

APPENDIX A



ARC 988

PRODUCT DATA SHEET

Description

A high performance, quartz reinforced composite designed to resurface and restore concrete surfaces, to protect new concrete, and to repair concrete damaged by severe chemical and physical abuse.

ARC 988 provides protection against chemical attack from highly aggressive substances including concentrated acids, alkalies and a wide variety of organic solvents. It is a trowelable overlayment which can be used at a thickness as low as 6 mm (1/4"). Its sag resistance makes it ideal for both vertical and horizontal applications. ARC 988 cures easily with a trowel, sealing the surface to prevent chemical attack on the substrate by permeation. The product produces a dense, fine textured surface. Non-shrinking, 100% solids. Colors are gray or red.

ARC 988 is generally used to repair and upgrade concrete surfaces or used as a replacement for acid resistant tiles, phenolics, furans, polyesters, sulfonated concretes and other overlayments. It is formulated to be thermally compatible with concrete. ARC 988 has the unusual ability to bond to damp concrete. ARC 988 is chosen over other ARC Composites for Concrete for its superior chemical resistance.

Composition - Polymer/Quartz Composite

Matrix - A modified multifunctional epoxy resin reacted with a cycloaliphatic amine curing agent.

Reinforcement - A proprietary blend of quartz reinforcements which are pretreated with a polymeric coupling agent, and engineered to produce optimal handling, high performance, and achieve a thermal coefficient of expansion compatible with concrete.

Suggested Uses

- Battery Rooms
- Pickling & Plating Lines
- Bleaching Areas
- Sumps, Trenches & Pits
- Chemical Containments
- Pump & Equipment Bases
- Concentrated Acid Areas
- Waste Water Treatment

Benefits

- Protects concrete and provides chemical containment of concentrated acids such as sulfuric acid up to 98%.
- Fine textured sealed surface produces a tough, durable, chemical resistant, low maintenance overlayment.
- Compatible thermal coefficient of expansion provides long-term resistance to disbondment.

- Moisture insensitive primer provides outstanding adhesion to damp concrete, a unique feature for concrete overlayments.
- User friendly consistency makes installation and finishing fast and easy.
- The reinforcement is engineered to minimize air entrapment and to improve mixing.
- ARC 988 is stronger than standard concrete, and its tough resin structure resists mechanical impact.

Chemical Resistance

All samples cured 12 days at room temperature 21°C (70°F) and tested at ambient conditions, 21°C (70°F).

- 1 = Continuous long term immersion
- 2 = Short term/intermittent immersion
- 3 = Splash and spills with immediate clean up, vapors
- 4 = Not recommended for direct contact

Acids

- 5% Acetic 3
- 37% Hydrochloric 1
- 10% Nitric 1
- 20% Nitric 2
- Oleic 3
- 50% Phosphoric 1
- 85% Phosphoric 2
- 70% Sulfuric 1
- 98% Sulfuric 1

Alkalies & Bleaches

- 28% Ammonium Hydroxide 1
- 3% Hydrogen Peroxide 1
- 50% Potassium Hydroxide 1
- 50% Sodium Hydroxide 1
- 6% Sodium Hypochlorite 1

Other Compounds

- Acetone 3
- Bunker C 1

Other Compounds

- Deionized Water 1
- Diesel Fuel 1
- Ethanol 1
- Formaldehyde 1
- Gasoline 1
- Hexane 1
- Isopropanol 1
- Kerosene 1
- Methanol 2
- Methyl Ethyl Ketone 3
- MIBK 2
- Mineral Spirits 1
- Naphtha 1
- Salt Water 1
- Sewage 1
- Toluene 1
- Xylene 1

NOTE: Due to localized surface reaction, ARC 988 may discolor in certain concentrated chemicals. This discoloration does not mean that the ARC composite has degraded. A corresponding trace discoloration of the process liquid may also occur. Please contact your local ARC Specialist for more information.

