



Product Pack for Fosroc® Renderoc HB45 Repair System



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PRODUCT INTRODUCTION

Renderoc HB45
Nitoprime Zincrich Plus
Renderoc Primer
Nitobond AR

Product Information

Product Name

Renderoc HB45

Nitoprime Zincrich Plus

Description

High performance, hand / wet-spray applied, fibre reinforced high build, high strength, concrete reinstatement mortar

Recommended anti-corrosion primer for exposed steel reinforcement for use with Fosroc concrete repair mortars.

Photo



Colour

Grey Powder

Grey-coloured liquid

Packaging

25 kg/bag

800ml cans

1.9 litre cans

Renderoc Primer

High performance Polymer /
Cement Slurry Bonding agent



Grey Powder
White coloured liquid

20kg Part A + 5 litres part B
Handy pack
4kg Part A + 1 litre Part B

Nitobond AR

Polymer emulsion curing
agent



White coloured liquid

5 litre bottle

System & Application Area



Concrete



Renderoc HB45



Nitoprime Zincrich Plus



Nitobond AR



Renderoc Primer



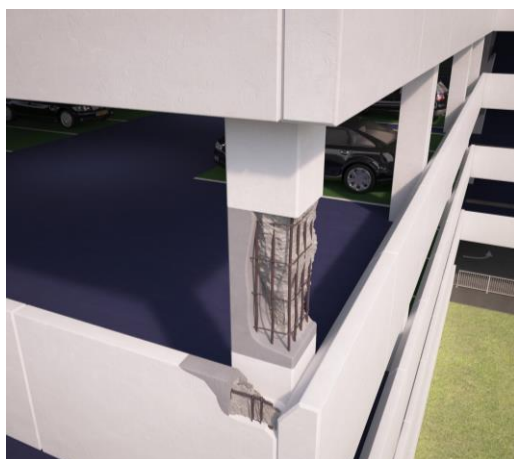
Internal Concrete Repair

Structural repair for internal concrete wall



External Concrete Repair

Structural repair for external concrete wall.



Column Repair

Structural repair for columns.



Soffit Repair

Repair works for ceiling area.

Product Advantages

High performance, hand / wet-spray applied, fibre reinforced high build, high strength, concrete reinstatement mortar conforming to the requirements of BS EN 1504-3 Class R4. It is designed for the reinstatement of reinforced concrete where low permeability characteristics are required and where higher compressive strength is a consideration.



Long-term dimensional stability

One component, pre-bagged to overcome site-batched variations and exceptional system of shrinkage compensation provides long-term dimensional stability

High-build applications possible

While maintaining higher compressive strengths fewer layers, frequently obviates the need for formwork



Exceptional handling characteristics

Easy to finish .

Wet spraying

Can be applied quickly and efficiently by wet spraying



Standard Compliance

Renderoc HB45 complies the following standards



EPD Certificate EPDHUB-0318

Environmental Data:

GWP Total, A1 – A3: 0.284 kgCO₂e per 1kg product.

GWP Total, A1 – D: 0.481 kgCO₂e per 1kg product.



BS EN 1504 - 3

Renderoc HB45 complies with the classification R4 according to EN 1504-3, repair methods 3.1, 3.3, 4.4, 7.1 and 7.2.



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PRODUCT DATA SHEETS

Fosroc® Renderoc HB45



constructive solutions

High performance, hand / wet-spray applied, fibre reinforced high build, high strength, concrete reinstatement mortar conforming to the requirements of BS EN 1504-3 Class R4

Uses

For the reinstatement of reinforced concrete where low permeability characteristics are required and where higher compressive strength is a consideration.

Renderoc HB45 has been specifically developed for the repair of columns and beams, but because of its medium fresh wet density, is also suitable for soffit repairs.

Renderoc HB45 is suitable for repair methods 3.1, 3.3, 4.4, 7.1, 7.2 as defined by BS EN 1504-3.

Advantages

- Exceptional handling characteristics - easy to finish
- High-build applications possible while maintaining higher compressive strengths — fewer layers
- Frequently obviates the need for formwork
- Polymer-modification provides extremely low permeability to water, carbon dioxide and chlorides
- Exceptional system of shrinkage compensation provides long-term dimensional stability
- Can be applied quickly and efficiently by wet spraying
- One component, pre-bagged to overcome site-batched variations
- Contains no chloride admixtures
- Suitable for use with cathodic protection systems
- Shade can be varied with Renderoc Lightener / Darkener*

Description

Renderoc HB45 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, fibres and chemical additives which provide the mortar with good handling and finishing characteristics while minimising water demand. The low water requirement ensures good strength gain and long-term durability.

Renderoc HB45 has been specifically engineered for vertical and overhead repair work. It can be applied in sections up to 80 mm thickness in vertical locations and up to 70 mm thickness in overhead locations in a single application without formwork. Thicker sections can be achieved by the use of formwork or can be built up in layers. Deep pockets can sometimes be filled in a single application dependent on the configuration of the pocket and the volume of exposed reinforcing steel.

Renderoc HB45 can be quickly and efficiently applied by the wet spray technique. Consult the local Fosroc office for further information.

The material should not be applied at less than 10 mm thickness.



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0370-CPR-0845

DOP: UK9-25

Fosroc International Limited

Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK

Fosroc® Renderoc HB45

BS EN 1504-3 :

Structural and non-structural repair methods 3, 4 and 7

Compressive strength	Class R4 (>45 MPa)
Chloride ion content	<0.05%
Adhesion strength by pull-off test	≥ 2.0MPa
Thermal compatibility: freeze thaw cycling with immersion	≥ 2.0MPa
Carbonation resistance	Pass
Capillary absorption	0.5 kg / m ² .h ^{0.5}
Elastic modulus	≥ 20 GPa
Reaction to fire	A2 s1 d0
Dangerous substances	Complies with 5.4

*Refer to separate datasheet



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Fosroc® Renderoc HB45

Properties

The following results were obtained at a water : powder ratio of 0.13 and a temperature of 20°C unless otherwise stated.

Test method	Standard	EN 1504 R4 Requirement	Result
Compressive Strength	EN 12190:1999	≥ 45 MPa	@ 1 Day 20 MPa @ 28 Days 50 MPa
Bond strength by pull off:	EN 1542:1999	≥ 2.0 MPa	2.1 MPa
Chloride ion content:	EN 1015-17:2000	≤ 0.05 %	0.01%
Freeze thaw cycling:	EN 13687-1:2002	≥ 2.0 MPa	2.0 MPa
Resistance to carbonation d_k	EN 13295:2005	$\leq$ ref concrete	Complies
Capillary absorption	EN 13057:2002	< 0.5 kg/ m ² /h ^{0.5}	0.09 kg/ m ² /h ^{0.5}
Elastic Modulus in Compression	EN 13412	≥ 20 GPa	25 GPa @28 Days
Fire rating	EN 13501-1		Class A2 s1 d0 Non-Combustible
Flexural strength	BS 6319 Pt 3:1990	-	7.5 MPa @ 28 Days
Tensile strength	BS 6319 Pt3: 1985	-	4.0 MPa @ 28 Days
Setting time	BS4551:2005+A2:2013	-	Initial set: 3 hours Final set: 5 hours
Fresh wet density		-	Nominally 2000 kg/m ³
Shrinkage	ASTM C596-96	-	< 300 microstrain @ 7 days
Alkali reactive particles	Method TI-B 52	-	≤ 1.0 vol%
Chemical resistance		-	The low permeability of Renderoc HB45 severely retards chemical attack in aggressive environments. The cured mortar is impermeable to acid gases, waterborne chloride ions and oxygen.
Highways England Specification	Resistivity		38000 ohm cm @ 28 days
Build Characteristics (hand applied) Minimum thickness: Overhead: Vertical:	-	-	10 mm Up to 70 mm Up to 80 mm

Clarification of property values: The typical properties given above are derived from laboratory testing. Results derived from field applied samples may vary. Maximum build thickness is dependent on location of repair, water content and application technique.



Fosroc® Renderoc HB45

Specification clause

The repair mortar shall be Renderoc HB45 a one component polymer modified high build cementitious mortar conforming to the requirements of BS EN 1504-3 Class R4. The cured mortar shall achieve a compressive strength of 20MPa at 1 day, 50 MPa at 28 days and a drying shrinkage of <300 microstrain at 7 days. It shall be able to be applied in sections up to 80 mm thickness in vertical locations and up to 70 mm thickness in overhead locations in a single application without formwork. The product shall be mixed, applied and cured in accordance with the manufacturer's written instructions to a correctly prepared substrate.

Standards compliance

Renderoc HB45 complies with the classification R4 according to EN 1504-3, repair methods 3.1, 3.3, 4.4, 7.1 and 7.2.

Renderoc HB45 complies with Highways England, Standards for Highways, Specifications for Highways Works, clauses 5703, 5704, 5716 (Repair Mortar).

Application instructions

Preparation

Form a square edge perimeter to the repair area using appropriate methods (feather edging must be avoided), break out the complete repair area up to a minimum depth of 10mm up to the square 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 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. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Abrasive blasting, hydrodem equipment, powered mechanical scraping or other suitable means 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.

Refer to HSE information sheet CIS36 regarding control of exposure to construction dust, available at www.hse.gov.uk.

Reinforcing steel priming

Apply one full coat of Nitoprime Zincrich Plus 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.

Concrete Priming

The concrete substrate should be saturated surface dry immediately before the application of the primer i.e. it should be thoroughly saturated with clean water and any residual surface water removed prior to applying Renderoc Primer.

Under severe drying conditions repeated soaking may be necessary to ensure the substrate is still saturated at the time of application of the primer.

Add 3 parts by volume of Renderoc Primer Part A to 1 part by volume Renderoc Primer Part B (4 to 1 by weight) in a clean mixing vessel and mix with a spatula or slow speed drill until a homogeneous smooth slurry is produced.

Scrub Renderoc Primer slurry into the surface.

Renderoc HB45 can be applied immediately to the primed surface. If the primer dries apply another coat of primer before continuing.

Open bags of Renderoc Primer Part A should be sealed and stored in a dry area. Use within 14 days.

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 the local Fosroc office for further information.

Mixing

Care should be taken to ensure that Renderoc HB45 is thoroughly mixed. A forced-action mixer is essential. Mixing in a suitably sized drum using an approved Renderoc Mixing Paddle (MR4) in a slow speed (400/500 rpm) heavy-duty drill is acceptable for the occasional one-bag mix.

Free-fall mixers must not be used. Mixing of part bags should never be attempted.

For normal applications, depending on the consistency required, place 3.0 to 3.5 litres of drinking quality water into the mixer (typically 3.25 litres).

With the machine in operation, add one full bag of Renderoc HB45 and mix for a minimum of 3 minutes and a maximum of 5 minutes, until fully homogeneous.

The consistency may be adjusted (if required) by the addition of small amounts of water up to the maximum total water content of 3.5 litres.

Note that the powder must always be added to the water.

Fosroc® Renderoc HB45

Mixing warning

As with other 'one pack' repair mortars, Renderoc HB45 may exhibit satisfactory handling characteristics even though inadequately mixed. This will result in a significantly lower level of performance or possible failure. It is therefore essential that mixing instructions are strictly adhered to with particular emphasis on the quantity of water used and the time of the mixing operation.

Application

Exposed steel reinforcing bars should be firmly secured to prevent movement during application.

Apply the mixed Renderoc HB45 by gloved hand or trowel, thoroughly compacting onto the primed substrate and around exposed reinforcement.

If sagging or slumping occurs Renderoc HB45 should be completely removed and reapplied at a reduced thickness to a correctly primed substrate.

Build-up

Additional build-up can be achieved by application of multiple layers.

The surface of the intermediate layers should be comb scratch-keyed and cured with Nitobond AR. Repriming with Renderoc Primer and a further application of Renderoc HB45 may proceed as soon as this layer has set.

Spray application

Renderoc HB45 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 wet spray techniques contact the local Fosroc office.

