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Paddington Heights: Concrete Repair and Coating Product Specification

Site Address:	68 Latrobe Terrace, Paddington 4064
Client:	The Body Corporate for Paddington Heights CTS 8735
Issue date:	19 th February 2024



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Important information

This Specification summarises, to the best of our knowledge, how to use and apply the product based on the information provided by the client and available to us at the time of publication. It is the responsibility of those using this information to check that it is current prior to specifying or using any of these products or systems. Project specific site and climatic variations along with method and timing of application play an important role in product performance and incorrect site-specific information may result in product application failure or product performance not meeting the client's expectation.

This document should be read in conjunction with the product Technical Data Sheet (TDS) and the information considered carefully in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied.

Where the substrate is of variable or poor quality, it may be necessary to produce a benchmark area for each section in order to determine the specific preparation required.

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Products or systems can be expected to perform as indicated on the TDS so long as applications and application procedures of the individual products are followed as recommended.

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19th February 2024

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Izaak,

Re: Paddington Heights: Concrete Repair and Coating Product Specification

Following your recent discussion with Steve Vanbeers, I am pleased to offer this 'Product Specification' for your consideration.

Please note that this document is to be read in conjunction with the specified products' current Technical Data Sheets. Sheets are available from:

<https://www.fosroc.com.au/technical-data/>

Yours sincerely

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Project Scope

The project is the repair and coating of concrete defects at an existing apartment complex at 68 Latrobe Terrace, Paddington. It is proposed to install repair mortars, anodes and a protective coating.



Scope Requirements

The repair product system must:

- Be compatible with the host substrate
- Reinstate lost concrete
- Protect the embedded reinforcement

Summary Table

Aspect	Primary Product	Section
Steel Primer	Nitoprime Zincrich	1.00
Concrete Primer	Nitobond HAR	1.00
Hand Packed Repair Mortar	Renderoc HB40	1.00
Galvanic Anodes	Galvashield XPt	1.00
Protective Coating	Dekguard E2000	2.00

Note: This table is a summary of the main product systems for each nominated aspect. It may not include primers or other support products. Refer to the current Technical Data Sheets for the nominated products for full details of support products.



Specification Clauses

1.00 Repair Mortar and Anodes

1.01 Where designated on the drawings, repairs to concrete will be made using a shrinkage compensated cementitious mortar compatible with 30 to 45MPa concrete.

1.02 Preparation

Saw cut or cut back the extremities of the repair locations to a depth of at least 10mm to avoid feather edging and to provide a square edge. Break out the complete repair area to a minimum depth of 10mm up to the sawn edge.

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or grit-blasting.

1.03 Steel Reinforcement

Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

Where a reinforcement coating is required as an active corrosion protection barrier, apply one full coat of a suitable zinc-rich primer and allow to dry before continuing.

1.04 **Embedded galvanic anodes** shall be pre-manufactured with nominal [add zinc mass] of zinc in compliance with ASTM B418 Type II cast around an integral, unspliced, uncoated, non-galvanized double loop steel tie wire and encased in a highly alkaline cementitious shell with a pH of 14 or greater. The anode unit shall contain no intentionally added chloride, bromide or other constituents that are corrosive to reinforcing steel (refer to ACI 562-13, Section 8.4.1).

1.05 Substrate Priming

The prepared substrate should be thoroughly soaked with clean water and any excess removed prior to applying one coat of the recommended primer scrubbing it well into the surface. The repair can be applied as soon as the primer becomes tacky. If the primer dries before the application of the repair mortar, the area must be re-primed before proceeding.

In exceptional circumstances, e.g. where a substrate/repair barrier is required or where the substrate is wet or likely to remain permanently damp, epoxy bonding aid should be used. Contact the repair mortar manufacturer for further information.

1.06 Repair Mortar

The repair mortar shall be a single-component polymer modified cement-based blend of powders to which only the site addition of clean water shall be permitted.

The repair mortar is to be non-hazardous in accordance with Australian Inventory of Industrial Chemicals containing <0.1% RCS (Respirable Crystalline Silica).

The repair mortar shall exhibit the following typical properties:

Compressive strength (AS1478.2-2005):	35 MPa @ 28 days
Flexural strength (AS1012.11-2000):	5.8 MPa @ 28 days
Indirect tensile strength (AS1012.10-2000):	3.1 MPa @ 28 days
Drying Shrinkage (25 x 25 x 285 prisms @ 27°C, 55% RH) AS 1478.2 – 2005:	< 400 microstrain @ 7 days < 600 microstrain @ 28 days
Fresh Wet Density	1780 kg/m ³



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1.07 The mortar shall be applied by wet spray process or hand trowel applied in accordance with the manufacturer's product data sheet.

1.08 Fosroc Vector Galvashield XPt anodes; Nitoprime Zincrich; Renderoc HB40 and Concure A99 meet the performance criteria and are approved.

2.00 Protective Coating

2.01 Concrete / Masonry Surfaces

All surfaces to receive the coating system should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algal growth, laitance, and all traces of mould release oils and curing compounds.

2.02 Coating System

The protective coating shall comprise a film forming penetrating silane-siloxane primer a single component elastomeric acrylic coating.

2.03 The silane-siloxane primer should be applied in one or more coats until the recommended application rate of 0.4 litres /m² has been achieved.

2.04 The protective coating should be applied in two coats to achieve a total dry film thickness of not less than 200 microns and exhibit Elongation at Break (ASTM D412) >300%.

When tested to AS/NZS 4548.5-1999 the coating shall exhibit a Carbon dioxide diffusion resistance equivalent thickness of air (R) >96m and Chloride ion diffusion coefficient: $2.3 \times 10^{-14} \text{m}^2/\text{sec}$ @ 147 days.

2.05 Fosroc Dekguard E2000 applied in conjunction with Nitoprime DG meets the performance criteria and is approved.



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3.00 Assurance Requirements

- The products must be installed strictly in accordance with the manufacturer's current technical data sheets. Sheets are available from:

<https://www.fosroc.com.au/technical-data/>

- Parchem operates a policy to encourage the use, where possible, of experienced applicators. This ensures that the scope of work is completed satisfactorily so that long-term performance of the materials is assured.
- The product manufacturer and supplier must be accredited to ISO9001 quality assurance requirements
- A site reference sample applied by the selected tenderer is to be carried out on site to ensure colour, texture, appearance, adhesion and compatibility with the existing systems. The Architect, Engineer, owner or their representatives are to confirm acceptance of the finish.