Technical Data

PROPERTY (TEST METHOD)

Cured Density	-----	2.0 g/cc	123 lb/cu.ft
Compressive Strength	(ASTM C 579)	1,000 kg/cm ² (97.9 MPa)	14,200 psi
Tensile Strength	(ASTM C 307)	210 kg/cm ² (20.7 MPa)	3,000 psi
Flexural Strength	(ASTM C 580)	390 kg/cm ² (37.9 MPa)	5,500 psi
Flexural Modulus of Elasticity	(ASTM C 580)	1.3 x 10 ⁵ kg/cm ² (1.2 x 10 ⁴ MPa)	1.8 x 10 ⁶ psi
Bond Strength			
Excellent – 100% Concrete Failure	-----	>28 kg/cm ² (>2.8 MPa)	>400 psi
Linear Coefficient of Thermal Expansion	(ASTM C 531)	2.2 x 10 ⁻⁵ cm/cm/°C	1.2 x 10 ⁻⁵ in/in/°F
Thermal Compatibility to Concrete	(ASTM C 884)		Passes
Impact Resistance	(ASTM D 2794)		Greater than Concrete
Taber Abrasion	(ASTM D 4060)		
H-18/250 gm wt/500 cycles	-----		136 mg Maximum Weight Loss
Maximum Service Temperature Dependent on Service			
(Water Immersion) Continuous	-----	66°C	150°F
(Water Immersion) Intermittent	-----	93°C	200°F

Surface Preparation

Proper surface preparation is important for the long term performance of this system. For detailed information on surface preparation and application, please refer to ARC Application Manual for Concrete. Generally new concrete must be cured for a minimum of 28 days. Remove all grease, oils, and grime by washing with an emulsifying alkaline water-base cleaner. All surface contaminants including old coatings, chemical salts, dust, loose concrete, and the laitance layer must be removed. This is best accomplished by hydro-blasting, steel shot-blasting, scabbling, scarifying, or dry abrasive blasting. The resulting surface must be structurally sound and free of all contaminants. Surface dampness is acceptable, standing water is not. For slab on grade applications a vapor barrier is recommended. If no vapor barrier is present check for vapor transmission.

ARC 797 Primer: Mixing and Application

Each system kit contains a two component primer (ARC 797) which is packaged in the proper mix ratio. Add Primer Part B to Primer Part A and mix thoroughly; the properly mixed primer should be clear not cloudy. Apply with a brush, roller, squeegee or spray to the freshly prepared concrete. The primer coat should be a uniform wet coat with a wet film thickness of 175 - 250 microns (7-10 mils). Do not prime more surface area than can be top coated within 4 hours, depending on ambient conditions. For vertical substrates and applications where concrete is porous, double prime the area.

NOTE: To reduce the chance of vapor blistering or disbondment, the overlayment should not be installed while the concrete's temperature is rising. In outdoor applications, it is best to install in the evening or at night to avoid this problem.

Each mixed A & B kit of ARC 797 primer covers approximately 5 m² (55 square feet) for the system kit.

Working Time - Minutes

	10°C 50°F	16°C 60°F	25°C 77°F	32°C 90°F
ARC 797 Primer	65 min.	40 min.	30 min.	18 min.
ARC 988 Top Coat	NR	50 min.	40 min.	20 min.

NR = Not Recommended.
 Working time begins when mixing is initiated.

ARC 988 Top Coat: Mixing and Application

To facilitate mixing and application, all material temperatures should be between 21° - 32°C (70°-90°F) prior to mixing. ARC 988 should be applied shortly after application of primer. The primer must still be tacky prior to applying ARC 988, otherwise the area must be reprimed. This is normally within 4 hours of application, depending on ambient conditions. ARC 988 should be applied at a minimum thickness of 6 mm (1/4 inch). Minimum application temperature is 16°C (60°F), although application will be easier at 25°C (77°F).

ARC 988 System Kit - Mixing

Premix Part A to disperse pigments. Thoroughly mix Top Coat Part A and Part B in a suitable pail, using a slow speed mixer. Next transfer the blended resins to a mortar mixer and gradually add in 3 bags of QRV reinforcement. Total mixing time should be a minimum of 3 minutes or until uniformly blended.

NOTE: 1A + 1B + 3 bags of QRV reinforcement will require a mixer suitable to handle 35 liters (1 1/4 ft³) mix.

