



X260 MEDI-VET[®] ANTIMICROBIAL

Technical Data Sheet



PERMANENT CONCRETE MOISTURE CONTROL & BACTERIA PROTECTION

Issued: 21st August 2018
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Description & Uses

X260 Medi-Vet[®] is a single pack one application spray on system that deeply penetrates new or existing concrete, provides curing, permanent waterproofing, and deep matrix resistance to bacteria, moulds and fungi. **X260 Medi-Vet[®]** with, safe silver ion, **SteriTouch[®]** has independent antimicrobial testing showing complete protection against *E.coli* and *Methicillin Resistant Staphylococcus aureus*. **X260 Medi-Vet[®]** conforms to the moisture suppressant requirements as per AS1884-2012. Provides an effective moisture barrier for impervious floor coverings and coatings.

Features and Benefits

- Will cure concrete equal to water pond curing.
- Permanently waterproofs concrete from any direction.
- Moisture barrier for impervious coatings and coverings.
- Proven control of *E.coli* and *Staphylococcus aureus*- MRSA
- Makes concrete impermeable, increasing longevity.
- Exceptional densifier and hardener for concrete.
- Increases tensile & compressive strength.
- Resists freeze thaw damage.
- Retards efflorescence.
- Can be used on vertical or horizontal substrates.
- Zero VOC, environmentally friendly, user safe.
- Compatibility with most flooring systems and coatings.
- After trade friendly.
- Indefinite shelf life.
- Reduces dry shrinkage cracking.
- Stabilises pH.
- Minimum site disruption, trafficable after 2 hours.
- Water cleanup.

Physical and Chemical Properties

Appearance:	Low viscosity cloudy-white liquid.	Upper/Lower Flammability or Explosive Limits:	Not applicable.
Odour:	Almost none.	Solubility:	Fully miscible in water.
pH:	Ca. 11.4	Auto-ignition Temperature:	Product is not self-igniting.
Initial Boiling Point/ Boiling Range:	> 100°C @ 760 mm Hg.	Viscosity:	Low.
Flash-point:	Not applicable.	Volatile Organic Compounds (VOC) Content:	0.0 % w/w.
Flammability (solid, gas):	Not applicable.		
Relative Density:	Ca. 1.10 @ 20°C.		

Recommended Substrate Conditions & Preparation

Freshly Placed Concrete: 5m² per litre.
Existing Concrete: 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 **X260 Medi-Vet[®]** to penetrate and work properly.
2. Areas of high porosity have a faster penetration rate. These areas appear dry immediately after spraying and will require additional product.
3. Do not apply on frozen substrate or when temperature is below 3°C when getting colder. Call for advice if applying during colder periods.

4. Do NOT apply if rain is forecast within 3 hours..

5. Before applying any paint, adhesives or any other coatings, wait 24 hours after application with **X260 Medi-Vet[®]**. Pressure wash or sand and clean, then check visually to be satisfied purging has completed (If required a second or subsequent coats may be required). Always follow coating manufactures surface preparation requirements.

6. **X260 Medi-Vet[®]** 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 use of a painters mask during application. Refer to MSDS available from www.oxtekaus.com



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Application Guide

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On Already-Set Concrete:

Apply **X260 Medi-Vet[®]** using a medium to high-pressure airless spray unit, complete with fan spray nozzle. Holding spray tip (eg .019" - .024") 150mm from surface, apply **X260 Medi-Vet[®]** 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 allow product to puddle dry on the surface. If product gels on the surface remove with a squeegee.

At Time of Pour:

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

Apply with a low-pressure non-atomizing, spray apparatus such as a pump-tank sprayer or airless set at 800psi. **X260 Medi-**

Vet[®] is ideally applied to the newly-poured concrete surface as soon as is practical following its surface finishing phase. Should 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 mar its surface during application. Recommended minimum coverage rate is **5m² per litre**. Floor coverings and coatings can be installed after 14 days from placement of **X260 Medi-Vet[®]** application.

Caution: Like many construction materials including fresh concrete **X260 Medi-Vet[®]** contacting glass should be flushed with water and not be allowed to dry, since glass/tiles will etch. **X260 Medi-Vet[®]** will dull the shine on shiny aluminium, however, aluminium's integrity will be otherwise unaffected.

Additional Data and Precautions

Available in 15, 200 and 1200 litre containers.

- Any coatings or burnished surface that may restrict penetration access to the concrete's interior must be chemically or mechanically removed for **X260 Medi-Vet[®]** to penetrate.
- Protect areas not intended for coverage.
- X260 Medi-Vet[®]** may etch glass/tiles or dull shiny aluminium and can be difficult to remove from other surfaces once it dries.
- Do not apply on frozen substrate. Only apply if temperature is 3°C and rising. Call for advice if applying during colder periods.
- As good safety practice we do recommend the use of a face mask during application. Refer to MSDS.
- Warranties are not available on concrete older than 15 years, call for advice.
- For more information read Material Safety Data Sheet available at www.oxtekaus.com

Warranty Registration

Call your Oxtek Australia Office to arrange personal assistance and advice anywhere in Australia or New Zealand. We have technical expertise and experience to help and consult on your next project or help your existing project maintain time and budget. An issued warranty is project specific and will require us to provide

consultation and a registered specification number. Call today. Warranties are not available on concrete older than 15 years, call **+61 3 9798 7534** for advice today.

