozzle spray) and / or scrubbing to assist with removal of larger build up areas of gelled product by brush should be undertaken, followed by squeegeeing or hosing off, the waste product from the concrete surface.

Cleaning of the concrete substrate surface to remove these non-penetrative residues by pressure washing, should commence no earlier than 24 hours post completion of the X-20 Coolroom & Freezer™ application.

Note: Application to vertical substrates:

Please contact Oxtek Solutions to confirm suitability for use, and for guidance on surface preparation requirements and application methodology.

Caution: For recently placed and unused concrete only.

For existing, soiled, used and old concrete a two-part sytem approach should be adopted for best results. X200 Densi-Proof™ or X220 Moisture Fix® wil decontaminate and purge deep seated unwanted substance to the substrate surface which will require to be removed prior to applying X310 Repeller Plus + ™ invisible penetrative sealer for additional antimicrobial surface protection. Pleaser refer to the relevant product TDS available from www.oxtek.com.au.

Overcoat Timelines:

Line Marking paint or other coating products can be applied 14 days from the date of concrete placement and X-20 Coolroom & Freezer™ application.

If the X-20 Coolroom & Freezer™.is applied to a substrate that is older than 14 days, line marking paint or other coating products 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 contaminats off the concrete surface to prepare the substrate for any line marking paint or other coatings product. Always follow the line marking paint or coating product 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 X-20 Coolroom & Freezer™. 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. X-20 Coolroom & Freezer™. should not be applied if the ambient temperature is below 3^0C and falling. X-20 Coolroom & Freezer™.is not affected at all by temperature change after 24 hours, not even in freeze thaw conditions.

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.

Maintenance Recommendations

Spillages:

All spillages should be removed as quickly as possible. This is good practice in terms of Health and Safety and the general upkeep of the treated surface. If spillages such as oil and grease are left longer than 24 hours on the surface some staining may occur.

Cleaning:

All areas should be cleaned on a regular and ongoing basis, by light scrubbing with warm water and detergent.

Repairs:

Localised repairs can easily be undertaken to damaged or heavily abraded areas. X-20 Coolroom & Freezer™ can be re-applied with a low-pressure spray by maintenance personnel – dry in approximately 30 minutes. Please note that although X-20 Coolroom & Freezer™ is an invisible penetrative densifier and sealer, it is likely that some darkening may appear on the treated surface, however this will have no detrimental effect on the performance of the product.

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.

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.

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

Proven Anti-Microbial Performance Testing

The anti-microbial additive BIOMASTER, used within X-20 Coolroom & Freezer™ is based on Ionic silver which is safe. It does not use nano-silver or any organic antimicrobial additives which have health and environmental concerns. The additive used is non-leaching and non-sensitising.

BIOMASTER gives continuous protection as ionic silver-based additives will not lose efficacy due to leaching or migration. They are evenly dispersed and embedded throughout X-20 Coolroom & Freezer™, and even scratches and abrasion do not affect the antimicrobial performance. Cleaning chemicals such as chlorine bleach, disinfectants, alcohol, and even harsh industrial products like MEK (methyl ethyl ketone) will not diminish the antimicrobial properties of X-20 Coolroom & Freezer™.

The anti-microbial additive BIOMASTER will remain effective on the surface, and within the concrete matrix of the substrate treated.

PLEASE NOTE: THIS DOES NOT REPLACE REGULAR CLEANING AND HYGEINE PRACTICES.

Biomaster
Antimicrobial Technology

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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.

AUSTRALIAN MADE AND OWNED

CONCRETE INSTITUTE of AUSTRALIA
BRONZE MEMBER

ASSOCIATE MEMBER
CARPET INSTITUTE - of - AUSTRALIA LIMITED

Environmentally Friendly
LOW VOC

Master Builders Association
New South Wales

Te Kāhui Whaihanga
NZIA Approved
CPD Provider

HACCP AUSTRALIA
FOOD SAFETY PROGRAMME
CERTIFICATION

ARCHITECT - ENGINEER - MBA
1 FORMAL CPD POINT
OXTEK SOLUTIONS PTY LTD

NZ CONCRETE CONTRACTORS ASSOCIATION
Setting the Standard in All Things Concrete

PROTECT CRETE
THE NAME SAYS IT ALL

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