ARC 988 Bulk Kit - Mixing

Please follow the ARC 988 Bulk Packaging Mix Instructions (provided separately).

Application

ARC 988 may be distributed to the floor surface by using screed guides and rigid bar, or screed box, not exceeding 1,2 m (4 ft.) wide. Apply a minimum of 6 mm (1/4 inch) and finish the surface using steel trowels. ARC 988 may be applied by use of a hawk and trowel. During application, ARC 988 must be pressed firmly onto the substrate to promote contact with the primer and to ensure that it is well compacted. Finish the surface to the desired texture with a trowel. Remove all trowel marks and unevenness before the end of "Working Time" (see chart). All non-moving horizontal cracks must be pre-filled with ARC 797 and fiber mesh. All vertical cracks must be pressure injected with a suitable injection system. All pre-existing joints must be respected.

Packaging and Coverage

ARC 988 is available in a System Kit covering 4,1 m² at 6 mm (45 ft² at 1/4"). The ARC 988 System Kit contains an ARC 797 primer pack, an ARC 988 resin pack and 3 bags of QRV reinforcement. All components are pre-measured and pre-weighted. Also included in every kit are a Product Data Sheet, brush, and mixing tool that are used for mixing and applying the primer.

ARC 988 is also available in Bulk Kit packaging. Please see your ARC specialist for more information.

Curing Schedule

	10°C 50°F	16°C 60°F	25°C 77°F	32°C 90°F
Foot Traffic	NR	5 hrs.	2 hrs.	1.5 hrs.
Light Load	NR	8 hrs.	4 hrs.	3 hrs.
Full Load	NR	34 hrs.	13 hrs.	8 hrs.
Full Chemical	NR	14 days	12 days	5 days

NR = Not Recommended.
 Cure times are based on substrate temperature and thickness of 6 mm (1/4 inch).
 Thicker films will cure more rapidly.

Clean Up

Use commercial solvents (Acetone, Xylene, Alcohol, Methyl Ethyl Ketone) to clean tools immediately after use. Once cured, the material would have to be mechanically abraded.

Storage

The recommended storage temperature is between 10°C (50°F) and 32°C (90°F). Excursions beyond this range which may occur during shipping, are acceptable as long as the material is prewarmed to room temperature before use. The shelf life is two years in unopened containers. Mix each liquid component well before using.

Safety

Before using any products, always review the appropriate Material Safety Data Sheet (MSDS) or appropriate Safety Sheet for your area. Follow standard confined space entry and work procedures, if appropriate.

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CPD® RAPIDCRETE

DESCRIPTION

CPD® Rapiderete is a ready-to-use, fast setting, high strength patching material. It is non-metallic, non-staining, and non-toxic. CPD® Rapiderete can be used for both interior and exterior applications.

WHERE TO USE

CPD® Rapiderete is particularly useful when downtime is at a premium and where low temperatures do not allow ordinary cement based patching compounds to properly cure. The rapid hydration of this product allows moisture sensitive coatings such as polyurethanes to be applied to the patched area in 24 hours under normal conditions. Applications include repairing concrete floors in factories, warehouses, parking decks and ramps, loading dock areas and cold storage rooms, concrete bridge deck repairs and concrete runway repairs.

BENEFITS

- fast setting
- high strength
- excellent freeze-thaw resistance
- very low permeability
- high resistance to sulphate attack
- non-toxic
- chloride free

PROPERTIES

Compressive Strength**

(ASTM C109-77)@ 21 °C(70°F)

Mortar Consistency

(4.5L water/25 kg bag)/(1.19 U.S. gal/55 lb)

2 hours	25.6 MPa (3,720 psi)
4 hours	28.5 MPa (4,135 psi)
24 hours	46.2 MPa (6,700 psi)
3 days	54.5 MPa (7,900 psi)
28 days	65.5 MPa (9,500 psi)

** This mix was extended with an equal weight of washed 10mm pea gravel.

Slant Shear Bond Strength

(ASTM C882-91)

4 L water/25 kg bag

(1.06 U.S. gal/55lb)

1 day	14 MPa (2,043 psi)
28 days	19 MPa (2,770 psi)

Chloride Permeability

(AASHTO T-277-831) 23°C

4L Water/25 kg bag

(1.06 U.S. gal/55 lb) 208 Coulombs

Water Absorption

(M1-67-92)

% Weight Gain

4 L Water/25 kg bag 3.67%

(1.06 U.S. gal/55 lb)

Salt Scaling

(MTO Method 1315-07) 50 cycles 0.467 kg/m²

The above information is representative of actual production runs. Independent test results may vary from the above by approximately ± 10 %.