Or email Technical Manager John Daymond

john@oxtekaus.com.au

Testing and Certifications



Test		Control Sample	Medi Vet	Results
Designation	Property	All concrete controls are water cured	Sample	Comparison
AS 1012.9 ASTM C39	Compressive Strength	28.9MPa 4,191 psi	31.0 MPa 4,496 psi	7% Increase
AS 1012.8 ASTM C78	Flexural Strength	2.52 MPa 365 psi	2.89 MPa 419 psi	15% Increase
Chaplin Abrader	Abrasion Loss	2.47 mm 0.10 in	1.46 mm 0.06 in	41% Reduction
Surface Dusting		2.57 g/0.25 m ²	1.78 g/0.25 m ²	31% Reduction
ASTM C1202	Rapid Chloride Penetration	597 / 543 / 10.097 Coulombs	148 / 136 / 6.582 Coulombs	35% to 75% Reduction
HKHA B2.9	Sorptivity	0.164 mm/(min) ^{1/2}	0.010 mm/(min) ^{1/2}	94% Reduction
ACCI Water Permeability Tset	Water Permeability	1.5 x 10 ⁻¹³ m/s	2.5 x 10 ⁻¹⁴ m/s	83% Reduction
USACOE C48	Water Permeability	NA	0 Leakage @ 30.5 m Head Pressure 0 Leakage @ 100 ft Head Pressure	
DIN 1048	Water Permeability	98.4 mm @ 0.33 hrs 3.9 in @ 0.33 hrs	5.5 mm @ 72 hrs 0.22 in @ 72 hrs	94% Reduction
ASTM C666	Mass Loss @ 300 Freeze/Thaw Cycles	4.80%	0.70%	85% Reduction
ISO 22196 JIS Z 2801:2000	Antimicrobial Performance*	Number of live organisms (Colony Forming Units)		>99.995% Reduction
		0 Hours 140000 24 Hours 220000	0 Hours 140000 24 Hours < 10	

*Test bacteria: *Escherichia coli*, Methicillin resistant *Staphylococcus aureus*

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SteriTouch is an established brand in antimicrobial technology, based in the UK. 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 **SteriTouch[®] X260 Medi-Vet[®]** creates a permanent barrier against the growth of bacteria, biofilm and moulds.

SteriTouch is safe. SteriTouch is an additive based on ionic

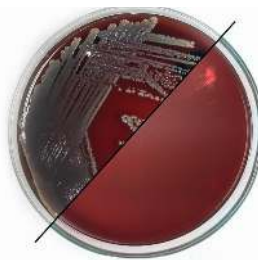
silver. We do not use nano-silver, triclosan or other organic antimicrobial additives which have health and environmental concerns. The additives we use are non-leaching and non-sensitising.

SteriTouch gives continuous protection. Ionic silver based additives will not lose efficacy due to leaching or migration, they are evenly dispersed and embedded through out **X260 Medi-Vet[®]** even scratches and abrasion do not effect the antimicrobial performance. Cleaning chemicals such as chlorine bleach, disinfectants, alcohol and even harsh industrial products like MEK (methyl ethol keytone) will no diminish the antimicrobial properties of **X260 Medi-Vet[®]**

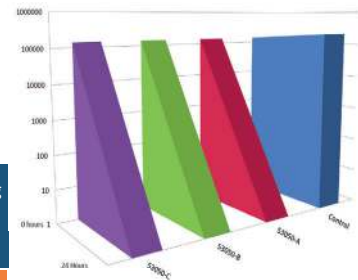
Independent Antimicrobial Test Report

Evaluation of the antimicrobial performance of samples containing antimicrobial additives. All testing is conducted by an independent laboratory using the ISO 22196 / JIS Z 2801:2000 test method, briefly summarised as follows;

Each test sample is inoculated with a suspension of the test organism. The inoculation is held in contact with the test sample using a sterile polyethylene film.



All test samples are inoculated in triplicate, with an additional three replicates of the control. The bacterial population on three control replicates is evaluated immediately following inoculation. This is assumed to be the initial population on all test samples (i.e. the population at zero hours). The remaining samples are incubated for the test period (24 hours) at 35°C, at which time the bacterial population is evaluated.



MRSA (Methaicillin Resistant Staphylococuss aureus)

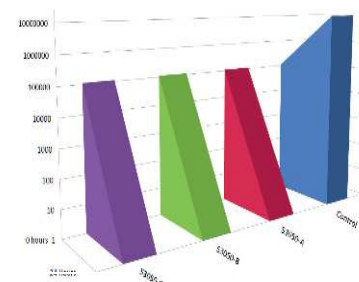
Tested at 35°C

Sample		Number of live organisms (Colony Forming Units)		%reduction of Colony Forming Units, expressed as comparison with control	
		0 hours	24 hours		
Control	Untreated polyethelene film	140000	220000	N/A	
53050-A	X260 Medi-Vet with ST1156	140000	<10	>99.99991% Reduction	EXCELLENT
53050-B	X260 Medi-Vet with ST1156	140000	<10	>99.99991% Reduction	EXCELLENT
53050-C	X260 Medi-Vet with ST1156	140000	<10	>99.99991% Reduction	EXCELLENT

Escherichai 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 polyethelene film	110000	120000000	N/A	
53050-A	X260 Medi-Vet with ST1156	110000	<10	>99.99991% Reduction	EXCELLENT
53050-B	X260 Medi-Vet with ST1156	110000	<10	>99.99991% Reduction	EXCELLENT
53050-C	X260 Medi-Vet with ST1156	110000	<10	>99.99991% Reduction	EXCELLENT



Notes: CFU = Colony Forming Units
The theoretical limit of detection is 10 CFU. If no bacteria are recovered the result is reported as "10 CFU".