Finishing

Renderoc HB45 is finished by striking off with a straight edge and closing with a steel float. Wooden or plastic floats, or damp sponges, may be used to achieve the desired surface texture. The completed surface should not be overworked. After spray application, the mortar may need to be 'cut back' to the required profile using a steel float and then finished with damp sponges as described above.

Low temperature working

In cold conditions down to 3°C, the use of warm mixing 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 3°C and falling. At 3°C static temperature or at 3°C and rising, the application may proceed.

At low temperatures, the strength gain may be further accelerated by adding Fosroc Resivit to Renderoc HB45. At 5°C, a typical strength increase of 4 MPa and 10 MPa can be observed at 24 hours and 7 days respectively, compared with a reference (non-accelerated) mix.

Fosroc Resivit is dosed into the mixing water before Renderoc HB45 is added. Do not exceed 0.25 litres per bag of Renderoc HB45. At this dosage, the typical water addition per bag is reduced to 3.1 litres, up to a maximum of 3.35 litres

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 HB45 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, sprayed on to the surface of the finished mortar in a continuous film, is recommended. A low pressure atomising sprayer is essential for applying the Nitobond AR. Any excessive run-off on verticals or drips on soffits should be removed by brush before they harden.

Large areas should be cured as trowelling progresses (0.5 m² 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.

Overcoating with protective decorative finishes

Renderoc HB45 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 benefit from the application of a barrier/decorative coating to limit the advance of chlorides and carbon dioxide, bringing them to the same protective standard as the repair itself. Fosroc recommend the use of the 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 without prior removal of the Nitobond AR curing membrane. Other curing membranes must be removed prior to the application of Dekguard products.

Cleaning

Renderoc HB45 and Renderoc Primer should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Clean tools used with Nitoprime Zincrich Plus and Nitobond EP before material cures using Fosroc Solvent 102.



Fosroc® Renderoc HB45

Estimating

Supply

Renderoc HB45:	25 kg bags
Nitoprime Zincrich Plus:	1.9 litre and 800 ml cans
Renderoc Primer:	20 Kg Part A + 5 litres part B
Handy Pack:	4 Kg Part A + 1 litre Part B
Nitobond AR:	5 and 25 litre drums
Fosroc Solvent 102:	5 and 25 litre tins
Fosroc Resivit:	20 litre pails

Coverage and yield

Renderoc HB45:	Approximately 14 litres / 25 kg bag (approximately 1.4 m ² at 10 mm thickness)
Nitoprime Zincrich Plus:	8 m ² /litre
Nitobond AR:	6 - 8 m ² /litre
Renderoc Primer	Approx. 13 litres - 2m ² /litre Handy pack 2.5 litres - 2m ² /litre

Notes: the actual yield per bag of Renderoc HB45 will depend on the consistency used. Yield when spraying may be reduced due to variation in application techniques and also in the nature of possible substrates.

Limitations

Renderoc HB45 should not be used when the temperature is below 3°C and falling. Do not mix part bags. Renderoc HB45 should not be used in areas subjected to traffic (in these circumstances, Renderoc S should be considered). Renderoc HB45 should not be exposed to moving water during application. Exposure to heavy rainfall prior to the final set may result in surface scour.

Where compatibility with lower strength concrete is required, Renderoc HB30 should be used.

If any doubts arise concerning temperature or substrate conditions, consult the local Fosroc office.

Storage

The Renderoc HB45 and Renderoc Primer have a shelf life of 12 months from the date of manufacture if kept in dry storage in the original, unopened bags. If stored at high temperatures and/or high humidity the shelf life may be reduced to less than 6 months.

Nitobond AR and Renderoc Primer Part B should be protected from frost.

Precautions

Health and safety

For further information refer to the appropriate Product Safety Data Sheet available at www.fosroc.com

Fire

Renderoc HB45 is non-flammable. Nitoprime Zincrich Plus and Fosroc Solvent 102 are flammable. Keep away from sources of ignition. No Smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet

Flash points

Nitoprime Zincrich Plus:	41°C
Fosroc Solvent 102:	33°C

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Important note

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April 2025

Fosroc® Nitoprime Zincrich Plus



constructive solutions

Single component zinc primer for use with Renderoc repair system

Uses

Nitoprime Zincrich Plus is the recommended anti-corrosion primer for exposed steel reinforcement for use with Fosroc concrete repair mortars.

It is fully compatible with all Renderoc mortars and fluid micro-concretes.

Advantages

- 'Active' zinc-rich system combats corrosion by electro-chemical means
- Formulated for use with Renderoc repair products
- Single component product — easy to use with no restrictive pot-life
- Economical - single component ensures almost no waste

Description

Nitoprime Zincrich Plus is supplied as a single component grey-coloured liquid based on metallic zinc.

Specification clause

The exposed steel surfaces shall be prepared to a minimum of ST3 standard prior to application of Nitoprime Zincrich Plus, a single-component zinc-rich coating compliant with BS EN 1504-7. An unbroken 40 microns thick coating shall be applied in one or two applications as required to provide 'active' galvanic protection in accordance with the manufacturer's written instructions. It shall have a suitable viscosity to enable the coating to penetrate imperfections and pits within the surface of corrosion-damaged steel bars. The formulation shall be such that it allows the application of the repair mortar to proceed as soon as the coating is touch dry (generally after 1 hour at 20°C.) It shall be fully compatible with the Fosroc system of concrete repair products.

Standards compliance

Nitoprime Zincrich Plus complies with LU Standard 1-085 'Fire Safety Performance of Materials'.

BS EN 1504-7: Reinforcement corrosion protection method 11.1

Properties

Test method	Typical result
Specific gravity:	2.5
Recommended thickness per coat:	40 microns (dry)
Application thickness per coat:	100 microns (wet)
Drying times —	@ 20°C
Touch dry:	1 hours
Fully dry/recoat:	2 hours

Note: at temperatures below 20°C, the drying times will be slower.



CE 0370 09 0370-CPR-0845	
DOP: UK9-48	
Fosroc International Limited Drayton Manor Business Park, Coleshill Road, Tamworth, B78 3XN, UK	
Nitoprime Zincrich Plus	
BS EN 1504-7: Reinforcement corrosion protection method 11.1	
Corrosion protection	Pass
Dangerous substances	Conforms to 5.3

Application instructions

Preparation

Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a minimum of ST3 standard, paying particular attention to the back of exposed steel bars. This should be achieved by suitable mechanical means, e.g. powered wire-brushing, high pressure jetting or alternative equivalent.

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

Application

The application of Nitoprime Zincrich Plus must take place as soon as possible to a dry steel surface after completion of the preparation work but always within 3 hours. The material should be stirred thoroughly before use in order to redisperse any settlement.

Apply one full and unbroken coat of Nitoprime Zincrich Plus by suitable brush, making sure that the back of exposed

Fosroc® Nitoprime Zincrich Plus

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 after 2 hours).

The application of concrete repair materials may proceed as soon as the Nitoprime Zincrich Plus is touch dry (generally 1 hour — see Properties).

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 Plus 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. If the 14 days in an external environment has been exceeded, inspect the coating for signs of damage, remove any dust by vacuuming or utilising oil free compressed air. If damage is detected, remove the affected areas and re-apply Nitoprime Zincrich Plus, lapping onto adjacent areas by a minimum of 20mm.

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, or is less than 3°C above the dew point. At 5°C static temperature or at 5°C and rising, the application may proceed.

Cleaning

Nitoprime Zincrich Plus should be removed from tools, equipment and mixers with Fosroc Solvent 102 immediately after use.

Estimating

Supply

Nitoprime Zincrich Plus:	1.9 litre and 800ml cans
Fosroc Solvent 102 :	5 and 25 litre tins

Coverage

Nitoprime Zincrich Plus:	8 m ² / litre
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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.



Important note

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Limitations

Nitoprime Zincrich Plus should not be applied when the temperature is below 5°C or is 5°C and falling. If any doubts arise concerning temperature or application conditions, consult the local Fosroc office.

Storage

Store in dry conditions in the original containers. Nitoprime Zincrich Plus and Fosroc Solvent 102 have a shelf life of 12 months if kept in a dry store in the original, unopened containers.

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

Precautions

Health and safety

For further information refer to the appropriate Product Safety Data Sheet

Fire

Nitoprime Zincrich Plus and Fosroc Solvent 102 are flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

Flash points

Nitoprime Zincrich Plus:	41°C
Fosroc Solvent 102:	33°C

For further information, refer to the Product Material Safety Data Sheet.

Additional information

Nitoprime Zincrich Plus is the approved reinforcing steel primer for use with the Renderoc, Patchroc, Paveroc and Nitomortar systems of concrete repair.



OHS 740931

FM 610

EMS 61113

Fosroc®

Renderoc Primer



constructive solutions

High performance Polymer / Cement Slurry Bonding agent

Uses

Fosroc Renderoc Primer is a high performance polymer/cement slurry primer for use in conjunction with Fosroc cementitious repair materials.

The primer facilitates bond strengths conforming to the classification of the repair material being used (BS EN 1504-3, class R2, R3, R4).

Advantages

- Easy to use
- High bond strength Adhesion strength achieved conforms to the requirement of BS EN 1504-3, class R2, R3, R4, when used with the relevant Fosroc repair materials
- Cost effective Economical in use

Description

Fosroc Renderoc Primer is a two component cementitious slurry material comprising specially selected cementitious powders and liquid polymer additives. The mixed slurry is applied to properly prepared concreted, the specified Renderoc repair material is then compacted onto the primer whilst this is still wet.

Standards compliance

Renderoc Primer complies with LU Standard 1-085 'Fire Safety Performance of Materials'.

Specification Clause

The primer shall be Renderoc Primer, a two part cement based high performance polymer/cement slurry primer that ensures compliance of the appropriate repair material to the bond strength requirements of BS EN 1504-3, Class R2, R3, R4.

Application instructions

Preparation

Prepare concrete substrates in accordance with the instructions of the chosen Renderoc repair material data sheet. The concrete substrate should be saturated surface dry immediately before the application of the primer i.e. it should be thoroughly saturated with clean water and any residual surface water removed prior to applying Renderoc Primer. Under severe

drying conditions repeated soaking may be necessary to ensure the substrate is still saturated at the time of application of the primer.

Application

Add 3 parts by volume of Renderoc Primer Part A to 1 part by volume Renderoc Primer Part B (4 to 1 by weight) in a clean mixing vessel and mix with a spatula or slow speed drill until a homogeneous smooth slurry is produced.

Scrub Renderoc Primer slurry into the surface.

The Renderoc repair material being used can be applied immediately to the primed surface. If the primer dries apply another coat of primer before continuing.

Cleaning

Wash all equipment with clean water immediately after use.

Estimating

Supply

Renderoc Primer	20kg Part A + 5 litres part B
Renderoc Primer Handy Pack	4kg Part A + 1 litre Part B

Coverage and yield

Renderoc Primer	Approx. 13 litres - 2m ² /litre
Handy pack	2.5 litres - 2m ² / litre

Limitations

Do not use Renderoc Primer when the temperature is below 5°C and falling.

Storage

Store in dry conditions at 5°-25°C. Shelf life is 12 months if stored in dry conditions. Protect from frost.

Open bags of Renderoc Primer Part A should be sealed and stored in a dry area. Use within 14 days.

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

Fire

Renderoc Primer is non-flammable.

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Fosroc® Nitobond AR

Polymer emulsion bonding agent

Uses

Nitobond AR is recommended as a curing membrane for Renderoc repair mortars. It may also be used as an economical dust proofer and surface sealer for non-trafficked cementitious surfaces.

Advantages

- Single component No site mixing
- Easy to use Ready to use straight from the container
- Cost effective Economical in use
- Curing aid Nitobond AR can be used as a curing membrane for Renderoc systems

Description

Nitobond AR is a single component polymer emulsion designed for use as a curing membrane with Fosroc Renderoc repair products. Nitobond AR can be used as a curing membrane and also a concrete surface sealer in non-traffic areas.