APPLICATION

Surface Preparation

The concrete substrate to receive the patching compound must be clean and sound. Square out the patch area minimum 12 mm (1/2") and chip out all contaminated concrete. Soak patch area with water so that the concrete is thoroughly damp (no free standing water should be present). For substrate temperatures below 10 °C (50 °F) use a slurry bond coat of CPD® Rapiderete and water. For substrate temperatures above 10°C (50°F) CPD® Concentrated Latex Adhesive, diluted 1:1 with water, can be mixed with CPD® Rapiderete powder to form a slurry bond coat mix. Scrub into the concrete then apply the mixed material as soon as possible. The mixed CPD® Rapiderete must be applied before the slurry bond coat sets.

MIXING

CPD® Rapiderete can be mixed with different quantities of water to yield a wide range of consistencies from trowel grade to pourable. This product can also be mixed with a dilute latex solution to improve certain physical properties if desired. As with all cementitious products, use only enough water to achieve the desired consistency. **Do not exceed 5L (1.32 US gal) of water per 25 kg (55 lb) bag.**

CPD® recommends extending CPD® Rapiderete with an equal weight (or loose volume) of clean 10mm (3/8") pea gravel for all patching over 32 mm (1 1/4") in depth.

CURING

Wet curing of all patches and exposed grout areas is required as specified below. Curing by application of a film forming curing compound is **not** recommended as a direct substitute for wet curing. Once the CPD® Rapidcrete has set (the material has a patchy-like finish) which is usually 30-45 minutes after placing @ 20°C (70°F), the product must now be wet cured for a minimum of 1-2 hours. This can be achieved by keeping the applied product wet covered with a layer of water, or using burlap that is continually kept saturated with water. If neither of these curing methods are possible, contact your CPD technical representative.

LIMITATIONS

- not for use on substrates below 0 C (32 F)
- not recommended for structural grouting applications
- not suitable for acid exposure
- maximum service temperature 176°C (350°F)
- minimum thickness 13mm (1/2")

COVERAGE

0.014m³(0.50 ft³) per 25 kg (55 lb) bag.

STANDARDS

Approved for use on all MTO & MTQ (Ministry of Transportation Ontario & Quebec) projects.

PACKAGING

CPD® Rapidcrete is packaged in 25 kg (55 lbs.) multi wall bags.

CPD® Concentrated Latex Adhesive is available in: 3.79L (1 U.S. gal), 18.9L (5 U.S. gal) and 208L (55 U.S. gal) containers.

CLEAN UP

Clean all mixers and tools with water before product hardens.

STORAGE

May be stored short term anywhere under tarp on pallets as long as the product is kept dry. Dry heated warehouse storage is recommended for extended storage.

SHELF LIFE

One year when stored in dry warehouse on pallets in original bags. Protect from moisture.

SAFETY PRECAUTIONS

Consult Material Safety Data Sheet (M.S.D.S.) for specific instructions. MSDS # 216.

WARRANTY

The recommendations made and the information herein is based on our own laboratory experience, and is believed to be accurate under controlled conditions. However, no warranty or guarantee of accuracy is made because we cannot cover every possible application of product nor anticipate every variation encountered in weather conditions, job-conditions, methods used and types of surfaces on which the product is applied. The users shall make their own tests to determine the suitability of such products for any particular purpose.

CPD® makes no warranties with respect to this product, expressed or implied, without limitation, the implied warranties of merchantability or fitness for a particular purpose.

CPD®'s liability shall be limited in all events to supplying sufficient product to re-treat and/or repair the specific area to which CPD® product has been applied.