4.00 Attachments:

- Technical Data Sheets:
 - Nitoprime Zincrich
 - Nitobond HAR
 - Renderoc HB40
 - Galvashield XPt
 - Dekguard E2000
 - RCS Hazard Free List

Zinc-rich epoxy resin primer to protect steel reinforcement within repair mortars

Uses

Nitoprime Zincrich is the recommended anti-corrosion primer for exposed steel reinforcement for use with Renderoc concrete repair mortars. The product provides a barrier to further corrosive elements such as chlorides attacking the steel. Compatible with all Renderoc mortars and fluid micro-concretes.

Advantages

- Excellent protective barrier to the steel from further corrosive attack
- Formulated for use with Renderoc repair products
- Single component product - easy to use with no restrictive pot-life
- Time saving - touch dry after 15 - 45 minutes
- Economical - single component ensures almost no waste
- Complies with AS4020:2018 - suitable for use in drinking water.

Standards Compliance

Nitoprime Zincrich has been approved by the British Board of Agreement, Certificate No. 91/2582 as part of the Renderoc system of concrete repair.

Conforms to AS/NZS 3750.9 Type 1.

Nitoprime Zincrich has been tested to comply with AS4020:2018. Refer to AWQC Report 354931. Copies of the certification are available from the Fosroc website.

Description

Nitoprime Zincrich, a zinc primer, is supplied as a single component grey-coloured liquid based on metallic zinc and epoxy resins.

Design Criteria

One or two coats of Nitoprime Zincrich are generally required, dependent largely on nature and profile of the steel substrate. Nitoprime Zincrich is recoatable generally between 30 minutes and 1 hour after the initial application. Application of concrete repair materials may also proceed at this time. At elevated temperatures, the recoatable and overlay times will be reduced. The minimum application temperature for Nitoprime Zincrich is 5°C.

Properties

Recommended thickness per coat:	50 microns (dry)
Application thickness per coat:	120 microns (wet)
Drying times – Touch dry:	
@ 20°C	45 minutes
@ 35°C	15 minutes
Fully dry/recoatable:	
@ 20°C	50 minutes - 1 hour
@ 35°C	20 - 45 minutes
VOC content:	518g / litre

Note: At temperatures below 20°C, drying times will be slower. Conversely, at temperatures above 35°C, drying times will be faster.

Application Instructions

Preparation

Expose fully any corroded steel in the repair area and remove all loose scale and flaky corrosion deposits. Grit blasting or high pressure water blasting is recommended for this process.

Where corrosion has occurred due to presence of chlorides, the steel should be high-pressure washed with clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface.

Application

The application of Nitoprime Zincrich must take place as soon as possible to a dry steel surface after completion of the preparation work but always within 3 hours.

Although a single component product, **it should be stirred thoroughly before use** in order to redisperse any settlement.

Apply one full and unbroken coat of Nitoprime Zincrich by suitable brush, making sure that the back of exposed steel reinforcing bars are properly coated. A small brush is generally more suitable for this purpose. Allow to dry fully before continuing. If any doubt exists about having achieved an unbroken coating, a second application should be made as soon as the first coat is fully dry (generally between 30 minutes and 1 hour).

The primed surfaces should not be left exposed to the elements for longer than necessary before overcoating or application of the repair material. Nitoprime Zincrich will, however, protect steel under clean interior exposure conditions for a period of several months. In non-aggressive exterior environments, a maximum interval of 14 days will be tolerated but in industrial and/or marine environments this interval should be reduced to the practical minimum.

The application of concrete repair materials should proceed as soon as the Nitoprime Zincrich is fully dry (generally 30 minutes to 1 hour - see under Properties).

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Nitoprime® Zincrich

Low temperature working

The minimum application temperature is 5°C. The material should not be applied when the substrate and/or air temperature is 5°C and falling. At 5°C stable temperature or at 5°C and rising, the application may proceed.

Cleaning

Remove material from tools, equipment and mixers with Fosroc Solvent 10 immediately after use.

Limitations

Nitoprime Zincrich should not be applied when the temperature is below 5°C or is 5°C and falling.

Supply

Nitoprime Zincrich 1 litre:	FC322100-1L
Fosroc Solvent 10:	4 and 20 litre cans

Coverage

Nitoprime Zincrich:	8 m²/litre (approx.)
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Note: this coverage figure is theoretical - due to wastage factors and the variety and nature of possible steel substrates, practical coverage figures will be reduced.

Storage

Nitoprime Zincrich should be stored in original packaging in a cool, dry area.

If stored at high temperatures the shelf life may be reduced.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.



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Polymer emulsion bonding agent

Uses

Nitobond HAR is the recommended primer for the Renderoc cementitious repair system.

Advantages

- Single component - no site mixing
- Easy to use - ready to use straight from container
- High bond strength - excellent bond strength between Renderoc systems and concrete
- Non-flammable
- Cost effective - economical in use

Description

Nitobond HAR is a single component polymer emulsion system designed as a bonding agent for Renderoc repair products.

Application Instructions

Preparation

All surfaces should be clean and free from dust and contamination.

Application

The substrate should be thoroughly soaked with clean water and any excess removed prior to applying one coat of Nitobond HAR primer and scrubbing it well into the surface. The Renderoc mortar can be applied as soon as the primer becomes tacky. If the Nitobond HAR is too wet, overhead and vertical build-up of the Renderoc mortar may be difficult.

If the Nitobond HAR primer dries before the application of the Renderoc mortar, the area must be re-primed before proceeding. In exceptional circumstances, e.g. where a substrate/repair barrier is required or where the substrate is wet or likely to remain permanently damp, Nitobond EP bonding aid should be used. Contact Fosroc for further information.

Note: Nitobond HAR primer is generally not used when spraying Renderoc mortars.

Cleaning

Wash all equipment with clean water immediately after use.

Limitations

Do not use Nitobond HAR when the temperature is below 5°C and falling.

Supply

Nitobond HAR 1 litre:	FC322070-1L
Nitobond HAR 5 litre:	FC322070-5L
Nitobond HAR 20 litre:	FC322070-20L

Coverage

Nitobond HAR: 4 - 6 m²/litre

Storage

Nitobond HAR should be stored in dry conditions at 5°C to 25°C in original unopened packaging.

Protect from frost.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

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Shrinkage compensated repair mortar suitable for use with embedded galvanic anodes

Uses

For the reinstatement of large areas of reinforced concrete where low permeability and low shrinkage characteristics are required and where higher compressive strength is an important consideration.

Renderoc HB40 has been engineered for the repair of columns and beams. Its relatively low fresh wet density makes it also suitable for soffits and other overhead repair work. The mortar can also be used for small, localised patch repairs.

