



Nitozinc Primer

Two component epoxy zincrich primer

Uses

Nitozinc Primer is recommended for priming exposed steel reinforcement for use with Fosroc concrete repair mortars. The product actively resists corrosion within the confines of the repair location and avoids the generation of incipient anodes in immediately adjacent locations.

Nitozinc Primer is compatible with all Renderoc mortars and fluid micro concretes.

Advantages

- Anti corrosive - Active 'Zinc-rich' system combats corrosion by electro chemical means.
- Two component product - Easy to mix and use.
- Timesaving - Touch dry after 30 to 45 mins.
- Excellent adhesion - Exhibits excellent bond strength in cementitious repairs.

Description

Nitozinc Primer is supplied as a two component system based on metallic zinc and epoxy resin which on mixing gives a grey coloured liquid.

Technical support

Fosroc offers a comprehensive range of high performance, high quality concrete repair and construction products. In addition, Fosroc offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country.

Design Criteria

One or two coats of Nitozinc Primer are generally required, dependent largely on the nature and profile of the substrate. Nitozinc Primer is recoatable generally between 45 minutes to two hours depending upon the temperature. Application of top coat may also proceed at this time. At elevated temperatures, the recoatable and overlay times will be reduced. The minimum application temperature for Nitozinc Primer is 10°C. The local Fosroc office may be consulted for further information.



Properties

Specific gravity	2.0 ± 0.2
Wet film thickness/coat	110 microns
Dry film thickness/coat	50 microns
Total zinc content in dry film	85% by weight
Solid content by weight	76%
Adhesive bond strength with steel (ASTM D4541)	≥2.0 N/mm ²
Pot life	1 hr @30°C
Drying times - Tack free time	45 mins @20°C 20 mins @30°C
Recoatable time	45 minutes to 2 hours depending upon temperature

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

Specification clauses

Steel reinforcement primer

Performance specification

The steel reinforcement primer shall be an epoxy, two component, zinc rich liquid packed and supplied ready to use. An unbroken 50 microns DFT coating shall be capable of providing 'active' galvanic protection and avoiding the generation of incipient anodes in the immediately adjacent locations. It shall be of suitable viscosity to enable the coating to penetrate into imperfections and pits within the surface of the structural steel.

The formulation of the primer shall be such that drying occurs to allow the application of the repair mortar after 45 minutes to two hours depending on the temperature.

It shall be fully compatible with the reinstatement methods adopted.

Supplier specification

The steel reinforcement primer shall be Nitozinc Primer, manufactured by Fosroc and used in accordance with the manufacturer's datasheet.

Nitozinc Primer is fully compatible with Fosroc's reinstatement techniques.

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Application instructions

Preparation

Any corroded steel shall be fully exposed and all loose scale and corrosion deposits shall be removed. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

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

Mixing

Both components shall be mixed until a homogenous mixture is obtained. It is important that both components are intermixed thoroughly and that no traces of the components remain unmixed. A slow speed heavy duty drill fitted with a paddle is recommended for mixing.

Application

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

One full and unbroken coat of Nitozinc Primer shall be applied using a suitable brush, making sure the surfaces of the steel are properly coated. A small brush is generally suitable for this purpose. It shall be allowed to dry fully before continuing. If in doubt of having achieved an unbroken coating, a second application should be made as soon as the first coat is fully dry.

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

The application of concrete repair materials should proceed as soon as the Nitozinc Primer is fully dry.

Low temperature working

The minimum application temperature is 10° C. The material should not be applied when the substrate and/or air temperature is 10° C and below.

Cleaning

Nitozinc Primer should be removed from tools, equipment and mixers with Nitoflor Sol immediately after use.

Limitations

Nitozinc Primer should not be applied when the temperature is below 10°C . If any doubts arise concerning temperature or application conditions, the local Fosroc office shall be contacted.

Estimating

Packaging

Nitozinc Primer	1 & 5 litre Pack
Nitoflor Sol	5 & 20 litre containers

Coverage

Nitozinc Primer	8.4 to 10.5 m ² / litre
	0.20 to 0.25 kg / m ²

Note : This coverage figure is theoretical - due to wastage factors, variety and nature of possible steel substrates, the practical coverage figures may be reduced.

Storage

Shelf life

6 months if kept in dry store in the original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

Precautions

Health & Safety instructions

Nitozinc Primer and Nitoflor Sol should not come in contact with the skin and eyes, or be swallowed. Adequate ventilation should be ensured and inhalation of vapours should be avoided. Some people are sensitive to resins, hardeners and solvents. Hence suitable protective clothing, gloves and eye protection shall be worn. If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams, provide additional skin protection. In case of contact with skin, it shall be rinsed with plenty of water, then cleansed with soap and water. In case of skin contact with Nitozinc Primer, it shall be removed immediately with resin removing cream followed by washing with soap and water. Solvent should not be used. In case of contact with eyes, it shall be rinsed immediately with plenty of clean water and medical advice shall be sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Fire

Nitozinc Primer and Nitoflor Sol are flammable. It shall be kept away from source of ignition. Smoking is prohibited during handling / application of the product. In the event of fire, it shall be extinguished with Carbondioxide or foam. Use of water jet is not recommended.



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Flash points

Nitozinc Primer	16 °C
Nitoflor Sol	33°C

Additional information

Fosroc manufactures a wide range of products specifically designed for repair and refurbishment of damaged reinforced concrete. This includes hand-placed and spray grade repair mortars, fluid micro - concretes, chemical resistant epoxy mortars and a comprehensive package of protective coatings. In addition, a wide range of complementary products is available. This includes joint sealants, water proofing membranes, grouting, anchoring and specialised flooring materials.

Fosroc have also produced several educational training videos which provide more detail about the mechanisms which cause corrosion within reinforced concrete structures and the solutions which are available to arrest or retard these destructive mechanisms. Further information is available from the publication : " Concrete Repair and Protection - The Systematic Approach'.

For further information about products, training videos or publications, contact the local Fosroc office.



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