CPD® reserves the right to have the true cause of any difficulty determined by accepted test methods. CPD® shall have no other liability, including liability for incidental, consequential or resultant damages, however caused, whether due to breach of warranty, negligence, or strict liability.

THIS WARRANTY MAY NOT BE MODIFIED OR EXTENDED BY REPRESENTATIVES OF CPD®, ITS DISTRIBUTORS OR DEALERS.



Vector™ Galvashield® XP

Embedded Galvanic Anode Units for Corrosion Prevention

Description

Galvashield XP embedded galvanic anode units are used in concrete rehabilitation to prevent the formation of new corrosion sites adjacent to completed patch repairs. Galvashield XP consists of a sacrificial zinc anode core that is activated by the surrounding specially formulated cementitious mortar. The small puck-shaped unit [2.5 in. (64 mm) diameter by 1.1 in. (27 mm) high] is quickly and easily fastened to the exposed reinforcing steel. Once installed, the zinc anode core corrodes preferentially to the surrounding rebar, thereby providing galvanic corrosion prevention to the adjacent reinforcing steel.

Applications

- Patch repairs
- Bridge widening
- Joints between new and existing concrete
- Slab replacement
- Expansion joint repair
- Prestressed concrete
- Post-tensioning anchors
- Repair of epoxy-coated rebar

Features and Benefits

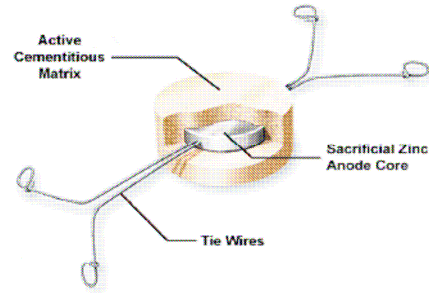
- **Proven technology** - supported by independent test program.
- **Focused protection** - provides localized corrosion protection where it is needed the most, at the interface of the repair and the remaining contaminated concrete.
- **Economical** - low cost method of providing galvanic corrosion prevention to extend the service life of concrete patch repairs.
- **Versatile** - effective in chloride-contaminated and carbonated concrete. Can be used for both conventionally reinforced and prestressed or post-tensioned concrete.
- **User friendly** - installation is quick and easy, requiring no special equipment or training.
- **Low maintenance** - requires no external power source or system monitoring.
- **Measurable** - anode performance can be easily monitored if required.
- **Long lasting** - 10 to 20 year service life* reduces the need for future repairs.

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

Specification

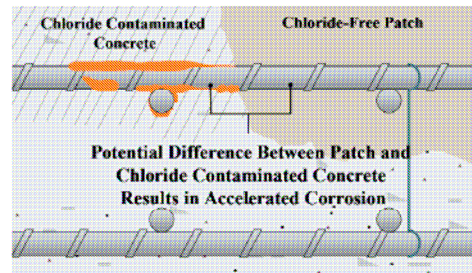
Embedded galvanic anode units shall be Galvashield XP as manufactured by Vector Corrosion Technologies. Galvashield XP is a pre-manufactured anode consisting of zinc in compliance with ASTM B418-95a Type I cast around integral bright steel tie wires for tying to the reinforcing steel and encased in an activated cementitious mortar with pH of 14 or greater. The cementitious mortar around the zinc anode shall contain no chlorides or other corrosion constituents detrimental to the reinforcing steel as per ACI 222R.

GALVANIC SYSTEMS

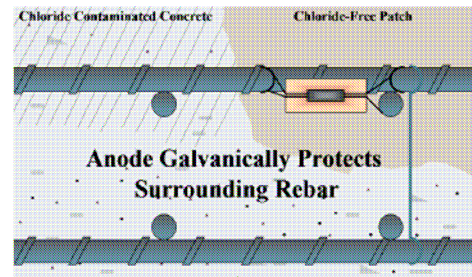


Cut-away of Galvashield XP

Level of Protection	Description	Galvashield XP
Corrosion Prevention	Preventing new corrosion activity from initiating	•
Corrosion Control	Significantly reducing on-going corrosion activity	
Cathodic Protection	Highest level of protection intended to stop on-going corrosion activity	



"Ring Anode" Corrosion (without Galvashield XP)



Galvashield XP prevents "Ring Anode" Corrosion





Vector™ Galvashield® XP

How It Works

When two dissimilar metals are coupled together in an electrolyte, the metal with the higher potential for corrosion (more electronegative) will corrode in preference to the more noble metal. In concrete repair applications, the zinc anode core of the Galvashield XP unit will corrode in favor of the reinforcing steel, thus preventing the initiation of new corrosion activity in the adjacent reinforcing steel.