Where compatibility with lower strength concrete is required, but low permeability and high-build characteristics are important, Renderoc HB25 should be used. For higher strengths Renderoc HB70 should be used.

Renderoc HB40 is suitable for use with Galvashield incipient anode protection and Cathodic Protection system. Contact Fosroc for further details.

Advantages

- Compatible with concrete strength in the range 30 to 45MPa
- Abrasion resistant - suitable for aggressive environments
- Shrinkage compensated - provides long term dimensional stability
- Low permeability to potentially damaging water, CO₂ and chloride ions
- Suitable for use with Galvashield anodes
- Can be applied using wet-spray process - providing faster high build repairs
- Pre-bagged to overcome site-batched variations - only the site addition of clean water required
- Complies to AS/NZS4020:2018 - suitable for use in potable water
- RCS (Respirable Crystalline Silica) Hazard Free

Standard Compliance

AS 4020:2018 at an exposure level of 15,000mm² per litre; AWQC Report 311757.

AS1530.3-1999 Methods for Fire Test on Building Materials

Ignitability Indices: 0
Spread of Flame Index: 0
Heat Evolved Index: 0
Smoke Developed Index: 0-1

Copies of the test reports are available from the Fosroc website.

Description

Renderoc HB40 concrete reinstatement mortar is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a highly consistent, medium-weight repair mortar. It is based on Portland cements, graded aggregates, lightweight fillers and chemical additives which provide a mortar with good handling characteristics while minimising water demand. The low water requirement ensures good strength gain and long-term durability.

Renderoc HB40 is not hazardous in accordance with Australian Inventory of Industrial Chemicals. Contains <0.1% RCS.

Design Criteria

Renderoc HB40 exhibits a series of performance characteristics designed to achieve maximum compatibility with concrete with a compressive strength greater than 30MPa. It is capable of being hand applied up to 40mm thick and wet spray applied up to 110mm thick in vertical applications.

Application Instructions

Preparation

Saw cut or cut back the extremities of the repair locations to a depth of at least 10mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 10mm up to the sawn edge and 20mm behind any exposed reinforcement steel.

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or abrasive-blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits paying particular attention to the back of exposed steel bars. Abrasive-blasting or high pressure water blasting is recommended for this process.

Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after abrasive-blasting to remove corrosion products from pits and imperfections within its surface.

Reinforcing steel priming

Apply one full coat of Nitoprime Zincrich and allow to dry before continuing. If any doubt exists about having achieved an unbroken coating, a second application should be made and, again, allowed to dry before continuing. (If Galvashield anodes are to be embedded into the Renderoc HB40 patch repair, refer to current Galvashield Technical Data Sheet for priming instructions).

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Properties

The following results were obtained at a water:powder ratio of 0.15 and a temperature of 20°C unless otherwise stated.

Test Method	Standard	EN 1504 R3 Requirement	Test Result	
Compressive Strength	EN 12190:1999 AS 1478.2 - 2005	≥ 25 MPa -	38 MPa @28 days 10 MPa @ 1 day 25 MPa @ 7 days 35 MPa @ 28 days	
Bond strength by pull off	EN 1542:1999	≥ 1.5 MPa	without primer	1.8 MPa
			Nitobond HAR primer	2.5 MPa
Chloride ion Content	EN 1015-17:2000	≤ 0.05%	0.004%	
Capillary Absorption	EN 1307:2002	≤ 0.5 Kg/(m ² x h ^{0.5})	0.2 Kg/(m ² x h ^{0.5})	
Carbonation Resistance	EN 13295:2005	d ≤ ref concrete	Conform	
Coefficient of thermal expansion	EN 1770:1990	Declared Value	13.7 x 10 ⁻⁶ /°C	
Shrinkage and Expansion	EN 12617-4:2002	> 1.5 MPa	Shrinkage: 1.7 MPa Expansion: 1.7 MPa	
Elastic Modulus	EN 13412:2008	> 15 GPa	18.4 GPa	
Chloride Diffusion	Nordtest NT Build 443	-	4.47 x 10 ⁻¹² m ² /sec	
VOC content	ASTM D3960-5	-	13g / litre	
Flexural Strength	AS 1012.11 - 2000	-	5.8 MPa @ 28 days	
Tensile Strength	AS 1012.10 - 2000	-	3.1 MPa @ 28 days	
Setting Time	AS 1012.18 - 1996	-	Initial Set: 3 hours Final Set: 5 hours	
Fresh Wet Density		-	1780 Kg/m ³	
Drying Shrinkage (25 x 25 x 285) prisms @ 23°C, 50% RH)	AS 1478.2 - 2005	-	< 400 microstrains @ 7 days < 600 microstrains @ 28 days	
Alkali reactive particles	RTA Rapid Mortar Bar Test RTA T363	-	<0.1% (Non-Reactive)	
Build Characteristics achievable in a single layer			Hand/Trowel	Wet Spray
Overhead	-	-	up to 30mm	60-85mm
Vertical	-	-	up to 40mm	70-110mm

Clarification of property values: The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary.

Substrate priming

The substrate should be thoroughly soaked with clean water and any excess removed prior to applying one coat of Nitobond HAR primer and scrubbing it well into the surface. Renderoc HB40 can be applied as soon as the primer becomes tacky. If the Nitobond HAR is too wet, overhead and vertical build up of the Renderoc HB40 mortar may be difficult. Scrubbing by hand a thin layer of the Renderoc into the tacky primer will assist adhesion and also minimise the chance of the primer drying out.

If the Nitobond HAR primer dries before the application of the Renderoc, the area must be re-primed before proceeding.

In exceptional circumstances, e.g. where a substrate/repair barrier is required or where the repair/substrate is likely to become immersed, permanently wet or damp subsequent to the completion and cure of the repair, Nitobond EP bonding aid should be used. Refer to the Nitobond EP data sheet.

Note: Nitobond HAR primer is generally not required when wet spraying Renderoc HB40. Refer to the separate information document "Wet Spraying Renderoc mortars" available from Fosroc.



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Note: When Renderoc HB40 is used in conjunction with Impressed Current Cathodic Protection, the substrate bonding primer should be an OPC: Water slurry mixed at a 2:1 ratio. Polymer bonding agents should not be used. No steel primer should be applied. Please refer to Fosroc for further advice.

Mixing

Care should be taken to ensure that Renderoc HB40 is thoroughly mixed. A forced-action mixer is essential. Mix for 3 to 5 minutes at a slow speed (400/500rpm) in a suitably sized drum using appropriate equipment such as a 120/140mm helical mixing paddle fitted to a heavy-duty 1600W mixer.