Specification clauses

Curing Membrane: All repair areas shall be correctly cured by the application of Nitobond AR immediately after application of the repair mortar or removal of the formwork as applicable. Large areas (0.5 m² at a time) shall be cured as trowelling progresses without waiting for completion of the whole 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.

Surface Sealer: The designated surfaces shall be sealed with a two coat application of Nitobond AR. The first coat shall be diluted 1:1 by volume with water, the second coat as supplied. The product application shall be in accordance with the manufacturer's written instructions to a correctly prepared surface.

Application instructions

Preparation

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

Application

Nitobond AR is supplied ready for use when used as a bonding primer or curing membrane. When used as a dust-proofer / surface sealer Nitobond AR should be diluted 1:1 with water for the first coat and as supplied for the second coat. Application should be by spray, brush or medium pile roller. Care should be taken to ensure complete and thorough wetting of the surface.

Cleaning

Wash all equipment with clean water immediately after use.

Estimating

Supply

Nitobond AR	5 litre bottles
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Coverage and yield

As Curing Membrane

Nitobond AR	6-8m ² / litre
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As Surface Sealer

1st coat	6 – 10m ² / litre (of mixed 1:1 dilution with water)
2nd coat	6 - 10m ² / litre (used as supplied)

Limitations

Do not use Nitobond AR when the temperature is below 3°C and falling.

Storage

Store in dry conditions at 5°-25°C. Shelf life is 12 months if stored in dry conditions. Protect from frost.

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet.

Fire

Nitobond AR is non-flammable.

Fosroc and Nitobond are trademarks
Fosroc International Limited



Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given. All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.

Fosroc International Limited

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Coleshill Road, Tamworth,
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enquiryuk@fosroc.com





SDS



SAFETY DATA SHEET RENDEROC HB45

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name RENDEROC HB45
Product number 2201100UK9
UFI UFI: S610-E0C2-400U-AW49

2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses mortier de réparation à base de ciment

3. Details of the supplier of the safety data sheet

Manufacturer Fosroc International Limited
 Drayton Manor Business Park
 Coleshill Road
 Tamworth
 Staffordshire
 B78 3XN
 England
 Tel: +44 (0) 1827 262222
 Fax: +44 (0) 1827 262444
enquiryuk@fosroc.com

1.4. Emergency telephone number

Emergency telephone +45 74848884 (MON- FRI 08:00 - 16:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards Not Classified

Human health Dust or splashes from the mixture may cause permanent eye damage. Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing. Dust has an irritating effect on moist skin. Prolonged contact with moist or wet product may cause burns. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Environmental The product will harden into a solid mass in contact with water and moisture. The resultant material is not biodegradable.

2.2. Label elements

RENDEROC HB45

Hazard pictograms



Signal word

Danger

Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

ORDINARY PORTLAND CEMENT

Supplementary precautionary statements

P261 Avoid breathing vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/ doctor.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SILICA SAND		30-60%
CAS number: 14808-60-7	EC number: 238-878-4	
Classification Not Classified		
ORDINARY PORTLAND CEMENT		10-30%
CAS number: 65997-15-1	EC number: 266-043-4	
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335		

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GROUND GRANULATED BLASTFURNACE SLAG (GGBS)			10-30%
CAS number: 65996-69-2	EC number: 266-002-0	REACH registration number: 01-2119487456-25-XXXX	
Classification Not Classified			
FUMES, SILICA			1-5%
CAS number: 69012-64-2	EC number: 273-761-1		
Classification Not Classified			
CALCIUM ALUMINATE SULPHATE			1-5%
CAS number: 12005-25-3	EC number: 818-462-4		
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 STOT SE 3 - H335			

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement or wet cement containing preparations.
Inhalation	Move affected person to fresh air at once. Dust in throat and nasal passages should clear spontaneously. Get medical attention if irritation persists or later develops, or if discomfort, coughing or other symptoms persist.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention. Show this Safety Data Sheet to the medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Ingestion	Ingestion of large doses may result in irritation to the gastrointestinal tract.
Skin contact	May have an irritating effect on moist skin after prolonged contact, or may cause dermatitis after repeated contact. Prolonged skin contact with wet preparation may cause serious burns without pain being felt, including through clothing.

RENDEROC HB45

Eye contact Eye contact may cause serious and potentially irreversible injuries.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

2. Special hazards arising from the substance or mixture

Specific hazards Water used for fire extinguishing, which has been in contact with the product, may be corrosive. No unusual fire or explosion hazards noted.

Hazardous combustion products No known hazardous decomposition products.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use work methods which minimize dust production. Avoid contact with eyes and prolonged skin contact. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust.

6.2. Environmental precautions

Environmental precautions Collect and dispose of spillage as indicated in Section 13. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Dry material: Collect powder using special dust vacuum cleaner with particle filter. Alternatively, damp powder with fine spray (to avoid dust formation) and remove slurry. Place into container and allow to solidify before disposal as described in section 13. Wet material: Clean up wet material and place in a container. Allow to dry and solidify before disposal as described in section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Avoid generation and spreading of dust. Avoid inhalation of dust. Mechanical ventilation or local exhaust ventilation may be required. Change contaminated clothing. Do not eat, drink or smoke when using the product.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions

Store in tightly-closed, original container in a dry and cool place. Unsuitable container materials: Aluminium. The product contains less than 2 mg chromate/kg dry cement, and this limit will not be exceeded for 6 months from the packing date stated on the packaging. Seal opened containers and use up as soon as possible. To be stored out of reach of children in its original packaging in a dry place.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

SILICA SAND

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³ Respirable crystalline silica

ORDINARY PORTLAND CEMENT

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

FUMES, SILICA

Long-term exposure limit (8-hour TWA): 6 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): 2.4 mg/m³ respirable dust

CALCIUM ALUMINATE SULPHATE

Long-term exposure limit (8-hour TWA): ACGIH/TLV:0.1 mg/m³ res

TLV - Threshold Limit Value 10 mg/m³

WEL = Workplace Exposure Limit.

ORDINARY PORTLAND CEMENT (CAS: 65997-15-1)

DNEL

Workers - Inhalation; Short term : 3 mg/m³

2,2-DIMETHYL 1,3-PROPANEDIOL (CAS: 126-30-7)

DNEL

Workers - Inhalation; Long term systemic effects: 35 mg/m³

Workers - Dermal; Long term systemic effects: 10 mg/kg bw/day

General population - Inhalation; Long term systemic effects: 8.7 mg/m³

General population - Dermal; Long term systemic effects: 5 mg/kg bw/day

General population - Oral; Long term systemic effects: 5 mg/kg bw/day

PNEC

- Fresh water; 5 mg/l

- marine water; 0.5 mg/l

- STP; 20 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Atmospheric levels of dust must be maintained within the Occupational Exposure Limit. Where mechanical methods are inadequate or impractical, appropriate personal protective equipment must be used.

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Personal protection	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. This product may present a chromate (VI) allergy risk. It contains a chromate reducing agent, but users should wear appropriate personal protective equipment.
Eye/face protection	The following protection should be worn: Chemical splash goggles. (conform EN 166)
Hand protection	Use impervious, abrasion and alkali resistant gloves. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.
Other skin and body protection	Use barrier creams to minimise skin contact. Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	This product contains silica sands. The grain size distribution of silica sand present means that it is not classified as hazardous. However, any respirable crystalline dust generated by secondary processing may cause health effects. Prolonged and /or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.
Respiratory protection	Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Dusty powder.
Colour	Grey.
Odour	Odourless.
Odour threshold	Not relevant.
pH	pH (concentrated solution): >12
Melting point	>1250°C
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	The product is not flammable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Solubility(ies)	Slightly soluble in water. Hardens in contact with water.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not applicable.

RENDEROC HB45

Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.
Comments	Information given is applicable to the product as supplied.
<u>9.2. Other information</u>	
Other information	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	When mixed with water, hardens to form a stable mass that is not reactive in normal conditions.
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10.2. Chemical stability

Stability	Stable under the prescribed storage conditions. When stored under humid conditions, the chromate neutralization will decrease. This product contains a chromate reducing agent to reduce the risk of allergic dermatitis caused by chromium (VI). This product has a shelf life. If not stored in accordance with packaging instructions (sealed and dry), there is an increased risk of the presence of hexavalent chromate leading to an increased risk of an allergic reaction.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known. Will not polymerise.
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4. Conditions to avoid

Conditions to avoid	Water, moisture.
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5. Incompatible materials

Materials to avoid	Acids. Chemically-active metals.
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10.6. Hazardous decomposition products

Hazardous decomposition products	No known hazardous decomposition products.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin sensitisation

Skin sensitisation	Some individuals may exhibit eczema upon exposure to wet cement caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness is not exceeded, a sensitising effect is not expected.
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Inhalation	Irritating to respiratory system. Inflammation of the nasal mucous membrane by exposure to cement dust.
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Ingestion	May cause irritation of mouth, throat and digestive tract.
------------------	--

RENDEROC HB45

Skin contact This product is strongly irritating. Prolonged contact may cause burns. May cause sensitisation by skin contact.

Eye contact Irritating and may injure eye tissue if not removed promptly.

Acute and chronic health hazards Repeated and/or prolonged contact may lead to dermatitis.

Toxicological information on ingredients.

ORDINARY PORTLAND CEMENT

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 2,000.0 mg/kg)

Species Rabbit

CALCIUM ALUMINATE SULPHATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 20,000.0 mg/kg)

Species Rat

ATE oral (mg/kg) 20,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 25,000.0 mg/kg)

Species Rat

ATE dermal (mg/kg) 25,000.0

SECTION 12: Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment.

Ecological information on ingredients.

CALCIUM ALUMINATE SULPHATE

Ecotoxicity Not determined.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish

Not determined.

The product is not expected to be hazardous to the environment. The addition of cements to water will, however, cause the pH to rise and may therefore be toxic to aquatic life in some circumstances.

Ecological information on ingredients.

ORDINARY PORTLAND CEMENT

Acute aquatic toxicity

Acute toxicity - fish

Not determined.

12.2. Persistence and degradability

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Persistence and degradability The product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product hardens to a solid, immobile substance. The product is not volatile but may be spread by dust-raising handling.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not empty into drains, sewers or water courses. Cement that has exceeded its shelf life: when demonstrated that it contains more than 0.0002% Cr (VI), the product shall not be used other than in controlled closed and totally automated processes. It may be recycled and/or treated again with a reducing agent.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Note that fully cured material is not considered as hazardous waste.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

1. UN number

Not relevant.

2. UN proper shipping name

Not relevant.

3. Transport hazard class(es)

Not relevant.

4. Packing group

Not relevant.

5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

6. Special precautions for user

Not relevant.

7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not relevant.

Annex II of MARPOL 73/78 and the IBC Code

RENDEROC HB45

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).

EU legislation Commission Regulation (EU) No 453/2010 of 20 May 2010.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information For professional users only. Only trained personnel should use this material.

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 22/12/2020

Revision 8b

Supersedes date 25/10/2019

SDS number 10857

Hazard statements in full H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.



constructive solutions

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes Date 22/09/2021***

Revision date 13/06/2025

Revision Number 8.01

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name NITOPRIME ZINCRICH PLUS

Safety data sheet number 12007

Form Liquid

Unique Formula Identifier (UFI) 3SD0-R0HN-G00N-MYT0

Pure substance/mixture Mixture

Contains HYDROCARBONS, C9, aromatics; CHLORINATED PARAFFIN (C14-17)

2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Corrosion inhibitor

Uses advised against Consumer use

3. Details of the supplier of the safety data sheet

Supplier

Fosroc International Limited
Drayton Manor Business Park
Coleshill Road
Tamworth
Staffordshire
B78 3XN
England
Tel. +44 (0) 1827 262222
Fax. +44 (0) 1827 262444

For further information, please contact

E-mail address enquiryuk@fosroc.com

1.4. Emergency telephone number

Emergency Telephone +44 (0) 1827 265 279 (Monday to Sunday, 24 hours a day)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Flammable liquids	Category 3 - (H226)
Effects on or via lactation	Yes - (H362)
Aspiration hazard	Category 1 - (H304)
Hazardous to the aquatic environment - acute	Category 1 - (H400)
Hazardous to the aquatic environment - chronic	Category 1 - (H410)

2.2. Label elements

Contains HYDROCARBONS, C9, aromatics; CHLORINATED PARAFFIN (C14-17)

**Signal word**

Danger

Hazard statements

H226 - Flammable liquid and vapour.