Design Criteria

Steel density ratio (steel surface area/concrete surface area)	Maximum spacing* between XP units in in. (mm)
< 0.3	30 in. (750 mm)
0.31 - 0.6	24 in. (610 mm)
0.61 - 0.9	20 in. (500 mm)
0.91 - 1.2	17 in. (430 mm)

*Maximum spacing is based on typical conditions. Spacing should be reduced as appropriate for severe environments or to extend the expected service life of the anode.

Installation Instructions

Prior to installation, the "Installation Instructions" bulletin should be thoroughly examined for details on the placement and use of Galvashield XP units.

Concrete shall be removed from around and behind all corroding rebar in accordance with good concrete repair practice (ICRI Guideline No. 03730). Securely fasten the unit to clean reinforcing steel using a suitable wire twisting tool to eliminate free movement, and to ensure a good electrical connection. Steel continuity within the patch should be verified with an appropriate meter. If discontinuous steel is present, re-establish continuity with steel tie wires. Following the unit installation, electrical connection between the unit tie wires and the clean reinforcing bar should be confirmed with an appropriate meter.

The location and spacing of the units shall be as specified by the designer (for more information refer to Design Criteria). Units are typically tied on the side or beneath the exposed rebar as close as practical to the surrounding concrete making sure that enough space is left to fully encapsulate the unit in the repair. Minimum cover over the units must be ¾ in. (20 mm). Units can be placed on a grid pattern throughout the repair to protect a second mat of steel if required. With the units in position, complete the repair using a suitable repair material with resistivity less than 15,000 ohm-cm. If higher resistance repair materials are to be used, pack Galvashield Embedding Mortar between the unit and the substrate to provide a conductive path to the substrate, then complete repair.

Precautions

Galvashield XP units are not intended to address or repair structural damage. Where structural damage exists, consult a structural engineer.

Galvashield XP units are designed to provide localized galvanic corrosion prevention. To provide galvanic corrosion control over a broader area, Galvashield XP units can be used in conjunction with Galvashield CC units placed in a grid pattern in the remaining sound but contaminated concrete. For more information on corrosion mitigation strategies, contact Vector Corrosion Technologies.

Packaging

Galvashield XP units	20 units per box 11.5 lb. (5.2 kg) per box
Galvashield Embedding Mortar	11 lb. (5 kg) bag

Storage

Store in dry conditions in the original unopened boxes. Avoid extremes of temperature and humidity. Units should be installed within one year.

Health and Safety

As with all cement-based materials, contact with moisture can release alkalis which may be harmful to exposed skin. Galvashield XP 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.

Related Documents

A range of related Galvashield XP documents are available including independent product evaluations, installation instructions, guideline specifications, project histories, applications, pricing and MSDS. For more information, contact Vector Corrosion Technologies.

About Vector

Vector Corrosion Technologies is a member of the Vector Construction Group, a privately owned corporation with 11 offices throughout Canada and the United States. Vector takes pride in offering technically advanced, cost effective solutions for concrete structures subject to corrosion damage and has earned numerous awards and patents for product innovation. As evidenced by the Corporate Safety and Environmental Policies, Vector is committed to a safe, healthy and sustainable environment.

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Vector® Galvashield® XP

Installation Instructions

The Galvashield XP anode is designed to mitigate corrosion of reinforcing steel in concrete. In concrete restoration, the Galvashield XP anode can be used in locations where an interface between the new repair mortar/concrete and the existing chloride contaminated or carbonated concrete creates a high potential for future corrosion (for more information, refer to "Galvashield Theory"). The Galvashield XP anode is simply tied to the existing reinforcing steel along this interface or around the perimeter of the repair area.