Free-fall mixers (cement mixers) must not be used.

For normal applications, place 3.0 - 3.2 litres of drinking quality water into the mixer and, with the machine in operation, add 1 full 20kg bag of Renderoc HB40 and mix for 3 - 5 minutes until fully homogeneous. Note that the powder must always be added to the water. Initially add 3.0 litres of water, mix the product for a minimum 3 minutes to allow the polymers in the mix to activate; then make any necessary water adjustments after this time up to the maximum 3.2 litres.

Mixing part bags

It is recommended that full bags be mixed, however for applications where smaller quantities of product are required, experienced applicators may elect to mix half bags by weighing out 10kg of Renderoc HB40 and mixing with half the recommended quantity of water. In doing so the contractor accepts the risk of any off-ratio mixing. Agitate the dry product before weighing out to minimise any segregation. Reliable scales should be used to weigh out individual components.

Application

Exposed steel reinforcing bars should be firmly secured to avoid movement during the application process as this will affect mortar compaction, build and bond.

Apply the mixed Renderoc HB40 to the prepared substrate by gloved hand or trowel. Thoroughly compact the mortar on to the primed substrate and around the exposed reinforcement. Renderoc HB40 can be applied in sections up to 40mm thickness in vertical locations and up to 30mm thickness in overhead locations in a single application and without the use of formwork. Thicker sections should be built-up in layers but are sometimes possible in a single application dependent on the actual configuration of the repair area and the volume of exposed reinforcing steel. Thicker applications can be achieved by spray application - see below.

If sagging occurs during application, the Renderoc HB40 should be completely removed and reapplied at a reduced thickness on to the correctly re-primed substrate.

Note: the minimum applied thickness of Renderoc HB40 is 10mm.

Build-up

Additional build-up can be achieved by application of multiple layers. The final thickness is dependent on the material consistency and substrate profile.

The surface of the intermediate layers should be scratch-keyed and cured with Nitobond AR. Repriming with Nitobond HAR and a further application of Renderoc HB40 may proceed as soon as this layer has set.

Wet spray application

Renderoc HB40 can be quickly and efficiently applied by the wet spray technique. In circumstances where large areas of repair are required, the rapid placement and higher build attainable by this method offer economic advantages over hand-trowelling. The resultant repair also offers a generally more dense compound with enhanced mortar/substrate bond characteristics. For further details on the wet spray technique, including selection of spraying machines and nozzles, consult the document "Wet Spraying Renderoc mortars" or contact Fosroc.

Finishing

Renderoc HB40 is finished by striking off with a straight edge and closing with a steel trowel. Wooden or plastic floats, or damp sponges may be used to achieve desired surface texture. The completed surface should not be overworked. Allow the applied Renderoc to stiffen before attempting to finish off - this will minimise slumping. After spray application, the mortar may need to be 'cut back' to the required profile using a steel trowel and then finished with damp sponges as described above.

Low temperature working

In cold conditions down to 5°C, the use of warm water (up to 30°C) is advisable to accelerate strength development. Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrate and/or air temperature is 5°C and falling. At 5°C static temperature or at 5°C and rising, the application may proceed.

High temperature working

At ambient temperatures above 35°C, the material should be stored in the shade and cool water used for mixing.

Curing

Renderoc HB40 is a cement-based repair mortar. In common with all cementitious materials, it must be cured immediately after finishing in accordance with good concrete practice. The use of Nitobond AR or Concure A99, sprayed on to the surface of the finished mortar in a continuous film, is recommended. Large areas should be cured as trowelling progresses (0.5 at a time) without waiting for completion of the entire area. In fast drying conditions, supplementary curing with polythene sheeting taped down at the edges must be used. In cold conditions, the finished repair must be protected from freezing.



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Overcoating with protective decorative finishes

Renderoc HB40 is extremely durable and will provide long-term protection to the embedded steel reinforcement within the repaired locations. The surrounding parts of the structure will generally benefit from the application of a barrier/decorative coating to limit the advance of chlorides and carbon dioxide, thus bringing them up to the same protective standard as the repair itself. Fosroc recommends the use of the Fosroc Dekguard range of protective, anti-carbonation coatings. These products provide a decorative and uniform appearance as well as protecting areas of the structure which might otherwise be at risk from the environment. Dekguard products may be applied over the repair area following the removal of any curing membranes prior to the application of Dekguard system to allow penetration of the silane primers.

When applying other decorative coating systems over curing compounds independent adhesion tests of the primer is recommended. Solvent based primers may compromise the curing compound.

Cleaning

Nitobond HAR, Nitobond AR and Renderoc HB40 should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Equipment used with Nitoprime Zincrich and Nitobond EP should be cleaned with Solvent 10.

Limitations

Renderoc HB40 should not be used when the temperature is below 5°C and falling. Do not mix part bags. Due to the relatively lightweight nature of Renderoc HB40, it should not be used in areas subjected to traffic. Neither should it be exposed to moving water during application. Exposure to heavy rainfall prior to final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, contact Fosroc for advice.

NOTE: Renderoc HB40 is not designed to be used as a broad-scale building render. For large scale areas of repair please contact Fosroc for further advice.

Supply

Renderoc HB40 20kg:	FC302020-20KG
Nitoprime Zincrich 1 litre:	FC322100-1L
Concure A99 20 litre:	FC600909-20L
Nitobond AR 5 litre:	FC320015-5L
Nitobond AR 20 litre:	FC320015-20L
Nitobond HAR 1 litre:	FC322070-1L
Nitobond HAR 5 litre:	FC322070-5L
Nitobond HAR 20 litre:	FC322070-20L
Nitobond EP base 1.5 litre pack:	FC321025-1L
Nitobond EP hdnr 1.5 litre pack:	FC321026-500ML
Nitobond EP base 6 litre pack:	FC321025-4L
Nitobond EP hdnr 6 litre pack:	FC321026-2L
Fosroc Solvent 10 4 litre:	FC600800-4L
Fosroc Solvent 10 20 litre:	FC600800-20L

Coverage and yield

Renderoc HB40:	12.3 litres / 20 kg bag (mid water)
Nitoprime Zincrich:	8 m ² /litre
Concure A99:	5 m ² /litre
Nitobond AR:	6 - 8 m ² /litre
Nitobond HAR:	3 - 4 m ² /litre
Nitobond EP:	4 - 5 m ² /litre

Note: the coverage figures for liquid products are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Renderoc HB40 has a shelf life of 36 months from date of manufacture if kept in the original, unopened bags. Do not use if there are lumps in the product, or a loss of workability (requiring more water to be added) is experienced.