H261 - In contact with water releases flammable gases.

H304 - May be fatal if swallowed and enters airways.

H362 - May cause harm to breast-fed children.

H410 - Very toxic to aquatic life with long lasting effects.***

Precautionary statements

P201 - Obtain special instructions before use.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 - Do not breathe dust, fume, gas, mist, vapors and spray.

P263 - Avoid contact during pregnancy and while nursing.

P273 - Avoid release to the environment.

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P331 - Do NOT induce vomiting.

P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish.

P391 - Collect spillage.

P403 + P235 - Store in a well-ventilated place. Keep cool.

Additional information

Restricted to professional users.

2.3. Other hazards**Other hazards**

This product does not contain any known or suspected endocrine disruptors.

PBT and vPvB assessment

The product does not contain any substance(s) classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
ZINC POWDER 7440-66-6	50 - <100%	231-175-3 (030-001-01-9) (030-001-00-1)	-	Pyr. Sol. 1 (H250) Water-react. 1 (H260) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-	T
HYDROCARBONS, C9, aromatics 64742-95-6	10 - <25%	265-199-0 (649-356-00-4)	-	Flam. Liq. 3 (H226) STOT SE3 (H335, H336) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)	-	-	-	P
ZINC OXIDE 1314-13-2	2.5 - <5%	215-222-5 (030-013-00-7)	-	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-	-
CHLORINATED PARAFFIN (C14-17) 85535-85-9	1 - <2.5%	287-477-0 (602-095-00-X)	-	Lact. (H362) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH066)	-	-	-	-
CALCIUM OXIDE 1305-78-8 CLP No 200-753-7	0.025 - <0.25%	215-138-9	-	Skin Irrit. 2 (H315) Eye Dam. 1 (H318) STOT SE 3 (H335)	-	-	-	-

Note P - The harmonized classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0.1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102)-P260-P262-P301 + P310-P331 shall apply.

Note T - This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.

Full text of H- and EUH-phrases: see section 16**Acute Toxicity Estimate**

In the absence of LD50/LC50 data, the conversion value (converted acute toxicity point estimate) may be indicated here; please note that these values do not represent test results

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
ZINC POWDER 7440-66-6	630	No data available	No data available	No data available	No data available
HYDROCARBONS, C9, aromatics	8400	2000	No data available	No data available	No data available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
64742-95-6					
ZINC OXIDE 1314-13-2	5000	2000	5.7	No data available	No data available
CHLORINATED PARAFFIN (C14- 17) 85535-85-9	13150	No data available	No data available	No data available	No data available
CALCIUM OXIDE 1305-78-8	2000	2500	6.04	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical attention.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses if present and easy to do so. Continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Difficulty in breathing. Coughing and/ or wheezing. Dizziness.
Effects of Exposure	No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapours or mists. Keep away from

heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with local regulations. Flammable liquid storage.

7.3. Specific end use(s)**Specific use(s)**

The identified uses for this product are detailed in Section 1.2.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical name	United Kingdom
CALCIUM OXIDE 1305-78-8	TWA: 1 mg/m ³ TWA: 2 mg/m ³ STEL: 4 mg/m ³ STEL: 6 mg/m ³

Note**Biological occupational exposure limits**

See section 16 for terms and abbreviations

This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Derived No Effect Level (DNEL) - Workers No information available

Chemical name	Oral	Dermal	Inhalation
ZINC POWDER 7440-66-6	-	83 mg/kg bw/day [4] [6]	5 mg/m ³ [4] [6]
HYDROCARBONS, C9, aromatics 64742-95-6	-	-	1286.4 mg/m ³ [4] [7] 837.5 mg/m ³ [5] [6] 1066.67 mg/m ³ [5] [7]
ZINC OXIDE 1314-13-2	-	83 mg/kg bw/day [4] [6]	5 mg/m ³ [4] [6] 0.5 mg/m ³ [5] [6]
CHLORINATED PARAFFIN (C14- 17) 85535-85-9	-	47.9 mg/kg bw/day [4] [6]	6.7 mg/m ³ [4] [6]
CHLORINATED PARAFFIN 63449-39-8	-	450 mg/kg bw/day [4] [6]	63.5 mg/m ³ [4] [6]

Chemical name	Oral	Dermal	Inhalation
CASTOR OIL (HYDROGENATED) 8001-78-3	-	47.75 mg/kg bw/day [4] [6]	336.75 mg/m ³ [4] [6]
CALCIUM OXIDE 1305-78-8	-	-	1 mg/m ³ [5] [6] 4 mg/m ³ [5] [7]
2-piperazin-1- ylethylamine 140-31-8	-	3.33 mg/kg bw/day [4] [6]	10.6 mg/m ³ [4] [6] 10.6 mg/m ³ [4] [7] 15 µg/m ³ [5] [6] 80 mg/m ³ [5] [7]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

Derived No Effect Level (DNEL) - General Public No information available.

Chemical name	Oral	Dermal	Inhalation
ZINC POWDER 7440-66-6	0.83 mg/kg bw/day [4] [6]	-	2.5 mg/m ³ [4] [6]
HYDROCARBONS, C9, aromatics 64742-95-6	-	-	1152 mg/m ³ [4] [7] 178.57 mg/m ³ [5] [6] 640 mg/m ³ [5] [7]
ZINC OXIDE 1314-13-2	0.83 mg/kg bw/day [4] [6]	-	2.5 mg/m ³ [4] [6]
CHLORINATED PARAFFIN (C14- 17) 85535-85-9	0.58 mg/kg bw/day [4] [6]	-	2 mg/m ³ [4] [6]
CHLORINATED PARAFFIN 63449-39-8	4.5 mg/kg bw/day [4] [6]	-	-
CASTOR OIL (HYDROGENATED) 8001-78-3	23.875 mg/kg bw/day [4] [6]	-	83.045 mg/m ³ [4] [6]
[4] CALCIUM [5] OXIDE [6] 1305-78-8	Systemic health effects. Local health effects. Long term.	-	1 mg/m ³ [5] [6] 4 mg/m ³ [5] [7]
[7]	Short term.		

Predicted No Effect Concentration (PNEC) No information available.

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
ZINC POWDER 7440-66-6	20.6 µg/L	-	6.1 µg/L	-	-
ZINC OXIDE 1314-13-2	20.6 µg/L	-	6.1 µg/L	-	-
CHLORINATED PARAFFIN (C14- 17) 85535-85-9	1 µg/L	-	0.2 µg/L	-	-
CHLORINATE D PARAFFIN 63449-39-8	0.0029 mg/L	0.0029 mg/L	0.00058 mg/L	-	-
CALCIUM OXIDE 1305-78-8	0.37 mg/L	0.37 mg/L	0.24 mg/L	0.24 mg/L	-
2-piperazin-1-ylethylamine 140-31-8	0.058 mg/L	0.58 mg/L	0.0058 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
ZINC POWDER 7440-66-6	235.6 mg/kg sediment dw	121 mg/kg sediment dw	100 µg/L	106.8 mg/kg soil dw	-
ZINC OXIDE 1314-13-2	117.8 mg/kg sediment dw	56.5 mg/kg sediment dw	100 µg/L	35.6 mg/kg soil dw	-
CHLORINATED PARAFFIN (C14-17) 85535-85-9	13 mg/kg sediment dw	2.6 mg/kg sediment dw	80 mg/L	11.9 mg/kg soil dw	10 mg/kg food
CHLORINATED PARAFFIN 63449-39-8	5710 mg/kg sediment dw	5710 ng/kg sediment dw	60 mg/L	4640 mg/kg soil dw	10 mg/kg food
CALCIUM OXIDE 1305-78-8	-	-	2.27 mg/L	817.4 mg/kg soil dw	-
Engineering controls 140-31-8	215 mg/kg sediment dw	21.5 mg/kg sediment dw	250 mg/L	1 mg/kg soil dw	-

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Eye protection must conform to standard EN 166.

Hand protection Wear suitable gloves. Impervious gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Nitrile rubber Polyvinyl chloride (PVC)	0.4 mm	

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Recommended filter type: Use respiratory equipment with gas filter, type A2.

Environmental exposure controls Product is not classified as hazardous for the environment, avoid spillage as much as possible.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance Liquid
Physical state Liquid
Colour Grey

Odour	Aromatic hydrocarbons	
Odour threshold	Not determined	
Property	Values	Remarks • Method
pH	No data available	Not applicable
pH (as aqueous solution)	No data available	Not applicable
Melting point / freezing point	No data available	Not applicable
Initial boiling point and boiling range	155 - 181 °C	None known
Flash point	41 °C	CC (closed cup)
Evaporation rate	0.2 (ethanol=1)	None known
Flammability	No data available	None known
Flammability Limit in Air		Not determined
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	0.25 kPa	@ 20 °C
Relative vapour density	No data available	Not determined
Relative density	2.6	25 °C
Bulk density	No data available	
Liquid Density	No data available	
Solubility(ies)	Insoluble in water	None known
Water solubility	No data available	None known
Partition coefficient	No data available	Not determined
Autoignition temperature	> 450 °C	None known
Decomposition temperature		Not determined
SADT (°C)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	6 Poise	25 °C
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	The mixture does not meet the criteria for classification as oxidising.	

9.2. Other information Maximum VOC of 495 g/l.

Information with regards to physical hazard classes

None known

Other safety characteristics

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Acids. Alkalis. Reacts with strong oxidizing agents.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

5. Incompatible materials

Incompatible materials Acids. Alkali. Oxidising agent.

6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapours. Carbon monoxide. Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. May cause irritation.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	16,172.60 mg/kg
ATEmix (dermal)	12,660.40 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapour)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	155.80 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
ZINC POWDER	= 630 mg/kg (Rat)	-	-
HYDROCARBONS, C9, aromatics	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
ZINC OXIDE	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h

CHLORINATED PARAFFIN (C14-17)	> 10 mL/kg (Rat)	-	-
CALCIUM OXIDE	> 2000 mg/kg (Rat)	> 2500 mg/kg (Rat)	> 6.04 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Classification based on data available for ingredients. May cause harm to breast-fed children.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	United Kingdom
CHLORINATED PARAFFIN (C14-17)	Lact.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard May be fatal if swallowed and enters airways.

Other adverse effects None known.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
ZINC POWDER	EC50: 0.11 - 0.271mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.09 - 0.125mg/L (72h, Pseudokirchneriella subcapitata)	LC50: 2.16 - 3.05mg/L (96h, Pimephales promelas) LC50: 0.211 - 0.269mg/L (96h, Pimephales promelas) LC50: =2.66mg/L (96h, Pimephales promelas) LC50: =30mg/L (96h,	-	EC50: 0.139 - 0.908mg/L (48h, Daphnia magna)

		Cyprinus carpio) LC50: =0.45mg/L (96h, Cyprinus carpio) LC50: =7.8mg/L (96h, Cyprinus carpio) LC50: =3.5mg/L (96h, Lepomis macrochirus) LC50: =0.24mg/L (96h, Oncorhynchus mykiss) LC50: =0.59mg/L (96h, Oncorhynchus mykiss) LC50: =0.41mg/L (96h, Oncorhynchus mykiss)		
HYDROCARBONS, C9, aromatics	-	LC50: =9.22mg/L (96h, Oncorhynchus mykiss)	-	EC50: =6.14mg/L (48h, Daphnia magna)
ZINC OXIDE	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
12.2. Persistence and degradability				
CALCIUM OXIDE	-	LC50: =1070mg/L (96h, Cyprinus carpio)	-	-
Persistence and degradability	The product is not expected to be biodegradable.			

