



THE NAME SAYS IT ALL

X230 DENSI-PROOF REPELLER™

Technical Data Sheet

Issued: 3rd September 2020
Document #: TDS 230 V1 NZ
Page 1 of 2



INTERNAL AND EXTERNAL PROTECTION FOR CONCRETE

Description & Uses

X230 Densi Proof™ Repeller is a single pack one application spray on system that deeply penetrates new or existing concrete, curing, permanent waterproofing and protection. The added X300 Repeller provides ease of cleaning and surface protection against acids, oils, water based stains, chemicals, body fluids, wine, grease and others. Conforms to the moisture suppressant requirements as per **NZAS1884-2013** and achieves the cure requirements of **NZS 3109:1997** and **NZS 3101:Part 1:2006**.

Features and Benefits

- Will cure concrete equal to water pond curing.
- Permanently waterproofs concrete from any direction.
- Makes concrete impermeable, increasing longevity.
- Resists surface staining.
- Increases tensile & compressive strength.
- Resists freeze thaw damage.
- Retards efflorescence.
- Stabilises pH.
- Used on horizontal substrates.
- Zero VOC, environmentally friendly, user safe.
- Compatible with epoxy and acrylic line marking paints.
- Eliminates moulds and odours.
- Indefinite shelf life.
- Minimum site disruption, trafficable after 2 hours.
- Reduces dry shrinkage cracking.
- Worn areas can be touched up without a full floor recoat.

Physical and Chemical Properties

Appearance:

Odour:

pH:

Initial Boiling Point / Boiling Range:

Flash-point:

Flammability (solid, gas):

Upper/Lower Flammability or Explosive Limits:

Relative Density:

Solubility:

Auto-ignition Temperature:

Viscosity:

Volatile Organic Compounds (VOC) Content:

Per Cent Volatile:

Low viscosity cloudy-white liquid.

Almost none.

Ca. 11.4

> 100°C @ 760 mm Hg.

Not applicable.

Not applicable.

Not applicable.

Ca. 1.10 @ 20°C.

Fully miscible in water.

Product is not self-igniting.

Low.

0.0 % w/w.

Ca. 0 % w/w.

Recommended Substrate Conditions & Preparation

Freshly Placed Concrete: 5m² per litre.

Existing Concrete: 5m² per litre

Important Notes:

1. Wax, paint, curing compounds, adhesives or a burnished surface restricting access to concrete's interior must be chemically or mechanically removed for X230 Densi-Proof™ Repeller 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 or hotter periods.
4. Do NOT apply if rain is forecast within 3 hours.
5. Before applying any paint, wait 24 hours after application with X230 Densi-Proof™ Repeller. Always follow paint manufacturers surface preparation guidelines and requirements.
6. X230 Densi-Proof™ Repeller 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.protectcretenz.co.nz**



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Page 2 of 2

Application Guide

Note: In hot climates, mist-wet the surface with water and remove any puddles prior to application. Use best hot weather concrete placement techniques.

On Already-Set Concrete:

Apply X230 Densi-Proof™ Repeller using a pump pack or battery pack sprayer complete with fan spray nozzle. Holding spray tip (eg .019" - .024") 150mm from surface, apply X230 Densi-Proof™ Repeller 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.

As a Cure Method at Time of Pour:

Apply with a low-pressure non-atomizing, spray apparatus such

as a pump-tank or battery pack sprayer. X230 Densi-Proof™ Repeller 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 as a cure method is **5m² per litre**.

Caution: For newly placed unused concrete only.

For existing, soiled, used and old concrete a two part system can be used. X200 Densi-Proof™ will decontaminate and purge deep seated unwanted substances to the surface and these need to be removed prior to finishing with the X300 Repeller. Use a two part system of X200 Densi-Proof™ or X220 Moisture-Fix (refer to TDS) and then clean and apply X300 Repeller. Call your Gilt Edge Rep for advice.

Additional Data and Precautions

Available in 5, 15, 200 and 1000 litre containers.

1. X550 is a penetrative product which sets as CSH gel in the capillaries of the concrete. In new concrete pours particularly, minerals may purge to the surface and will appear as a white powdery substance. This can be

scrubbed off or will wear away.

2. X230 is such an effective sealer that a second application cannot be made once the product is dry. Work quickly to maintain a wet edge.

3. **MSDS** available at our websites.

Warranty Registration & Training

An issued 15 year warranty is project specific and will require us to provide consultation, a site specific specification and a registered specification/warranty number prior to the commencement of product application. A Warranty Application Form, will be forwarded to the applicator, and must be completed in full by the applicator, and

forwarded to **Gilt Edge Industries** at the end of the project. For all customers requiring a written warranty, all applicators must be fully trained, and approved by either **Gilt Edge Industries** or **Protect Crete NZ Ltd**. Full training and installation advice is available for the full **Protect Crete** product range.

Testing and Certifications

Test		Control Sample*	Densi Proof Sample	Results Comparison
Designation	Property			
AS 1012.9 ASTM C39	Compressive Strength	28.9 MPa 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 Test	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	4.8%	0.7%	85% Reduction

*Note - All control samples were moisture cured.

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Middle Tennessee State University
Testing and Review



For more information visit: www.protectcretenz.co.nz or www.giltedge.co.nz



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