If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

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NZBN 9429033691282

Galvashield® XP One-and-Done™ Range



Technical
Data
Sheet

Type 1A Embedded Galvanic Anodes for Concrete Repair

Description

The Galvashield® XP range of embedded galvanic anodes are used to mitigate ring anode corrosion when repairing reinforced concrete structures. Designed for optimum performance and ease of installation, the alkali-activated (Type 1A) anodes are comprised of high purity zinc cast around a steel tie wire with an enhanced formulated cement-based mortar with an internal pH of 14 or greater that keeps the zinc active over the life of the anode. The Galvashield® XP range of anodes utilize the contractor-friendly One-and-Done™ single-wire connection. Once installed, the zinc anode corrodes to provide galvanic corrosion prevention or corrosion control to adjacent reinforcing steel.

Applications

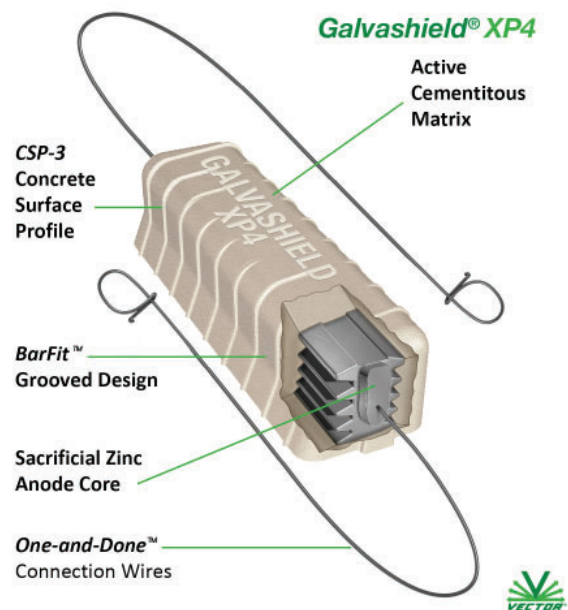
- Mitigates ring anode formation (halo effect) in patch repair applications
- Bridge widening and other structure modifications
- Slab replacements, expansion joint repairs and other interfaces between new and existing concrete
- Repair of prestressed and post-tensioned concrete
- Chloride contaminated or carbonated concrete
- Repair of structures with epoxy-coated rebar
- Extends the life of concrete repairs
- Extends the life of joint repairs

Advantages

- Proven technology - Galvashield® is the original embedded galvanic anode with an extensive 20-year track record.
- Independent testing - indicates concrete repair service life can be extended by more than 400%.
- Type 1A anode - alkali-activated to maintain activity of zinc; meets building code requirements that prohibit intentionally added constituents that are corrosive to reinforcement within repair area.
- One-and-Done™ connection innovative single wire connection can be installed up to 2x faster than the traditional two wire connection, saving 50% on installation labor cost.
- Cast zinc core - provides high anode utilization and a secure long-term connection between the zinc and the integral lead wire.
- BarFit™ design - grooved edges on Galvashield® XP2 and XP4 anodes assist with secure anode placement.

- Steel connection wires - Provides dependable steel-to-steel contact with no intermediate materials such as galvanizing that may compromise the long-term electrical connection.
- Economical - provides localized protection where it is needed the most, at the interface between the repair and the remaining contaminated concrete.
- Versatile - can be used for both conventionally reinforced and prestressed or post-tensioned concrete.
- Low maintenance - requires no external power source or system monitoring.
- Long lasting - 20 year anode service life* reduces the need for future repairs.
- CSP-3 Surface Profile - raised ridges provide increased surface profile to promote mechanical bond with repair mortars and concrete.

**As with all galvanic protection systems, service life and performance is dependent upon a number of factors including reinforcing steel density, concrete conductivity, chloride concentration, humidity and anode spacing.*



Specification Clause

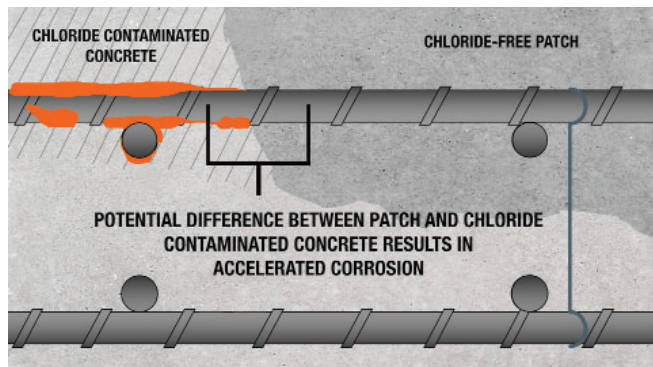
Embedded galvanic anodes shall be pre-manufactured with nominal [add zinc mass] of zinc in compliance with ASTM B418 Type II cast around an integral, unspliced, uncoated, non-galvanized double loop steel tie wire and encased in a highly alkaline cementitious shell with a pH of 14 or greater. The anode unit shall contain no intentionally added chloride, bromide or other constituents that are corrosive to reinforcing steel (refer to ACI 562-13, Section 8.4.1).

Galvashield® XP

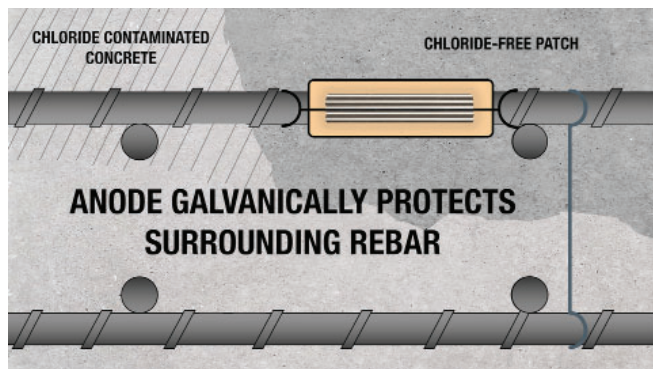
One-and-Done™ Range

How does it work?

When two dissimilar metals are coupled together in an electrolyte (in this case concrete), the metal with the higher potential for corrosion (zinc) will corrode in preference to the more noble metal (reinforcing steel). Galvashield XP-type anodes are embedded in concrete repairs to provide corrosion prevention or corrosion control to the reinforcing steel in the adjacent area.