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Component Information

Chemical name	Partition coefficient
CHLORINATED PARAFFIN (C14-17)	7

12.4. Mobility in soil

Mobility in soil The product contains substances which are insoluble in water and which may spread on watersurfaces. The product contains volatile substances which may spread in the atmosphere.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
ZINC POWDER	Not PBT/vPvB
HYDROCARBONS, C9, aromatics	Not PBT/vPvB
ZINC OXIDE	Not PBT/vPvB
CHLORINATED PARAFFIN (C14-17)	Not PBT/vPvB
CALCIUM OXIDE	Not PBT/vPvB

12.6. Other adverse effects

No information available.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

1. UN number or ID number	UN1263
2. UN proper shipping name	PAINT RELATED MATERIAL (ZINC METAL)
3. Transport hazard class(es)	3
4. Packing group	III
5. Environmental hazards	Yes
6. Special precautions for user	
Special Provisions	None

IMDG

1. UN number or ID number	UN1263
2. UN proper shipping name	PAINT RELATED MATERIAL (ZINC METAL)
3. Transport hazard class(es)	3
4. Packing group	III
5. Environmental hazards	Yes
6. Special precautions for user	
Special Provisions	None
7. Maritime transport in bulk according to IMO instruments	NOT APPLICABLE

RID

1. UN number or ID number	UN1263
2. UN proper shipping name	PAINT RELATED MATERIAL (ZINC METAL)
3. Transport hazard class(es)	3
4. Packing group	III
5. Environmental hazards	Yes
6. Special precautions for user	
Special Provisions	None
Classification code	F1***

ADR

1. UN number or ID number	UN1263
2. UN proper shipping name	PAINT RELATED MATERIAL (ZINC METAL)
3. Transport hazard class(es)	3
4. Packing group	III
5. Environmental hazards	Yes
6. Special precautions for user	
Special Provisions	None
Classification code	F1***
Tunnel restriction code	(D/E)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Control of Substances Hazardous to Health Regulations 2002 (as amended). Workplace Exposure Limits EH40 REACH Regulation

(EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

Chemical name	Restricted substance per UK REACH Annex XVII	Substance subject to authorization per UK REACH Annex XIV
HYDROCARBONS, C9, aromatics 64742-95-6	Use restricted. See item 28. Use restricted. See item 29. Restricted Carcinogen 1B Restricted Mutagen 1B	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH (SI 2015/483 as amended)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

Named dangerous substances per COMAH (SI 2015/483 as amended)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
HYDROCARBONS, C9, aromatics 64742-95-6	-	25000

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Chemical name	The Biocidal Products Regulations 2001 (as amended)
CALCIUM OXIDE 1305-78-8	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 3: Veterinary hygiene

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons and Explosive Precursors

Not applicable.

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status
TCSI	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report

No chemical safety assessment has been carried out.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

EUH066 - Repeated exposure may cause skin dryness or cracking
 H226 - Flammable liquid and vapour
 H250 - Catches fire spontaneously if exposed to air
 H260 - In contact with water releases flammable gases which may ignite spontaneously
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 P201 - Obtain special instructions before use
 P260 - Do not breathe dust, fume, gas, mist, vapors and spray
 P263 - Avoid contact during pregnancy and while nursing
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P308 + P313 - IF exposed or concerned: Get medical advice/attention
 P273 - Avoid release to the environment
 P391 - Collect spillage
 P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting
 P405 - Store locked up
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P233 - Keep container tightly closed
 P240 - Ground and bond container and receiving equipment
 P241 - Use explosion-proof electrical, ventilating and lighting equipment
 P242 - Use non-sparking tools
 P243 - Take action to prevent static discharges
 P280 - Wear protective gloves, protective clothing, eye protection and face protection
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
 P370 + P378 - In case of fire: Use .? to extinguish
 P403 + P235 - Store in a well-ventilated place. Keep cool
 P501 - Dispose of contents/container to industrial incineration plant

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area

BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative

VPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitiser
RS	Respiratory Sensitiser
S	Sensitiser
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Supersedes date 22/09/2021***

Revision date 13/06/2025

Reason for revision Updated as per GHS

Restrictions on use For professional use only

This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



SAFETY DATA SHEET RENDEROC PRIMER PART A

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name RENDEROC PRIMER PART A

Product number A2224301UK9, A2224304UK9

2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Cementitious overlay

3. Details of the supplier of the safety data sheet

Supplier Fosroc International Limited
Drayton Manor Business Park
Coleshill Road
Tamworth
Staffordshire
B78 3XN
England
Tel: +44 (0) 1827 262222
Fax: +44 (0) 1827 262444
enquiryuk@fosroc.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 1827 265 279 (Monday-Sunday 24 hours a day)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335

Environmental hazards Not Classified

Human health Dust or splashes from the mixture may cause permanent eye damage. Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing. Dust has an irritating effect on moist skin. Prolonged contact with moist or wet product may cause burns. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Environmental The product will harden into a solid mass in contact with water and moisture. The resultant material is not biodegradable.

2.2. Label elements

RENDEROC PRIMER PART A

Hazard pictograms



Signal word

Danger

Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

Precautionary statements

P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

ORDINARY PORTLAND CEMENT

Supplementary precautionary statements

P261 Avoid breathing dust.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/ doctor.
P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ORDINARY PORTLAND CEMENT		30-60%
CAS number: 65997-15-1		EC number: 266-043-4
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335		

RENDEROC PRIMER PART A

SILICA SAND		30-60%
CAS number: 14808-60-7	EC number: 238-878-4	
No. REACH: Exempt of registration		
Classification		
Not Classified		

CALCIUM CARBONATE-LIMESTONE(0.5 mm)		5-10%
CAS number: 1317-65-3		
Classification		
Not Classified		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	No personal protective equipment is needed for first aid responders. First aid workers should avoid contact with wet cement or wet cement containing preparations.
Inhalation	Move affected person to fresh air at once. Dust in throat and nasal passages should clear spontaneously. Get medical attention if irritation persists or later develops, or if discomfort, coughing or other symptoms persist.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin contact	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention. Show this Safety Data Sheet to the medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Ingestion	Ingestion of large doses may result in irritation to the gastrointestinal tract.
Skin contact	May have an irritating effect on moist skin after prolonged contact, or may cause dermatitis after repeated contact. Prolonged skin contact with wet preparation may cause serious burns without pain being felt, including through clothing.
Eye contact	Eye contact may cause serious and potentially irreversible injuries.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

RENDEROC PRIMER PART A

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Water used for fire extinguishing, which has been in contact with the product, may be corrosive. No unusual fire or explosion hazards noted.

Hazardous combustion products No known hazardous decomposition products.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Use work methods which minimize dust production. Avoid contact with eyes and prolonged skin contact. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust.

6.2. Environmental precautions

Environmental precautions Collect and dispose of spillage as indicated in Section 13. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Dry material: Collect powder using special dust vacuum cleaner with particle filter. Alternatively, damp powder with fine spray (to avoid dust formation) and remove slurry. Place into container and allow to solidify before disposal as described in section 13. Wet material: Clean up wet material and place in a container. Allow to dry and solidify before disposal as described in section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Avoid generation and spreading of dust. Avoid inhalation of dust. Mechanical ventilation or local exhaust ventilation may be required. Change contaminated clothing. Do not eat, drink or smoke when using the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Unsuitable container materials: Aluminium. The product contains less than 2 mg chromate/kg dry cement, and this limit will not be exceeded for 6 months from the packing date stated on the packaging. Seal opened containers and use up as soon as possible. To be stored out of reach of children in its original packaging in a dry place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

RENDEROC PRIMER PART A

8.1. Control parameters

Occupational exposure limits

ORDINARY PORTLAND CEMENT

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

SILICA SAND

Long-term exposure limit (8-hour TWA): WEL 0,05 mg/m³ respirable dust

CALCIUM CARBONATE-LIMESTONE(0.5 mm)

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

WEL = Workplace Exposure Limit.

ORDINARY PORTLAND CEMENT (CAS: 65997-15-1)

DNEL

Workers - Inhalation; Short term : 3 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Atmospheric levels of dust must be maintained within the Occupational Exposure Limit. Where mechanical methods are inadequate or impractical, appropriate personal protective equipment must be used.

Personal protection

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. This product may present a chromate (VI) allergy risk. It contains a chromate reducing agent, but users should wear appropriate personal protective equipment.

Eye/face protection

The following protection should be worn: Chemical splash goggles. (conform EN 166)

Hand protection

Use impervious, abrasion and alkali resistant gloves. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin. Protective gloves should have a minimum thickness of 0.4 mm. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Use barrier creams to minimise skin contact. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

This product contains silica sands.
The grain size distribution of silica sand present means that it is not classified as hazardous. However, any respirable crystalline dust generated by secondary processing may cause health effects.
Prolonged and /or massive inhalation of respirable crystalline silica dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness.
Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

Respiratory protection

Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

RENDEROC PRIMER PART A

Appearance	Dusty powder.
Colour	Grey.
Odour	Odourless.
Odour threshold	Not relevant.
pH	pH (concentrated solution): >12
Melting point	>1250°C
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	The product is not flammable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Solubility(ies)	Slightly soluble in water. Hardens in contact with water.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not applicable.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.
Comments	Information given is applicable to the product as supplied.
<u>9.2. Other information</u>	
Other information	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	When mixed with water, hardens to form a stable mass that is not reactive in normal conditions.
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10.2. Chemical stability

Stability	Stable under the prescribed storage conditions. When stored under humid conditions, the chromate neutralization will decrease. This product contains a chromate reducing agent to reduce the risk of allergic dermatitis caused by chromium (VI). This product has a shelf life. If not stored in accordance with packaging instructions (sealed and dry), there is an increased risk of the presence of hexavalent chromate leading to an increased risk of an allergic reaction.
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10.3. Possibility of hazardous reactions

RENDEROC PRIMER PART A

Possibility of hazardous reactions None known. Will not polymerise.

4. Conditions to avoid

Conditions to avoid Water, moisture.

5. Incompatible materials

Materials to avoid Acids. Chemically-active metals.

10.6. Hazardous decomposition products

Hazardous decomposition products No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin sensitisation

Skin sensitisation Some individuals may exhibit eczema upon exposure to wet cement caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis. The cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness is not exceeded, a sensitising effect is not expected.

Inhalation Irritating to respiratory system. Inflammation of the nasal mucous membrane by exposure to cement dust.

Ingestion May cause irritation of mouth, throat and digestive tract.

Skin contact This product is strongly irritating. Prolonged contact may cause burns. May cause sensitisation by skin contact.

Eye contact Irritating and may injure eye tissue if not removed promptly.

Acute and chronic health hazards Repeated and/or prolonged contact may lead to dermatitis.

Toxicological information on ingredients.

ORDINARY PORTLAND CEMENT

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rabbit

SECTION 12: Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment.

Ecological information on ingredients.

SILICA SAND

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute aquatic toxicity

RENDEROC PRIMER PART A

Acute toxicity - fish

Not determined.

The product is not expected to be hazardous to the environment. The addition of cements to water will, however, cause the pH to rise and may therefore be toxic to aquatic life in some circumstances.

Ecological information on ingredients.

ORDINARY PORTLAND CEMENT

Acute aquatic toxicity

Acute toxicity - fish

Not determined.

12.2. Persistence and degradability

Persistence and degradability The product is not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility

The product hardens to a solid, immobile substance. The product is not volatile but may be spread by dust-raising handling.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Do not empty into drains, sewers or water courses. Cement that has exceeded its shelf life: when demonstrated that it contains more than 0.0002% Cr (VI), the product shall not be used other than in controlled closed and totally automated processes. It may be recycled and/or treated again with a reducing agent.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Note that fully cured material is not considered as hazardous waste.

