

Galvashield CC[®] Installation Guide

The following information provides a general step by step installation guide for Galvashield CC. It is not possible to provide a guide for all circumstances due to the diversity of sites possible, and it does not set out to provide information relating to the design and positioning of CC for specific sites due to variations in conditions such as environment, concrete and steel contents.

The Galvashield CC anode is used to control on-going corrosion and to prevent the initiation of new corrosion activity in concrete structures. Often during concrete condition surveys, areas of high corrosion potentials or active corrosion are identified in locations where the concrete is still sound. The Galvashield CC anode is used to provide corrosion control to these areas with quick and easy installation. Galvashield CC anodes can be used alone or in conjunction with Galvashield XP anodes placed around the perimeter of patch repairs.

INSTALLATION PROCEDURE

1. Using a suitable rebar locator, the location of the reinforcing grid should be determined and marked out in areas where anodes are to be installed.
2. Mark out locations for anode installation. The anodes shall be installed in a grid pattern with a maximum spacing as determined by the engineer. For spacing guidelines refer to the Galvashield CC Data Sheet. When possible, anodes shall be installed a minimum 100 mm away from reinforcing grid.
3. Mark out location of rebar connections. If the anodes are to be installed in series, two rebar connections per string of anodes are required with a maximum of 10 anodes per string.

If the anodes are to be individually connected, one rebar connection per anode is required.
4. Rebar connection shall be established using a Rebar Connection Kit. At the location of the rebar connections, drill 12 mm diameter holes from the concrete surface until contact is established with the top surface of the rebar.
5. Anode Location - drill a hole of appropriate diameter and length (see table below) in close proximity to marked out location to accommodate the anode. Do not damage rebar when drilling holes.
6. Saw cuts - all saw cuts into the concrete surface between the anode installation holes and the rebar connection holes shall be approximately 6 mm wide by 12 mm deep.
 - A. If anodes are to be installed in series, saw cut a single continuous groove between the anode installation holes and the rebar connection holes.
 - B. If anodes are to be individually connected, saw cut grooves between the anode installation hole and the rebar connection hole for each anode location.
7. All holes and saw cuts shall be cleaned of debris and concrete dust.
8. Using one Rebar Connector per rebar connection hole, place the weighted end of the connector into the drilled hole until the steel coil contacts the top of the steel.
9. Feed the steel connector wire through the Setting Tool and set into place by striking with a hammer.

| Anode Type | Description | Unit Size diameter x length mm | Minimum Hole Size diameter x depth mm |
|-------------------|--|--------------------------------|---------------------------------------|
| Galvashield CC65 | Standard unit for moderate steel density | 46 x 62 mm | 50 x 95 mm |
| Galvashield CC100 | Larger unit for higher steel density | 46 x 100 mm | 50 x 130 mm |
| Galvashield CC135 | Slim-fit for congested reinforcement | 29 x 135 mm | 32 x 165 mm |

10. Proper connection and rebar continuity shall be verified using a multi-meter. Maximum resistance between the locations shall be less than 1 ohm.
11. Holes shall be in a saturated-surface dry condition prior to anode placement.
12. Presoak anodes in a small volume of water for 10 to 20 minutes. Remove from water bath immediately prior to installation.
13. Complete wiring between the anodes and the rebar connections.
 - A. If anodes are to be installed in series:
 - (i) Trim the cable supplied in the Anode Connection Kit leaving enough length to interconnect the anodes and rebar locations along a single string. Trim the steel anode connection wire on each anode to a length of approximately 12 mm.
 - (ii) Insert the interconnecting cable through the open side of the button-type wire connectors supplied in the Anode Connection Kit and the steel anode wire into the terminated side. With the anode along side of the installation hole, crimp the button connector until it is flush with its casing.
 - (iii) Connect the bare ends of the interconnecting cable and reinforcing steel connector wires using the same procedures as outlined above in 13.A.ii.
 - iv) After all the anodes along the string are connected to the interconnecting cable, verify continuity between anodes and rebar connections with a multi-meter. Resistivity of 1 ohm or less is acceptable.
 - B. If anodes are to be connected individually:
 - (i) Trim the steel anode connection wire on each anode to a length of approximately 12 mm.
 - (ii) Insert the end of the Rebar Connection wire through the open side of the button-type wire connectors supplied in the Anode Connection Kit and the steel anode wire into the terminated side. Crimp the button connector until it is flush with its casing.
 - (iii) Verify continuity between steel anode wire and rebar connection wire with a multi-meter. Resistivity of 1 ohm or less is acceptable.
14. Mix the Galvashield CC bedding mortar per the manufacturer's instructions. After removing excess water from the presoaked holes, fill each anode installation hole approximately 2/3 full with mixed embedding mortar.

15. Insert an anode into each hole, forcing the embedding mortar to fill the annular space from the bottom up. Top off the hole with embedding mortar and strike off excess flush with the concrete surface. Minimum cover over the top of the anode shall be 25 mm.
16. After burying all wiring into the saw cut and drilled holes, backfill saw cut and rebar connection holes with embedding mortar or other material approved by the engineer and strike off flush with the concrete surface.
17. Wet cure cement-based mortar(s) or cure with two coats of a membrane-forming concrete curing compound meeting the requirements of ASTM C309.
18. Protect area from traffic for 24 hours.

IMPORTANT NOTICE

A Material Safety Data Sheet (MSDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the MSDS 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 Application Guide 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 the 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.

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