"Ring Anode" Corrosion (without Galvashield XP-type anode)



Galvashield XP-type anode prevents "Ring Anode" Corrosion

Design Criteria

Corrosion Risk Category	Chloride Level*	Minimum Current Density at 20 years
Low to Moderate	<0.8%	0.4mA/m ²
High	0.8% - 1.5%	0.8mA/m ²
Extremely High	>1.5%	1.6mA/m ²

*Chloride content is based on percent by weight of cement.

Product Comparison

Anode Name	Anode Type	Nominal Dimension (mm)	Zinc Mass (g)
Galvashield XPT	1A-P	24mm x 28mm x 100mm	60
Galvashield XP2	1A-C	32mm x 34mm x 100mm	100
Galvashield XP4	1A-C	35mm x 35mm x 130mm	160

Anode Type

- 1 - Installed in Concrete Repairs
- 2 - Installed in Drilled Holes in Sound Concrete
- A - Alkali-activated using High pH
- H - Halide-activated using Corrosive Salts
- P - Corrosion Prevention
- C - Corrosion Control

Application Instructions

Installation

Concrete shall be removed from around and behind all corroding rebar in accordance with good concrete repair practice such as ACRA guideline SA HB 84:2018, Section 6.4. Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue.

The anode units and repair material should be installed immediately following preparation and cleaning of the steel reinforcement. The location and spacing of the units shall be as specified by the designer (refer to design criteria). The units can be placed around the perimeter of the repair or on a grid pattern to protect a second layer of steel if required.

Securely fasten the anode units from the side or beneath the exposed rebar as close as practical to the surrounding concrete (preferably within 100 mm) while ensuring that enough space remains to fully encapsulate the unit in the repair. Wrap the tie wires around the clean reinforcing steel at least one full turn in opposite directions and bring the two free ends together and twist tight. The minimum cover of the repair material over the units should be 20 mm.

When required, the steel reinforcement, other than where the anodes are attached, should be primed immediately following attachment of the Galvashield XP-type anode units with a 135 micron (wft) continuous coating of Nitoprime Zincrich.

Over painting with the bonding agent or reinforcement primer, onto the surface of the Galvashield XP-type anode unit must be avoided.

Anode-to-steel continuity and steel-to-steel continuity within the repair cavity should be verified with an appropriate meter; discontinuous steel should be tied to continuous bars using steel tie wire and re-tested. A value between 0 and 1 ohm should be achieved.



Galvashield® XP

One-and-Done™ Range

Repair Materials

For optimum performance, use a low resistivity repair material such as Renderoc HB40 or Renderoc HB70. If a high resistivity repair material is to be used or if the resistivity of the material is unknown, pack Fosroc Renderoc HB40 between the anode unit and the substrate to provide an ionically conductive path to the substrate.

Prior to placing the repair material, pre-wet the concrete substrate to achieve a saturated surface dry condition, then complete the repair. Do not soak the anode units for greater than 20 minutes.

Design Criteria - Anode Spacing

Low to Moderate Corrosion Risk (Chloride Content < 0.8%)			
	XPT	XP2	XP4
Steel Density Ratio	Anode spacing (mm)	Anode spacing (mm)	Anode spacing (mm)
<0.3	675	700	700
0.31 - 0.6	450	700	700
0.61 - 0.9	350	575	700
0.91 - 1.2	300	475	625
1.21 - 1.5	275	425	550
1.51 - 1.8	250	375	500
1.81 - 2.1	225	350	475

Limitations

Galvashield XP-type anode units are intended to provide localised corrosion prevention or corrosion control and do not address or repair structural or concrete damage. Where structural damage exists, consult a structural engineer. To provide protection to a broader area, install Galvashield CC anodes or Galvashield Fusion T2 anodes on a grid pattern.

High Corrosion Risk (Chloride Content 0.8% to 1.5%)			
	XPT	XP2	XP4
Steel Density Ratio	Anode spacing (mm)	Anode spacing (mm)	Anode spacing (mm)
<0.3	450	700	700
0.31 - 0.6	300	475	625
0.61 - 0.9	250	375	500
0.91 - 1.2	200	325	425
1.21 - 1.5	175	275	375
1.51 - 1.8	150	250	350
1.81 - 2.1	125	225	325

Extremely High Corrosion Risk (Chloride Content >1.5%)			
	XPT	XP2	XP4
Steel Density Ratio	Anode spacing (mm)	Anode spacing (mm)	Anode spacing (mm)
<0.3	300	475	652
0.31 - 0.6	200	325	425
0.61 - 0.9	175	250	350
0.91 - 1.2	150	225	275
1.21 - 1.5	125	175	250
1.51 - 1.8	100	150	225
1.81 - 2.1	n/a	125	200

New Construction and Carbonated Concrete			
	XPT	XP2	XP4
Steel Density Ratio	Anode spacing (mm)	Anode spacing (mm)	Anode spacing (mm)
<0.3	700	700	700
0.31 - 0.6	700	700	700
0.61 - 0.9	580	700	700
0.91 - 1.2	500	700	700
1.21 - 1.5	440	680	700
1.51 - 1.8	400	600	700
1.81 - 2.1	370	560	700

The anode spacing guidelines are based on achieving the minimum current density for the appropriate corrosion risk category as referenced on the technical data sheets design criteria 20 years after installation. In warmer or more corrosive conditions such as marine exposure, Galvashield XP4 is recommended to achieve the 20 year anode life. For more information on the design methodology or receive a custom design, contact Parchem.



Galvashield® XP

One-and-Done™ Range

Supply

Galvashield XPT One-and-Done	FC312016-UNIT	50 units / box	10 units / tray
Galvashield XP2 One-and-Done	FC312027-UNIT	40 units / box	10 units / tray
Galvashield XP4 One-and-Done	FC312026-UNIT	30 units / box	6 units / tray

Galvashield XP anodes must be ordered / purchased in tray lots.

Storage

Galvashield XP anode units have 24 months shelf life.

Store in dry conditions in the original unopened box. Avoid extremes of temperature and humidity.

Health and Safety

Handling

Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of dust. Wear nitrile gloves when handling the anodes.

Keep anodes in their trays at all times, unless they are removed to be installed.

Installation

As with all cement-based materials, contact with water can release alkalis which may be harmful to exposed skin. Galvashield anode units should be handled with suitable gloves and other personal protective equipment in accordance with standard procedures for handling cementitious materials.

Additional safety information for both handling and installation is included in the product Safety Data Sheet.