SECTION 14: Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

1. UN number

Not relevant.

2. UN proper shipping name

Not relevant.

3. Transport hazard class(es)

Not relevant.

4. Packing group

Not relevant.

RENDEROC PRIMER PART A

5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

6. Special precautions for user

Not relevant.

7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not relevant.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service. DMEL: Derived Minimal Effect Level. DNEL: Derived No Effect Level. PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. TWA: Time Weighted Average vPvB: Very Persistent and Very Bioaccumulative.
General information	For professional users only. Only trained personnel should use this material.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	03/11/2020
Revision	2c
Supersedes date	21/10/2019
SDS number	21939
Hazard statements in full	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation.

RENDEROC PRIMER PART A

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.



constructive solutions

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 15/05/2025

Revision Number 3.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name RENDEROC PRIMER PART B

Safety data sheet number 21940

Form Liquid

Pure substance/mixture Mixture

2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Liquid component for waterproofing membrane primer

Uses advised against Consumer use

3. Details of the supplier of the safety data sheet

Supplier

Fosroc International Limited
Drayton Manor Business Park
Coleshill Road
Tamworth
Staffordshire
B78 3XN
England
Tel. +44 (0) 1827 262222
Fax. +44 (0) 1827 262444

For further information, please contact

E-mail address enquiryuk@fosroc.com

1.4. Emergency telephone number

Emergency Telephone +44 (0) 1827 265 279 (Monday to Sunday, 24 hours a day)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Not classified.

2.2. Label elements

Not classified.

Hazard statements

Not classified.

EUH208 - Contains 1,2-BENZISOTHIAZOL-3(2H)-ONE. May produce an allergic reaction.

EUH210 - Safety data sheet available on request.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Other hazards

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

1 . Substances

Not applicable

2 . Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	<0.025%	220-120-9 (613-088-00-6)	-	Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Eye Dam. 1 (H318) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Aquatic Chronic 3 (H412)	Skin Sens. 1 :: C>=0.05%	-	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

In the absence of LD50/LC50 data, the conversion value (converted acute toxicity point estimate) may be indicated here; please note that these values do not represent test results

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	1020	2000	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues. If in doubt, get medical attention promptly.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Remove contaminated clothing and shoes.
Ingestion	Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	No specific health hazards known.
Effects of Exposure	No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	The product is not flammable. In case of fire: Use CO ₂ , dry chemical, or foam for extinction.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	No information available.
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5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Avoid the spillage or runoff entering drains, sewers or watercourses.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	For exposure control and individual protection measure, see section 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains, watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Label the containers containing waste and contaminated materials and remove from the area as soon as possible.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Provide eyewash station and safety shower. Discard contaminated shoes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Packaging materials Store in tightly closed, original container in a dry and cool place.

7.3. Specific end use(s)

Specific use(s)

The identified uses for this product are detailed in Section 1.2.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, contains materials that do not have reportable occupational exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Derived No Effect Level (DNEL) - Workers No information available

Chemical name	Oral	Dermal	Inhalation
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	-	0.966 mg/kg bw/day [4] [6]	6.81 mg/m ³ [4] [6]

Derived No Effect Level (DNEL) - General Public No information available.

Chemical name	Oral	Dermal	Inhalation
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	-	-	1.2 mg/m ³ [4] [6]

Predicted No Effect Concentration (PNEC) No information available.

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	4.03 µg/L	1.1 µg/L	0.403 µg/L	110 ng/L	-

Chemical name	Freshwater r sediment	Marine sediment	Sewage treatment	Soil	Food chain
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	49.9 µg/kg sediment dw	4.99 µg/kg sediment dw	1.03 mg/L	3 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls Ensure adequate ventilation.

Personal protective equipment

Eye/face protection Eye protection must conform to standard EN 166. The following protection should be worn: Chemical splash goggles.

Hand protection Polyvinyl chloride (PVC).

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyvinyl chloride (PVC) Butyl rubber Nitrile rubber	0.4 mm	

Skin and body protection Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Recommended filter type: It is recommended to use respiratory equipment with combination filter, type A2/P2.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water. Product is not classified as hazardous for the environment, avoid spillage as much as possible.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid	
Physical state	Liquid	
Colour	white	
Odour	Mild Acrylic	
Odour threshold	Odour Not determined	
Property	Values	Remarks • Method
pH	No data available	None known
pH (as aqueous solution)	9 - 10	None known
Initial boiling point and boiling range	No data available	Not determined
Melting point / freezing point	No data available	Not determined
Flash point	No data available	Not applicable
Evaporation rate	No data available	Not determined
Flammability	No data available	None known
Flammability Limit in Air		Not applicable
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	Not determined
Relative vapour density	No data available	Not determined
Relative density	1.04 @25°C	None known
Bulk density	No data available	
Liquid Density	No data available	
Solubility(ies)	No data available	None known
Water solubility	No data available	Soluble in water
Partition coefficient	No data available	Not determined
Autoignition temperature	No data available	Not applicable
Decomposition temperature		Not determined
SADT (°C)	No data available	None known
Kinematic viscosity	No data available	Not determined
Dynamic viscosity	No data available	Not determined.
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	The mixture does not meet the criteria for classification as oxidising.	

9.2. Other information

Information with regards to physical hazard classes

None known Not applicable

Other safety characteristics

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known hazardous reactivity associated with the product when used as recommended.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerisation Will not polymerise.

4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Protect from freezing.

5. Incompatible materials

Incompatible materials Water reactive materials.

6. Hazardous decomposition products

Hazardous decomposition products Acrylic monomers.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure**

Product Information This product has low toxicity.

Inhalation No significant hazard at ambient temperature. Heating may generate the following products: Irritating gases or vapours.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	99,999.00 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapour)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	99,999.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2-BENZISOTHAZOL-3(2H)-ONE	= 1020 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Other adverse effects	None known.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	The product is not expected to be hazardous to the environment. However, Large, or frequent, spills may have hazardous effects on the environment.
Unknown aquatic toxicity	Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability	There is no data for this product.
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12.3. Bioaccumulative potential

Bioaccumulation	Not expected to be bioaccumulative.
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Component Information

Chemical name	Partition coefficient
1,2-BENZISOTHAZOL-3(2H)-ONE	0.99

12.4. Mobility in soil

Mobility in soil	Soluble in water.
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12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.
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Chemical name	PBT and vPvB assessment
1,2-BENZISOTHAZOL-3(2H)-ONE	Not PBT/vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

Note: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

IATA

1. UN number or ID number	Not Applicable
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not Applicable
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None

IMDG

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None
7. Maritime transport in bulk according to IMO instruments	None known

RID

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None

ADR

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable

14.6 Special precautions for user**Special Provisions**

None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

Control of Substances Hazardous to Health Regulations 2002 (as amended). Workplace Exposure Limits EH40

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV). This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH (SI 2015/483 as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Chemical name	The Biocidal Products Regulations 2001 (as amended)
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	Product-type 2: Disinfectants and algacides not intended for direct application to humans or animals Product-type 6: Preservatives for products during storage Product-type 9: Fibre, leather, rubber and polymerised materials preservatives Product-type 11: Preservatives for liquid-cooling and processing systems Product-type 12: Slimicides Product-type 13: Working or cutting fluid preservatives

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons and Explosive Precursors

Not applicable.

International Inventories**TSCA**

Contact supplier for inventory compliance status

DSL/NDSL

Contact supplier for inventory compliance status

EINECS/ELINCS

Contact supplier for inventory compliance status

ENCS

Contact supplier for inventory compliance status

IECSC

Contact supplier for inventory compliance status

KECL

Contact supplier for inventory compliance status

PICCS

Contact supplier for inventory compliance status

AIIC

Contact supplier for inventory compliance status

NZIoC

Contact supplier for inventory compliance status

TCSI

Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report

No chemical safety assessment has been carried out for this product.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H302 - Harmful if swallowed
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H400 - Very toxic to aquatic life
 H412 - Harmful to aquatic life with long lasting effects

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation

KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitizer
RS	Respiratory Sensitizer
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Acute oral toxicity
 Acute dermal toxicity
 Acute inhalation toxicity - gas
 Acute inhalation toxicity - vapour

Method Used
 Calculation method
 Calculation method
 Calculation method
 Calculation method

Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 15/05/2025

Reason for revision Updated as per GHS

Restrictions on use For professional use only

This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



constructive solutions

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes Date 22/11/2018

Revision date 16/06/2025

Revision Number 4.11

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name NITOBOND AR

Safety data sheet number 12509

Pure substance/mixture Mixture

2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Concrete Curing Membrane

Uses advised against Consumer use

3. Details of the supplier of the safety data sheet

Supplier

Fosroc International Limited
Drayton Manor Business Park
Coleshill Road
Tamworth
Staffordshire
B78 3XN
England
Tel. +44 (0) 1827 262222
Fax. +44 (0) 1827 262444

For further information, please contact

E-mail address enquiryuk@fosroc.com

1.4. Emergency telephone number

Emergency Telephone +44 (0) 1827 265 279 (Monday to Sunday, 24 hours a day)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

Not classified.

2.2. Label elements

Not classified.

Hazard statements

Not classified.

Contains 2-methyl-1,2-benzothiazol-3(2H)-one; 1,2-BENZISOTHIAZOL-3(2H)-ONE.

2.3. Other hazards

Other hazards This product does not contain any known or suspected endocrine disruptors.

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

1 . Substances

Not applicable

2 . Mixtures

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove to fresh air.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses if present and easy to do so. Continue flushing for at least 15 minutes.
Skin contact	Remove contaminated clothing and shoes.
Ingestion	Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Effects of Exposure No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media The product is not flammable. Use fire extinguishing methods suitable to surrounding conditions. Extinguish with carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical None in particular.

Hazardous combustion products Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)

The identified uses for this product are detailed in Section 1.2.

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, contains materials that do not have reportable occupational exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Biological occupational exposure limits This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Derived No Effect Level (DNEL) - Workers No information available

Chemical name	Oral	Dermal	Inhalation
Distillates (petroleum), solvent-dewaxed heavy paraffinic 64742-65-0	-	0.97 mg/kg bw/day [4] [6]	2.73 mg/m ³ [4] [6] 5.58 mg/m ³ [5] [6]
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	-	0.966 mg/kg bw/day [4] [6]	6.81 mg/m ³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public No information available.

Chemical name	Oral	Dermal	Inhalation
Distillates (petroleum), solvent-dewaxed heavy paraffinic 64742-65-0	0.74 mg/kg bw/day [4] [6]	-	1.19 mg/m ³ [5] [6]
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	-	-	1.2 mg/m ³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC) No information available.

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	4.03 µg/L	1.1 µg/L	0.403 µg/L	110 ng/L	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Distillates (petroleum), solvent-dewaxed heavy paraffinic 64742-65-0	-	-	-	-	9.33 mg/kg food
1,2-BENZISOTHIAZOL-3(2H)-ONE 2634-33-5	49.9 µg/kg sediment dw	4.99 µg/kg sediment dw	1.03 mg/L	3 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Personal protective equipment

Eye/face protection

Eye protection must conform to standard EN 166. Always wear eye protection.

Hand protection

Gloves must conform to standard EN 374. Impervious gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Wear protective nitrile rubber gloves Polyvinyl chloride (PVC) Chloroprene rubber	0.4 mm	240 minutes

Skin and body protection

Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

Respiratory protection

Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Recommended filter type:

Combination filter, type A2/P2, If atmospheric concentrations exceed exposure limits, use an approved air-purifying respirator with particulate and organic vapor filters. AP3 type.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Physical state	Liquid
Colour	white
Odour	Characteristic

Odour threshold Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	9.5 - 10.5	pH (concentrated solution): 9.5 - 10
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	No data available	Not determined
Boiling point and boiling range	100	1 atm
Flash point	No data available	Not applicable
Evaporation rate	No data available	Not determined
Flammability	Not ignitable	Not applicable
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	17mm Hg	@ 20 °C
Relative vapour density	1.03 - 1.08	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Solubility(ies)	partially soluble	None known
Water solubility	Soluble in water	Not determined
Partition coefficient	No data available	Not determined
Autoignition temperature	No data available	Not applicable
Decomposition temperature		Not determined
SADT (°C)	No data available	None known
Kinematic viscosity	50 200 mPa s	25 °C
Dynamic viscosity	<100 mPa s	None known
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	The mixture does not meet the criteria for classification as oxidising.	