For maximum performance, the anodes should be installed as close as practical to the edge of the repair area (within 6 in. or 150mm) while still providing sufficient clearance for the anode to be completely surrounded by the repair mix. Anode spacing shall be as specified by the designer however anode spacing should not exceed 30 inches (750mm) on center. Structures containing heavy reinforcement or exposure to a particularly corrosive environment require reduced spacing (See data sheet for spacing guidelines). For additional information, refer to the Galvashield XP data sheet or contact Vector Corrosion Technologies.

Installation Procedure

1. As in standard patch repairs, all old/loose concrete should be removed from around and behind the steel reinforcement inside the repair area in accordance with good concrete repair practice. Provide sufficient clearance between the anode and the substrate concrete (minimum of ¼ in. [19 mm] or ¼ in. [6 mm] larger than the top size aggregate in the repair material, whichever is greater).

2. The exposed rebar in the repair area shall be thoroughly cleaned to bright metal to facilitate a good electrical connection where anodes will be attached. Prior to installation, electrical continuity of the rebar within the repair area should be confirmed with the use of an appropriate meter.

Note: When checking electrical continuity DC resistance of 1 ohm or less is acceptable. Discontinuities can be corrected by wiring the "unconnected" bar to adjacent bars using standard steel tie wire.

3. Securely fasten anode in place with attached tie wires. If the anode is to be tied onto a single bar, or if less than 1 inch (25 mm) of concrete cover exists, place anode beneath the bar (away from the surface of the concrete). If sufficient cover exists, the anode may be placed at the intersection between two bars and secured to each clean bar.

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GALVANIC SYSTEMS

Level of Protection	Description	Galvashield XP
Corrosion Prevention	Preventing new corrosion activity from initiating	●
Corrosion Control	Significantly reducing or stopping on-going corrosion activity	
Cathodic Protection	Highest level of protection intended to stop on-going corrosion activity	

4. Once installed, electrical continuity between the anode tie wires and the rebar should be confirmed using an appropriate meter. Maximum DC resistance of 1 ohm.

5. Repair material must have a resistivity below 15,000 ohm-cm. Products with significant polymer modification and/or silica fume content may not be suitable. Similarly, if bonding agents are used, they should have suitable conductivity. Insulating materials such as epoxy bonding agents should not be used. If high resistance repair materials are to be used, anodes should be installed with Galvashield Embedding Mortar (contact Vector for further details).

Note: If rebar coatings are to be used, care should be taken to ensure the anode and tie wires do not become coated or the connection between the anode tie wires and the rebar is not lost.

6. Complete the repair following normal concrete repair procedures, taking care not to create any voids around the anode.

Health and Safety Information

As with all cement based products, contact with water/moisture can release alkalis which may be harmful to exposed skin. Avoid contact with skin. Wear suitable gloves and other personal protective equipment in accordance with standard practices for handling cement based materials. Additional safety information is provided in the Galvashield XP Material Safety Data Sheet (MSDS).

Storage Instructions

Avoid extremes of temperature and humidity. Anodes are not particularly vulnerable to storage conditions but should be installed within 1 year.



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Vector® Galvashield® XP Installation Process

GALVANIC SYSTEMS

Galvashield XP anodes provide proven corrosion prevention and economically extend the life of concrete repairs.



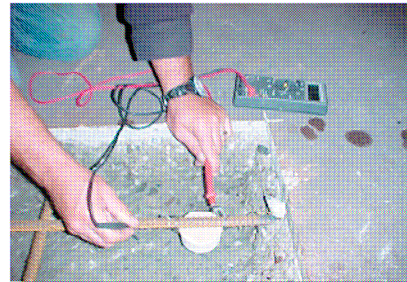
Prepare the area to be repaired in accordance with industry (ICRI) guidelines.



Anodes should be placed around the perimeter of the patch. (See data sheet for spacing guidelines)



Tie the anode on the side or beneath the rebar providing minimum 3/4 in. cover and clearance on all sides



Check connection with a multimeter. Resistance should be 1 ohm or less.



Anodes installed and ready for repair.



Complete the repair with compatible repair material.

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