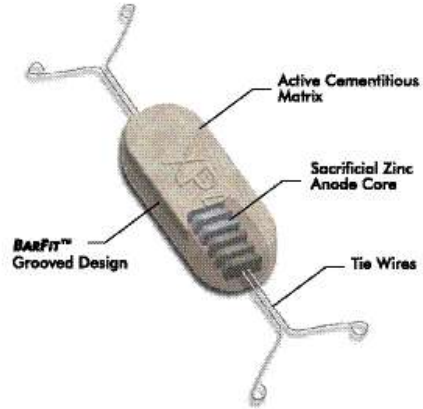


Embedded Galvanic Anode Units with 2G Technology™

Description

The Galvashield XP range of embedded galvanic anode units utilise an innovative zinc anode core design surrounded by an enhanced formulated cement-based mortar to provide corrosion mitigation to reinforced concrete structures. The anode units are alkali-activated (Type A) with an internal pH of 14 or greater to keep the zinc active over the life of the anode while being non-corrosive to reinforcing steel. The anode units utilise 2G Technology™ to provide higher current output. Once installed, the zinc anode corrodes preferentially to the adjacent reinforcing steel, thereby providing galvanic corrosion prevention or corrosion control.



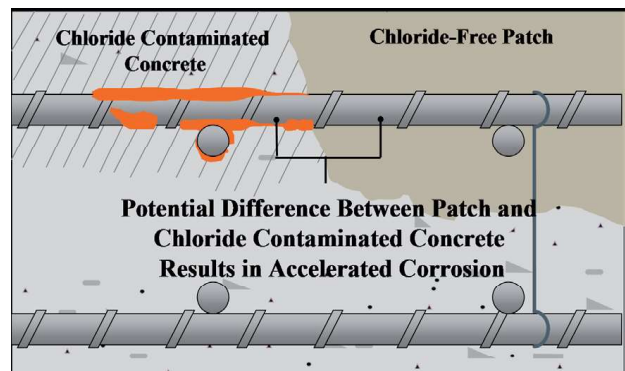
Applications

- Mitigates incipient anode formation (halo effect) in patch repair applications
- Bridge widening and other structure modifications
- Slab replacements, expansion joint repairs and other interfaces between new and existing concrete
- Repair of prestressed and post-tensioned concrete
- Chloride contaminated or carbonated concrete

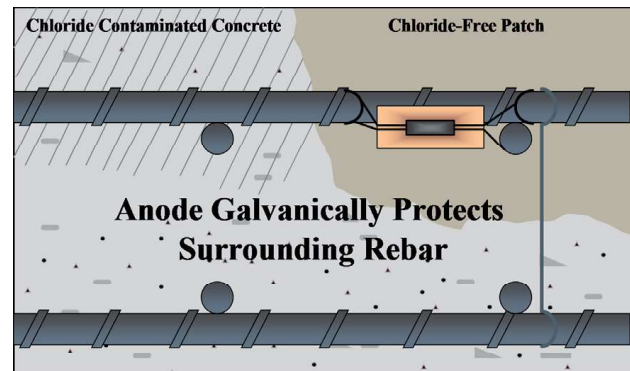
Advantages

- Proven technology - Galvashield has an extensive 10 year track record in the field
- Type A anode - alkali-activated to maintain activity of zinc while being non-corrosive to reinforcing steel
- Cast zinc core - provides high anode utilisation in addition to a secure long-term connection between the zinc and the lead wires
- Integral steel lead wires - allows for quick and convenient anode installation. Provides dependable steel-to-steel contact with no intermediate materials such as galvanising (which can corrode over time) that may compromise the long-term electrical connection
- BarFit™ design - grooved edges on Galvashield XP2 and XP4 anode units assist with secure anode placement
- Economical - provides localised protection where it is needed the most, at the interface of the repair and the remaining contaminated concrete
- Versatile - can be used for both conventionally reinforced and prestressed or post-tensioned concrete
- Low maintenance - requires no external power source or system monitoring
- Long lasting - 10 to 20 year service life* reduces the need for future repairs. **As with all galvanic protection systems, service life and performance is dependent upon a number of factors including reinforcing steel density, concrete conductivity, chloride concentration, humidity and anode spacing.*

Level of Protection	Description	Galvashield
Corrosion Prevention	Mitigates initiation of new corrosion activity	XPT/XP2/XP4
Corrosion Control	Reduces ongoing corrosion activity	XP2/XP4
Cathodic Protection	Reduce or eliminate ongoing corrosion activity	



“Ring Anode” Corrosion (without Galvashield XP-type anode)



Galvashield XP-type anode prevents “Ring Anode” Corrosion

Galvashield® XP Range

Application Instructions

Installation

Concrete shall be removed from around and behind all corroding rebar in accordance with good concrete repair practice such as ACRA guideline HB84-2006. Section 6. Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue.

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

Securely fasten the anode units from the side or beneath the exposed rebar as close as practical to the surrounding concrete (preferably within 100 mm) while ensuring that enough space remains to fully encapsulate the unit in the repair. The minimum cover of the repair material over the units should be 20 mm.

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

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

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

Repair Materials

For optimum performance, use a repair material with resistivity less than 15,000 ohm-cm. If a higher resistivity repair material is to be used or if the resistivity of the material is unknown, pack Renderoc HB40 between the anode unit and the substrate to provide an ionically conductive path to the substrate.

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

Important notice

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

Product disclaimer

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

Precautions

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

Supply

Galvashield XPT	FC312015-UNIT
Galvashield XP2	FC312040-UNIT
Galvashield XP4	FC312025-UNIT

Storage

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

Shelf life

24 months.

Health and Safety

As with all cement-based materials, contact with moisture can release alkalis which may be harmful to exposed skin. Galvashield anode units should be handled with suitable gloves and other personal protective equipment in accordance with standard procedures for handling cementitious materials. Additional safety information is included in the Material Safety Data Sheet.



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