9.2. Other information

Information with regards to physical hazard classes

None known

Other safety characteristics

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known hazardous reactivity associated with the product when used as recommended.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Avoid freezing and high temperatures.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Nitrogen oxides (NO_x).

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure**

Product Information	This product has low toxicity.
Inhalation	Considered to be a low inhalation hazard as supplied. Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Prolonged contact may cause redness and irritation. Specific test data for the substance or mixture is not available.
Ingestion	May cause irritation of mouth, throat and digestive tract. Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	99,999.00 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-gas)	99,999.00 ppm
ATEmix (inhalation-vapour)	99,999.00 mg/l
ATEmix (inhalation-dust/mist)	99,999.00 mg/l

Component Information**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.

Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.
Other adverse effects	None known.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	The product is not expected to be hazardous to the environment. However, Large, or frequent, spills may have hazardous effects on the environment.
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2. Persistence and degradability

Persistence and degradability	Readily biodegradable.
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3. Bioaccumulative potential

Bioaccumulation	The material does not bioaccumulate.
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Component Information

4. Mobility in soil

Mobility in soil	The product is miscible with water. May spread in water systems.
------------------	--

5. Results of PBT and vPvB assessment

PBT and vPvB assessment	The product does not contain any substance(s) classified as PBT or vPvB.
-------------------------	--

12.6. Other adverse effects

No information available.

Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors.
---------------------------------	--

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

Note:	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
-------	--

IATA

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None

IMDG

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None
7. Maritime transport in bulk according to IMO instruments	None known

RID

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None

ADR

1. UN number or ID number	Not regulated
2. UN proper shipping name	Not regulated
3. Transport hazard class(es)	Not regulated
4. Packing group	Not regulated
5. Environmental hazards	Not applicable
6. Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV). This product does not contain

substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH (SI 2015/483 as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons and Explosive Precursors

Not applicable.

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status
TCSI	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing Chemicals Inventory
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report

No chemical safety assessment has been carried out for this product.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H301 - Corrosive to the respiratory tract

H301 - Toxic if swallowed

H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H314 - Causes severe skin burns and eye damage
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H400 - Very toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects
 H412 - Harmful to aquatic life with long lasting effects

Legend

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area
BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation

	(EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern
TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitiser
RS	Respiratory Sensitiser
S	Sensitiser
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Supersedes date	22/11/2018
Revision date	16/06/2025
Reason for revision	Updated as per GHS
Restrictions on use	For professional use only

This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



DECLARATION OF PERFORMANCE



Number: UK9-25

UK DECLARATION OF PERFORMANCE

In compliance with the Construction Products Regulation (EU) No 305/2011
as amended by The Construction Products (Amendment etc.)
(EU Exit) Regulations 2019 (S.I. 2019/465)

- 1 Unique identification code of the product-type:

RENDEROC HB45, 2201100

- 2 Intended use as foreseen by the manufacturer of the construction product in accordance with the harmonised technical specification:

Structural and non-structural repair methods 3, 4 and 7

- 3 Name, registered trade name or registered trade mark and contact address of the manufacturer as set out in article 11 (5)



Fosroc International Limited
Drayton Manor Business Park
Coleshill Road, Tamworth
Staffordshire, B78 3XN, UK

- 4 Name and contact address of the authorised representative who has received a mandate for the tasks set out on Article 12 (2):

Not Relevant

- 5 System or systems for assessment and verification of constancy of performance of the construction product in accordance with Annex V

System 2+

- 6a In the case of a declaration of performance concerning a construction product that is covered by a harmonised standard

EN 1504-3:2005

The notified body

BBA 0836

- 6b In case of a declaration of performance concerning a construction product for which a European Technical Assessment was issued

Not Relevant

Issue Number: 1

Number: UK9-25

7 Declared performance

Essential Characteristics	Performance	Test Method
Compressive strength	Class R4: ≥ 45 MPa	EN 12190:1999
Adhesion strength by pull-off test	≥ 2.0 MPa	EN 1542:1999
Thermal compatibility: freeze-thaw cycling with immersion	≥ 2.0 MPa	EN 13687-1
Elastic modulus	≥ 20 GPa	EN 13412:2002
Carbonation resistance	Pass	EN 13295:2005
Chloride ion content	$\leq 0.05\%$	EN 1015-17:2000
Dangerous substances	Complies with 5.4	
Reaction to fire	Class A2 s1 d0	EN 13501-1
Capillary absorption (water permeability)	≤ 0.5 kg m ⁻² h ^{-0.5}	EN 13057

8 Appropriate Technical Documentation and/or Specific Technical Documentation:

Not Relevant

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Signed for the manufacturer and in the name of the manufacturer by:

Jon Potter
Technical Manager



Place and Date of Issue:

30th June 2022

Tamworth

Issue Number: 1



Number: UK9-48

UK DECLARATION OF PERFORMANCE

In compliance with the Construction Products Regulation (EU) No 305/2011
as amended by The Construction Products (Amendment etc.)
(EU Exit) Regulations 2019 (S.I. 2019/465)

- 1 Unique identification code of the product-type:

NITOPRIME ZINCRICH PLUS , 1958023, 1958220

- 2 Intended use as foreseen by the manufacturer of the construction product in accordance with the harmonised technical specification:

Reinforcement corrosion protection method 11.1

- 3 Name, registered trade name or registered trade mark and contact address of the manufacturer as set out in article 11 (5)



Fosroc International Limited
Drayton Manor Business Park
Coleshill Road, Tamworth
Staffordshire, B78 3XN, UK

- 4 Name and contact address of the authorised representative who has received a mandate for the tasks set out on Article 12 (2):

Not Relevant

- 5 System or systems for assessment and verification of constancy of performance of the construction product in accordance with Annex V

System 2+

- 6a In the case of a declaration of performance concerning a construction product that is covered by a harmonised standard

EN 1504-7:2006

The notified body

BBA 0836

- 6b In case of a declaration of performance concerning a construction product for which a European Technical Assessment was issued

Not Relevant

Issue Number: 1

Fosroc® Nitoprime Zincrich Plus



constructive solutions

Number: UK9-48

7 Declared performance

Essential Characteristics	Performance	Test Method
Corrosion protection	Pass	EN 15183

Dangerous substances Complies with 5.3

8 Appropriate Technical Documentation and/or Specific Technical Documentation:

Not Relevant

The performance of the product identified above is in conformity with the set of declared performance/s.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Signed for the manufacturer and in the name of the manufacturer by:

Jon Potter

A handwritten signature in purple ink, appearing to read "Jon Potter".

Technical Manager

Place and Date of Issue:

30th June 2022

Tamworth

Issue Number: 1



METHOD STATEMENT

HIGH PERFORMANCE MEDIUM-WEIGHT REINSTATEMENT MORTAR

RENDEROC HB45

1. Substrate Preparation

- a. Form a square edge perimeter to the repair area using appropriate methods (feather edging must be avoided), break out the complete repair area up to a minimum depth of 10mm up to the square edge.
- b. 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.
- c. 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.
- d. 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. Abrasive blasting, hydrodem equipment, powered mechanical scraping or other suitable means is recommended for this process.
- e. 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.

2. Reinforcement steel Priming – “Nitoprime Zincrich Plus”

- a. Apply one full coat of Nitoprime Zincrich Plus on reinforcement steel and allow to dry before continuing.
- b. If any doubt exists about having achieved an unbroken coating, a second application should be made and, again, allowed to dry before continuing.

METHOD STATEMENT

3. Concrete Priming - “Renderoc Primer”

- a. The concrete substrate should be saturated surface dry immediately before the application of the primer.
- b. Under severe drying conditions repeated soaking may be necessary to ensure the substrate is still saturated at the time of application of the primer.
- c. Add 3 parts by volume of Renderoc Primer Part A to 1 part by volume Renderoc Primer Part B (4 to 1 by weight) in a clean mixing vessel
- d. Mix with a spatula or slow speed drill until a homogeneous smooth slurry is produced.
- e. Scrub Renderoc Primer slurry into the surface
- f. Single repair areas larger than 0.5 m² shall be part primed to commence and thereafter progressively in maximum 0.5 m² adjacent bays as application of the repair mortar proceeds.

4. Mixing of “Fosroc® Renderoc HB45”

- a. Only mixes using complete bags of RENDEROC HB45 are allowed, and part bag mixes should not be used.
- b. A forced action mixer or slow speed (400 – 500 rpm) drill and Renderoc paddle should be employed
- c. Mixing in a suitably sized drum.
- d. Always add the powder to water.
- e. place 3.0 to 3.5 litres of drinking quality water into the mixer (typically 3.25 litres)
- f. Continue mixing for a minimum of 3 minutes and maximum of 5 minutes until fully homogeneous.
- g. The consistency may be adjusted (if required) by the addition of small amounts of water up to the maximum total water content of 3.5 litres.

METHOD STATEMENT

5. Hand Application of “Renderoc HB45”

- a. Exposed steel reinforcing bars should be firmly secured to prevent movement during application.
- b. Immediately following mixing the repair mortar is applied by gloved hand or trowel to the prepared and primed surface of the substrate. Paying particular attention to packing behind and between the reinforcement and thorough compaction overall.
- c. **“Renderoc HB45”** can be applied in one operation by building up to the required profile in wet-on-wet layers between 10 – 80 mm vertically and 10 – 70 mm overhead.
- d. Thicker sections may be achieved by building up in wet-on-dry layers. where each layer shall be wavy-line scratch keyed with a comb, cured with **“Nitobond AR”**
- e. If sagging or slumping occurs Renderoc HB45 should be completely removed and reapplied at a reduced thickness to a correctly primed substrate, supported by formwork pre-treated with a varnish if required.
- f. Use mixed material within 60 minutes of mixing, do not remix mixed material.

6. Spray Application of “Renderoc HB45”

- a. 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.
- b. For further details on wet spray techniques contact the local Fosroc office.

7. Curing - “Nitobond AR”.

- a. It must be cured immediately after finishing in accordance with good concrete practice.
- b. Curing techniques must be begun immediately following application of the mortar to any given area. Large areas (0.5 m² at a time) shall be cured as trowelling progresses without waiting for completion of the whole area.

METHOD STATEMENT

- c. NITOBOND AR can be low-pressure spray applied as a curing membrane. In fast drying conditions it will be necessary to supplement this with polyethylene sheet taped around its edges.
- d. In cold conditions, the finished repair must be protected from freezing.
- e. Any excessive run-off on verticals or drips on soffits should be removed by brush before they harden.

8. Overcoating with protective decorative finishes (Optional)

- a. Fosroc recommend the use of the 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.
- b. Dekguard products may be applied over the repair area without prior removal of the Nitobond AR curing membrane.
- c. Other curing membranes must be removed prior to the application of Dekguard products.

9. Cleaning

- a. Renderoc HB45 and Renderoc Primer should be removed from tools, equipment and mixers with clean water immediately after use.
- b. Cured material can only be removed mechanically.
- c. Clean tools used with Nitoprime Zincrich Plus and Nitobond EP before material cures using Fosroc Solvent 102.

