

X310 REPELLER PLUS +™

INVISIBLE ANTIMICROBIAL PENETRATING SEALER



TDS 117 – V1L 1-APR-23

Description

X310 Repeller Plus +™ is an invisible antimicrobial, surface protection treatment for concrete, masonry, and some natural stone substrates. With PROVEN TESTED safe silver ion antimicrobial additive, X310 Repeller Plus +™ will protect the substrate from E coli & MRSA. A water-based formulation spray applied to new and existing substrates providing stain resistance from oils and other contaminants, compatible with line marking paints.

A breathable, low VOC treatment which penetrates concrete and chemically bonds to the silica, providing temporary hydrophobic repellence. With proven tested antimicrobial additive.

Typical Applications

Examples for areas of use are as follows: Internal or external exposed concrete and masonry surfaces, including polished and decorative concretes, and some natural stones such as limestone, sandstone, and travertine.

Features and Benefits

Some features and benefits of X310 Repeller Plus +™ include the following:

- Antimicrobial formulation offers protection from E. coli & MRSA.
- Reduces oil staining.
- Reduces tyre noise and marks.
- Enhanced traction quality.
- Improves fungus / mildew resistance.
- Retards / eliminates efflorescence.
- Suitable for any concrete or masonry surfaces.
- Can be applied to some natural stones.
- Preserves original appearance.
- Matt no-sheen surface finish.
- Improved surface protection and stain resistance.
- Barrier against bodily fluids.
- LOW VOC, 14g/litre
- HACCP approved – Food compliant.
- Resists freeze-thaw damage.
- Highly resistant to alkali attack.
- UV Resistant and will not darken or yellow.
- Minimum site disruption and trafficable after 2 hours.
- Clear invisible finish.
- Long lasting & easily maintained / repairable.
- Non-flammable.
- Odourless.
- Environmentally friendly.
- Easy and safe to apply.
- Doesn't form a membrane - After trade friendly.
- Compatible with line marking paints and other coating products.
- Used on horizontal or vertical substrates.
- Temporary hydrophobic beading effect.
- Test reports available on request.

Oxtek Solutions Pty Ltd H/O
5/ 17-19 Miles Street, Mulgrave VIC 3170
Phone: +61 39798 7534 Email: reception@oxtek.com.au

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Physical Properties

Appearance	Low viscosity clear liquid
pH	Ca. 11.4
Flash Point	Not applicable
Relative Density	Ca. 1.03 @ 20°C
Volatile Organic Compounds (VOC) Con	14g per Litre
Viscosity	Low
Odour	Almost odourless
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:

Concrete & Masonry:	5m ² – 8m ² per litre.
Natural Stone:	5m ² per litre.

Important Notes:

1. Wax, paint, curing compounds restricting access to substrates interior must be chemically or mechanically removed for X310 Repeller Plus +™ to penetrate the substrate.
2. Areas of high porosity have a faster penetration rate. These areas that appear to penetrate immediately after spraying will require additional product. Re-application requires to be wet on wet, as when the product dries on the substrate surface the application will repel itself.
3. 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.
4. Do not apply on a substrate surface of 34°C or above. On hot days, the application of X310 Repeller Plus +™ should take place in early morning or in the cool of the evening, out of direct sunlight.
5. Do NOT apply if rain is forecast within 24 hours.
6. X310 Repeller Plus +™ 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. Incidental skin contact should not be hazardous, but ingestion or eye contact should be avoided. It is recommended to wear eye protection, gloves, and a painter's face mask during application.
8. Refer to MSDS available from www.oxtek.com.au.

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Application Guidelines

Note: In hot climates, mist-wet the surface with water and remove any puddles prior to application.

Existing Substrates:

X310 Repeller Plus +™ is to be applied to a clean absorbent surface free from any standing or pooling water on the substrate surface. It is highly recommended prior to commencing with a liberal application that a test is undertaken on a small area to confirm suitability.

Application:

Apply X310 Repeller Plus +™ using 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 X310 Repeller Plus +™ 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.

Using a soft broom sweep and spread-out puddled product as it penetrates. Do not over apply X310 Repeller Plus +™ and under no circumstance allow the applied product to puddle dry on the surface.

Do not apply a second coat if the first coat has penetrated the concrete and appears surface dry, as it will bead and will subsequently require to be removed.

Application to vertical substrates:

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

Precaution:

White precipitate may form on the substrate surface if X310 Repeller Plus +™ is over applied. The surface should be washed and may need extensive scrubbing if this occurs, however it is extremely difficult to remove.

Protect all adjacent areas not intended for coverage as once X310 Repeller Plus +™ is applied it is very difficult to remove from the surface when dry and may cause damage.

Additional Note:

X310 Repeller Plus +™ can be used in conjunction with either X200 Densi-Proof™, X220 Moisture Fix® or X260 Medi Vet™ so to provide an effective moisture barrier system for polished and decorative concrete finishes.

Please refer to the relevant product TDS, available from www.oxtek.com.au.

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Overcoat Timelines:

If the X310 Repeller Plus +™ is applied to a substrate that is older than 14 days, Line marking paints or subsequent coating products can be installed 24 hours post application.

Note: Always follow line marking paint and or coating manufacturers surface preparation requirements for the applicable substrate that it is to be applied.

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

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. X310 Repeller Plus +™ can be re-applied with a low-pressure spray by maintenance personnel – dry in approximately 30 minutes. Please note that although X310 Repeller Plus +™ 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.

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Proven Anti-Microbial Performance Testing

The anti-microbial performance of X260 Medi-Vet® is confirmed by independent laboratory testing to the international standards (JIS and ISO) and is proven to be 99.99% effective against MRSA and E. coli (test reports available on request). With the combination of an anti-microbial additive X260 Medi-Vet® creates a permanent barrier against the growth of bacteria, biofilm, and moulds.

The anti-microbial additives based on Ionic silver used in X260 Medi-Vet are safe. We do not use nano-silver or any organic antimicrobial additives which have health and environmental concerns. The additives we use are non-leaching and non-sensitising.

X260 Medi-Vet gives continuous protection. Ionic silver-based additives will not lose efficacy due to leaching or migration, they are evenly dispersed and embedded throughout X260 Medi-Vet® 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 X260 Medi-Vet®

Escherichia coli

Tested at 35°C

Sample		Number of live organisms (Colony Forming Units)		% reduction of Colony Forming Units, expressed as comparison with control	
		0 hours	24 Hours		
Control	Untreated polyethylene film	110000	12000000	N/A	
53050-A	X260 MediVet	110000	<10	>99.99991% Reduction	EXCELLENT
53050-B	X260 MediVet	110000	<10	>99.99991% Reduction	EXCELLENT
53050-C	X260 MediVet	110000	<10	>99.99991% Reduction	EXCELLENT

MRSA (Methicillin Resistant Staphylococcus aureus)

Tested at 35°C

Sample				% reduction of Colony Forming Units, expressed as comparison with control	
			24 Hours		
Control	Untreated polyethylene film		220000	N/A	
53050-A	X260 MediVet	140000	<10	>99.995% Reduction	EXCELLENT
53050-B	X260 MediVet	140000	<10	>99.995% Reduction	EXCELLENT
53050-C	X260 MediVet	140000	<10	>99.995% Reduction	EXCELLENT

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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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