

Galvashield XP*

Embedded zinc anode which acts to prevent corrosion of reinforcing steel in concrete

Uses

Galvashield XP is used to galvanically protect steel reinforcement in chloride contaminated concrete, and thereby avoid future problems associated with the formation of 'incipient anodes'.

Advantages

- Patented system
- Self regulating, intelligent action
- Protects against residual chlorides
- Prevents corrosion
- Extends lifetime of repair
- Eliminates secondary repairs
- Measurable performance
- Extends maintenance cycle
- Provides highly cost effective repair
- Quick and easy installation
- Proven technology
- University supported test programme

Description

An amphoteric zinc block embedded within a specially formulated cementitious mortar, incorporating cast-in wire ties for fixing. Galvashield XP is fixed to reinforcing steel by means of the wire ties which allow attachment in horizontal, vertical and overhead locations whilst ensuring electrochemical continuity.

Design Criteria

Galvashield XP has been specifically engineered to prevent the onset of reinforcement corrosion in chloride contaminated concrete. Each unit will provide galvanic protection within its sphere of influence, subject to continuity of steel reinforcement.



Galvashield XP



Specification

The galvanic anode shall be Galvashield XP, an amphoteric zinc block embedded within a specially formulated cementitious mortar having a pore solution pH which is sufficiently high for corrosion of the anode to occur and for passive film formation on the anode to be avoided as described in patent no PCT/GB94/01224.

Instructions for use

Preparation

The concrete should be broken out from around and behind the steel reinforcement in accordance with established concrete repair practice.

All exposed steel reinforcement should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Abrasive blasting is recommended for this process.

Application

Galvashield XP should be attached immediately following preparation and cleaning of the steel reinforcement.

Location of Galvashield XP should be as close as practical to the edge or back of the broken out repair zone, create a rebate if necessary. Typically the unit will be positioned so as to face the edge or back of the repair.

Galvashield XP units should be positioned at maximum 750 mm centres around or along the repair boundary, although the exact configuration will be dependent on steel configuration and repair geometry.

Galvashield XP should be positioned to ensure all round contact with the reinstatement material and attached to the reinforcement using the wire ties. Tighten the wire ties using the Galvashield Fixing Tool so that no free movement is possible, thus ensuring electrical continuity. To test electrical continuity between wire ties and reinforcement bar a continuity meter should be used.

Reinforcing steel priming

Where specified, the steel reinforcement should be primed

Galvashield XP

using a continuous coating of Nitoprime Zincrich immediately following attachment of Galvashield XP.

Repair materials

Galvashield XP should be used in conjunction with Fosroc's extensive range of compatible repair mortars and acrylic bonding/curing agents.

Overpainting of the bonding agent or reinforcement primer onto the surface of the Galvashield XP unit must be avoided.

In addition to standard substrate preparation, Renderoc Galvashield XP should be thoroughly pre-soaked prior to application of the repair mortar.

Cover to Galvashield XP should equate to the minimum depth of application of the repair material used.

Limitations

For application in submerged conditions or in areas subject to high levels of chemical contamination/attack, consult the local Fosroc office

Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Estimating

Supply

Galvashield XP unit : **20 units/box**

Coverage

Galvashield XP **500-750 mm spacing depending on steel density and repair geometry**

Storage

Store in dry conditions in the original unopened packs.

Shelf life

Renderoc Galvashield will have a shelf life of 5 years if stored in original packing, in dry, warehouse conditions

Precautions

Health and safety

Galvashield XP should be handled using gloves, and other personal protective equipment, as per standard procedures for handling cementitious materials.

Additional Information

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

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INDIA/2004/0418/B