10. Remarks

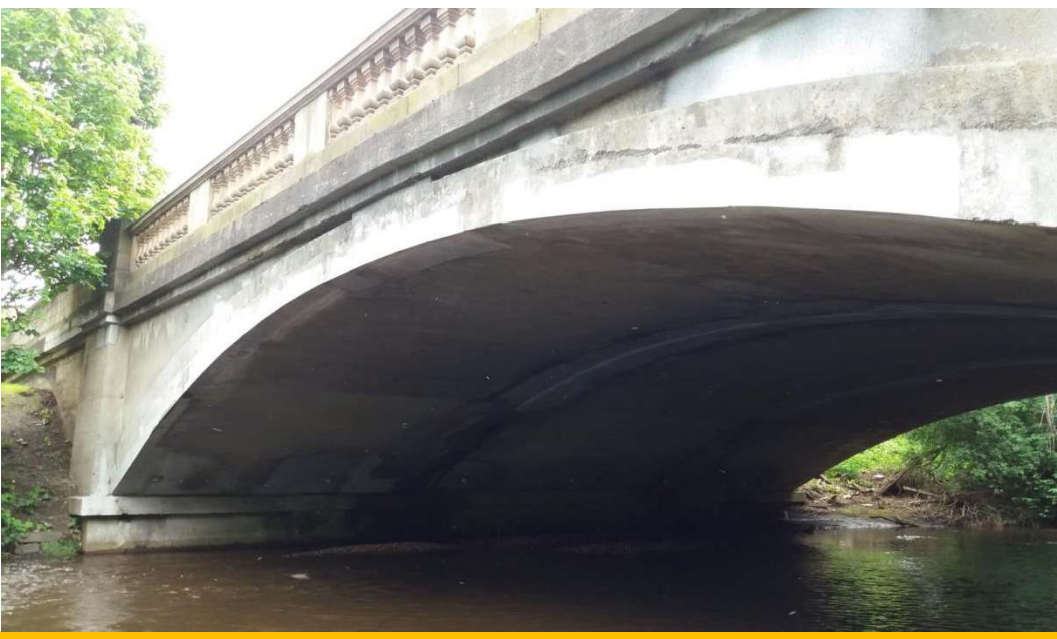
- a. During application and curing all work shall be protected against direct strong sunlight.
- b. Clean tools used with Nitoprime Zincrich Plus and Nitobond EP before material cures using Fosroc Solvent 102.



DRAWINGS



PROJECT REFERENCES

constructive solutions**Gorgie Road Bridge**

Saughton, Edinburgh

CUSTOMER

Edinburgh City Council

SECTOR

Highways

DATE

September 2018

PRODUCTS

- Nitoprime Zincrich Plus
- Renderoc Primer
- Renderoc HB45

THE PROJECT

The bridge, in Edinburgh's Saughton district, spans the Water of Leith as it travels through Edinburgh City Centre and supports the A71's route in and out of Edinburgh. The bridge has seen many repairs over the years and this work was undertaken not only to make good previous poorly executed repairs, but also to address some fresh repair requirements on the bridge's soffit and intrados.

THE SOLUTION

In works undertaken by Concrete Repairs Limited, the reinforced concrete was fully prepared by mechanical means, to establish the full extent of the concrete defects and the underlying corrosion to the reinforcement within. Once excavated and prepared, this steelwork was treated with Nitoprime Zincrich Plus, before the work began to reinstate the concrete elements using Renderoc Primer and Renderoc HB45, a high-strength and EN1504 compliant structural repair mortar.

THE BENEFITS

The Fosroc concrete repair solution not only lends itself to an aesthetically pleasing repair, but one which, in-line with BS EN1504, takes a holistic approach to repairs and treats the initial cause of the repair, corrosion of the reinforcement.



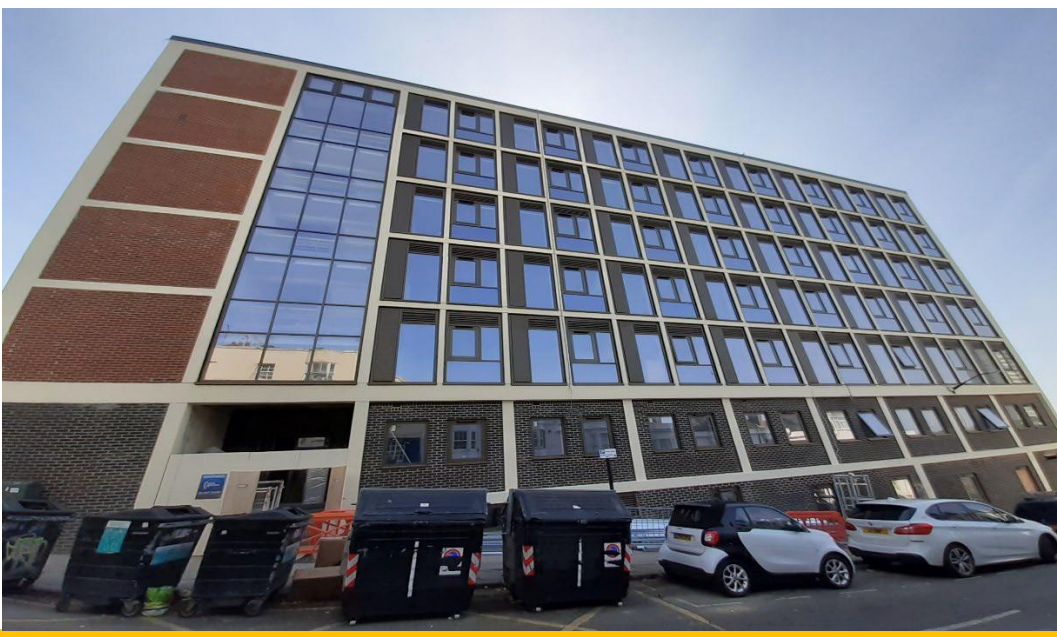
Spalling to arch.



North arch ring mid span spalling.



Repaired bridge.

constructive solutions

THE PROJECT

Crown House is a change of use project from an old 1960s office block into modern student accommodation and highlights the opportunity to repair and refurbish concrete structures to provide much needed housing for local communities. The refurbishment and repair approach is of course, significantly greener than a complete demolition and rebuild, particularly in a busy town location such as Brighton. The concrete surveys found issues with the underlining substrate, including carbonation, so the project required a specification which would ensure protection of the concrete, in addition to a pleasing aesthetic finish for the client and student residents of the new block.

THE SOLUTION

Fosroc provided a full concrete repair specification to EN1504 to the main building, along with the replacement of an anti-carbonation coating. This effectively future-proofed the building against further corrosion issues, whilst also improving the exterior appearance. The anti-carbonation coating used for Crown House (Dekguard E2000) is a primer + one coat system. This innovative elastomeric coating can accommodate cracks on the substrate up to 2mm and cyclic movement up to 0.3mm to protect reinforced concrete and masonry structures. It is highly effective at protecting atmospherically exposed 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. It also minimises dirt retention and is resistant to the effects of ultra-violet light.

The building was kept in use throughout the duration of the project, rather than demolish and rebuild, lowering the total carbon impact for the project.

THE BENEFITS

Toolbox talks were carried out onsite by Fosroc for the contractor to ensure the correct use of the concrete repair products. Fosroc's dedicated Site Support Managers ensured assistance was available quickly when needed, in addition to providing easily accessible guidance on product storage, preparation and application through CPD training webinars available on demand, bite-sized podcasts, literature and other online and in-person training sessions. The expertise of the Fosroc team, on-site support and technical support resources helped to ensure the contractor was able to complete the application without complications and to the agreed time schedule, thereby keeping the project within the cost budgeted.

Crown House

Brighton, UK

CUSTOMER

CRM Students

SECTOR

Residential

DATE

May 2022

PRODUCTS

- Dekguard E2000
- Nitoprime Zincrich Plus
- Renderoc HB
- Renderoc HB45
- Nitokit LV



Before – front elevation of building



Left: typical cracking to the concrete. Right: Failure of existing coating



After: the finished result with improved exterior finish

constructive solutions

New Bancroft Car Park Tallaght, Dublin

CUSTOMER
SCB Services

SECTOR
Car Parks

DATE
April 2020

PRODUCTS

- Renderoc HB45
- Nitoprime Zincrich Plus
- Nitobond AR

THE PROJECT

In April 2017 Iceland opened its largest store in Ireland in a 15,000m² ground-level unit at the New Bancroft apartment complex, with a 200-space underground car park below. On January 29th 2018, all residents from the 85 apartments were evacuated because of a fire that had broken out in the basement car park. There was extensive damage to walls, soffits and columns as well as mechanical and electrical installations within the vicinity. The immediate priority was to repair and reinstate the strength and integrity to the walls and soffits that were damaged as a result of the direct flames and extreme heat.

THE SOLUTION

Once all the affected areas had been surveyed and identified, a very fast operation of hydro demolition began removing all of the de-bonded and weakened concrete surfaces. Following the hydro demolition, the specialist contractor prepared the surface of the substrate and the exposed reinforcement. The exposed steel was all primed with the Nitoprime Zincrich Plus to provide galvanic protection and enhance the bond strength of the repair mortar to the reinforcement. Reinstatement of the removed concrete was carried out by wet spraying Renderoc HB45 BS EN 1504 Class R4 structural repair mortar to all vertical and overhead areas.

THE BENEFITS

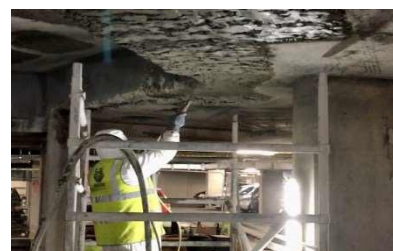
The rapid return to service of this area in terms of performance and use was paramount to its success, and both hydro demolition and the application of the Renderoc HB45 by spraying, ensured that this project was completed in a very short time period. This project once again demonstrated the versatility and speed of application of Renderoc HB45 by a suitably experienced specialist contractor.



Hydro demolition



Concrete preparation



Renderoc HB45 spray application

CASE STUDIES



Thackeray Building, London

The Thackeray Building is a 5-storey block of residential flats in Herbrand Street dating back to the early 1900's, constructed of concrete and brick. Over the years the concrete elements have suffered from water ingress which has resulted in spalling and also corrosion of steel 'H' sections above the windows. Fosroc were able to supply a total solution package.



ICAIR, Sheffield

During construction the concrete to form the tanks had been poured to the wrong measurements and in order to correct the situation a product was required that could withstand the pressure and load from the stored water and gain a compressive strength similar to the parent concrete. Repairs were successfully carried out using Renderoc LA60.



A404M, Cannon Lane

Works included reconstruction of the joint edges and repairing defective concrete in the bridge deck with a clear objective to get the works completed quickly and reduce the closure of the very busy major route. Patchroc 250 thick section repair mortar which exceeds the requirements of BS EN 1504, and Highways England was successfully installed minimising disruption and allowing a rapid return to service.



Central Station, Glasgow

When platform repairs were required at Central Station, Glasgow Fosroc's Paveroc pavement reinstatement mortar was selected due to its rapid strength gain which means it can accept pedestrian traffic at 12 hours. In addition to providing a rapid return to service of the platforms Paveroc's high strength, abrasion and weather resistance ensures that it will provide a durable repair.



Victoria Hospital, Blackpool

The Maternity Wing at Blackpool Victoria Hospital was constructed in the 1960's and over the years had been subjected to many environmental stresses, particularly due to its marine location. Fosroc provided a specification to repair the degraded concrete and bring a new lease of life to the structure using the Renderoc Repair System.



Oldbury Viaduct, M5 Midlands

Fosroc delivered a sustainable motorway repair solution using Renderoc LA60 meeting Highways England's quality standards. Fosroc successfully introduced innovations in product design, and in bulk supply, maintaining regular supply to site through a fully integrated supply chain and production process. This approach helped reduce costs, save time and enabled concrete repairs to be carried out effectively in a challenging environment.

Fosroc offers a full range of construction chemical solutions, helping to protect structures throughout the world. Please refer to our brochures, which include:



www.fosroc.com

Important Note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.



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