Important notice

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NZBN 9429033691282

Elastomeric, pigmented acrylic, chloride ion and carbonation protective and decorative coating for concrete and masonry

Uses

To protect atmospherically exposed (non-trafficked) reinforced concrete structures from attack by acid gases, chloride ions, oxygen and water, especially where there is a danger of subsequent cracks appearing within the substrate. The product is also suitable to protect other cementitious substrates and masonry. Dekguard E2000 is suitable for use on all types of structures, including those in coastal environments. It is equally suitable for new and existing structures. Dekguard E2000 is a component of Fosroc's Renderoc system of concrete reinstatement.

Advantages

- Can accommodate substrate cracking
- True elastomeric coating with excellent elongation and recovery properties
- Excellent barrier to carbon dioxide, chloride ions, oxygen and water
- Special acrylic polymer minimises dirt retention
- Allows water vapour to escape from the structure
- UV-resistant with high resistance to the effects of long-term weathering
- Water-based

Properties

The values obtained are for the Dekguard E2000 system applied at the minimum recommended application rate.

Test method	Typical result
Volume solids	50% approx
Elongation at Break:	> 300% (ASTM D412)
Carbon dioxide diffusion resistance	(AS/NZS 4548.5-1999)
Equivalent thickness of air (R):	> 96 metres
Equivalent thickness of 30 MPa concrete cover (Sc):	> 240 mm
CO ₂ Diffusion Coefficient:	$3.7 \times 10^{-07} \text{ cm}^2 / \text{sec}$
Chloride ion diffusion coefficient:	$2.3 \times 10^{-14} \text{ m}^2 / \text{sec}$ @ 147 days (AS/NZS 4548.5-1999)
Water vapour transmission resistance	(AS/NZS 4548.5-1999)
Vapour Transmission Rate:	55.7g/m ² /24hour
Equivalent thickness of Air (Sd):	< 1m
Vapour Diffusion Coefficient:	$1.1 \times 10^{-04} \text{ cm}^2 / \text{sec}$
Water Transmission Resistance:	14g/24h/m ² /KPa (AS/NZS 4548.5-1999)
Fire testing - Spread of flame:	Class 1 (BS 476, Pt 7: 1987)

Description

The Dekguard E2000 system comprises a single component penetrating silane-siloxane primer and a single component elastomeric pigmented coating, both ready for immediate site use.

The film-forming, stabilising primer (Nitoprime DG) is supplied as a clear liquid and is based on an acrylic resin and a silane-siloxane dissolved in a penetrating organic carrier. The primer is reactive and capable of producing a chemically-bound hydrophobic barrier, thus inhibiting the passage of water and water-borne contaminants. A thin surface film is produced which consolidates and stabilises porous substrates.

Dekguard E2000 is a crack-accommodating, water based protective coating based on a special acrylic polymer. It provides excellent elongation and recovery, low dirt pick-up, resistance to aggressive elements, UV light and rain.

Design Criteria

The coating should generally be applied in two coats to achieve a total dry film thickness of not less than 200 microns in order to accommodate substrate cracking. It is possible to achieve the total dry film thickness in one coat however, this depends on the substrate type and the finish required. Trials are recommended prior to full application to ensure the finish meets the clients requirements. To achieve the correct protective properties, the Dekguard E2000 system must be applied on to the substrate at the coverage rates recommended.

Fosroc®

Dekguard® E2000

Application Instructions

Preparation

All surfaces should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algal growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit-blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit-blasting process.

Where application over existing sound coatings is required, trials should be conducted to ensure compatibility and retention of the bond between the underlying coating and the substrate. For further advice, consult your local Fosroc sales office.

It is essential to produce an unbroken coating of Dekguard E2000. To ensure this is achieved, surfaces containing blow-holes or similar areas of pitting should first be filled using Renderoc FC or Renderoc ST 06, a cementitious fairing coat (for further details, refer to separate Technical Data Sheet). Renderoc FC and Renderoc ST 06 should be allowed to cure for approximately 48 hours, depending on ambient conditions, before the application of Dekguard E2000.

Application

In order to obtain the protective properties of the Dekguard E2000 system, it is important that the correct rates of application and overcoating times are observed.

	Nitoprime DG	Dekguard E2000	
Number of coats:	Flood coat	One	Two
Theoretical application per coat:	0.4 litres/m ²	0.4 L/m ²	0.2 L/m ²
Theoretical wet film thickness:	N/A	400 microns per coat	200 microns per coat
Overcoating time:	2 hours @ 20°C	N/A	8 hours @ 20°C

Application of Nitoprime DG should not commence if the temperature of the substrate is below 5°C. Application of Dekguard E2000 should not commence if the temperature of the substrate is below 5°C.

Any areas of glass should be masked. Plants, grass, joint sealants, asphalt and bitumen-painted areas should be protected during application.

Nitoprime DG should be applied first. It should be applied in one or more coats until the recommended application rate of 0.4 litre per square metre has been achieved. This is best accomplished by using portable spray equipment of the knapsack-type. A uniform surface appearance (sheen) should be achieved. If any matt porous patches remain, a further application of primer should be made.

The primer should be allowed to dry for a minimum of two hours (at 20°C) before continuing. Under no circumstances should the primer be overcoated with Dekguard E2000 until the surface is properly dry.

Dekguard E2000 may be applied by the use of suitable brushes, rollers or spray equipment. All primed substrates should be treated with one or two coats of Dekguard E2000 as specified. It is important that no gaps or 'raw edges' appear in the finished coating. Special care should be taken to provide an unbroken coating at external corners and similar exposed protrusions.

Spray application

When being applied to well prepared surfaces (no blow holes) it is possible to spray apply Dekguard E2000 in a single coat to achieve the 400 micron wet film thickness (200 micron dry film thickness). This can be a substantial time saving on a project. Suitable equipment includes Graco 795 or Graco 1095 airless running at 3000 psi and utilising 19 thou or 21 thou spray tips.

Cleaning

Dekguard E2000 should be removed from tools and equipment with clean water immediately after use. Nitoprime DG should be removed from tools and equipment using Fosroc Solvent 10.

Limitations

The Dekguard E2000 system is formulated for application to clean, sound concrete or masonry. Where application over existing sound coatings or paints is required, trials should be conducted to ensure compatibility and retention of the bond between the underlying coating and the substrate. Compatibility and soundness should be assessed on a trial area. For further advice, contact Fosroc.

Application of Nitoprime DG should not commence if the temperature of the substrate is below 5°C. Application of Dekguard E2000 should not commence if the temperature of the substrate is below 5°C.

Dekguard E2000 should not be applied where there is a likelihood of exposure to frost within 48 hours of the application. The product should not be applied in windy conditions where early-age dust adhesion may occur, or where rain is likely within 2 hours at 20°C or 20 hours at 5°C (up to 80% RH). It should not be applied when the prevailing relative humidity exceeds 90%.

The use of Dekguard E2000 should not be considered for areas subjected to exposure to ponded water. Dekguard S should be considered in this occasion.

Dekguard coatings are not designed nor suitable for use on trafficable surfaces.

Fosroc®

Dekguard® E2000

Supply

Dekguard E2000 products are made to order and subject to minimum order quantities.

Dekguard E2000 White 15L:	FC860625-15L
Dekguard E2000 Special Colour 15L:	FC860626-15L
Dekguard E2000 In Can Tint 15L:	FC860628-15L
Nitoprime DG 20 litres:	FC862600-20L
Fosroc Solvent 10 4 litre:	FC600800-4L
Fosroc Solvent 10 20 litre:	FC600800-20L

Coverage

Dekguard E2000:	2.5m ² per litre (total)
Nitoprime DG:	2.5m ² per litre (total)

The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Store in cool, dry conditions. Dekguard E2000 should be protected from frost.

Important notice

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constructive solutions

RESPIRABLE CRYSTALLINE SILICA (RCS) HAZARD FREE CLASSIFIED PRODUCTS

RENDEROC® ■ PATCHROC® ■ PAVEROC™
GUNCRETE™ ■ CONBEXTRA® ■ CEMTOP®

Fosroc cement-based powder products are classified as respirable crystalline silica (RCS) hazard free*, meaning you will not be exposed to hazardous levels of RCS when mixing the powder with water.

As a leading manufacturer and supplier to the construction industry across Australia and New Zealand, Fosroc ANZ committed to reducing RCS levels below the hazardous threshold to ensure our products are safer to use.

However, we still recommend wearing a dust mask due to the cementitious powder nature of the product and only using products in well ventilated areas to avoid inhaling dust. Always follow the safety directions, read the product TDS and wear the recommended PPE as directed on the SDS.

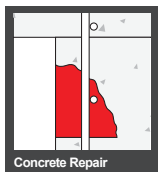


*Non-hazardous in accordance with Australian Inventory of Industrial Chemicals, contains <0.1% RCS.

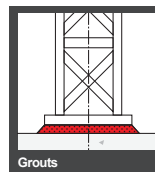
For further information contact your Fosroc representative. Product TDSs and SDSs are available from fosroc.com.au and fosroc.co.nz.

Respirable crystalline silica (RCS) hazard free classified products

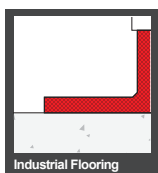
The following tables list Fosroc products that are classified as RCS hazard free.*



Product Code	Product Description
FC302060-1000KG	GUNCRETE E 1000KG MTO
FC302060-20KG	GUNCRETE E 20KG
FC342260-10.4KG	NITOMORTAR EL-HB FILLERS 9L PACK
FC342060-20KG	PATCHROC C 20KG
FC342070-20KG	PATCHROC GP 20KG
FC302080-20KG	PAVEROC 20KG
FC306063-20KG	RENDEROC CAC DRY SPRAY (2.5MM) 20KG MTO
FC306061-20KG	RENDEROC CAC DRY SPRAY (4MM) 20KG MTO
FC306062-20KG	RENDEROC CAC WET SPRAY 20KG
FC302001-20KG	RENDEROC FC 20KG
FC302025-20KG	RENDEROC G 20KG
FC306095-20KG	RENDEROC HB 20KG
FC387080-20KG	RENDEROC HB25 20KG
FC302020-20KG	RENDEROC HB40 20KG
FC302023-20KG	RENDEROC HB40 PLUS 20KG
FC303030-20KG	RENDEROC HB70 20KG
FC303035-20KG	RENDEROC HB70 PLUS 20KG
FC302030-20KG	RENDEROC LA55 20KG
FC300579-1000KG	RENDEROC LA55 BULK BAG 1000KG MTO
FC300744-20KG	RENDEROC LA55 PLUS 20KG
FC300200-20KG	RENDEROC RAPID 20KG
FC302032-10KG	RENDEROC ST 06 POWDER PART B 10KG



Product Code	Product Description
FC524478-25KG	CONBEXTRA BB92 25KG MTO
FC501040-20KG	CONBEXTRA C 20KG
FC500587-25KG	CONBEXTRA C 25KG (NZ Only)
FC501087-20KG	CONBEXTRA CB 20KG MTO
FC501088-20KG	CONBEXTRA CB-C 20KG
FC501070-20KG	CONBEXTRA DEEP POUR 20KG
FC501070-1000KG	CONBEXTRA DEEP POUR MTO 1000KG
FC500546-20KG	CONBEXTRA EP300 FILL 20KG
FC501020-20KG	CONBEXTRA GP 20KG
FC502021-20KG	CONBEXTRA GROUT AGGREGATE 20KG
FC501060-20KG	CONBEXTRA HES 20KG
FC501050-20KG	CONBEXTRA HF 20KG
FC502000-20KG	CONBEXTRA HS 20KG
FC524476-25KG	CONBEXTRA TA 25KG MTO
FC501030-20KG	CONBEXTRA UW 20KG
FC501000-1000KG	CONSTRUCTION GROUT 1000KG MTO
FC501000-20KG	CONSTRUCTION GROUT 20KG
FC300250-20KG	RENDEROC BB 20KG



Product Code	Product Description
FC630088-20KG	CEMTOP GP ADVANCED 20KG
FC652023-18.6KG	CEMTOP HD30 COARSE GREY POWDER 18.6KG
FC652021-18.6KG	CEMTOP HD30 FINE GREY POWDER 18.6KG
FC602055-18KG	CEMTOP XD 18KG
FC602056-18KG	CEMTOP XD WHITE 18KG MTO
FC605192-3.8KG	NITOFLO PU200 PART C FILLERS 3.8KG
FC605202-12.4KG	NITOFLO PU600 PART C FILLERS 12.4KG
FC602040-20KG	NITOFLO SICALTOP GREY 20KG
FC312060-20KG	NITOMORTAR F4 FILLERS



Listed products are classified as respirable crystalline silica (RCS) hazard free*. By using these products you will not be exposed to hazardous levels of RCS when mixing the powder with water.

Wearing a dust mask is still recommended due to the cementitious powder nature of the product and should only be used in well ventilated areas to avoid inhaling dust. Always follow the safety directions and wear the recommended PPE requirements as directed on the SDS.

*Non-hazardous in accordance with Australian Inventory of Industrial Chemicals, contains <0.1% RCS.

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