BUILDING TRUST

PRODUCT DATA SHEET

Sika® FerroGard®-720 Reba

DISCRETE ANODE FOR CORROSION MITIGATION OF INCIPIENT ANODE ADJACENT TO CONCRETE REPAIRED AREAS AND FOR CORROSION PREVENTION IN NEW CONSTRUCTION

AVAILABLE ON INDENT ORDER ONLY

DESCRIPTION

Sika® FerroGard®-720 Reba is a zinc based discrete sacrificial anode placed inside a concrete repaired area in reinforced concrete structures which are corroding as a result of chloride ingress. Sika® FerroGard®-720 Reba anodes are placed along the perimeter of the repair area and fixed to the reinforcement prior the application of a concrete repair system. The reinforcement outside the repaired area is at greatest risk owing to the passive condition of the reinforcement within the repaired area. Sika® FerroGard®-720 Reba anodes corrode preferen-tially to the surrounding reinforcement offering protection against incipient anode damage.
Sika® FerroGard®-720 Reba can also be placed at specific positions on steel reinforcement stirrups when used in new construction to prevent corrosion in marine environments.

USES

Sika® FerroGard®-720 Reba may only be used by experienced professionals.

- Controlling the incipient anode effect by electrically balancing the anodic and cathodic areas of reinforcement
- Targeted treatment applied to concrete repaired areas to prevent incipient corrosion damage
- For reinforced concrete structures such as bridges, car parks, coastal structures, industrial structures and residential high rise
- Coastal reinforced structures both in and above the tidal zones
- Corrosion prevention in new construction

CHARACTERISTICS / ADVANTAGES

- Sika® FerroGard®-720 Reba anodes corrode preferentially to the surrounding reinforcement, offering protection from further corrosion damage
- Protection against incipient anode effect outside of repaired areas
- No long term maintenance cost
- Strengthens passive film on reinforcement
- No rapid dissolution of activating components
- Quick installation - no additional break out
- Performance can be monitored
- Cost effective corrosion control solution

PRODUCT INFORMATION

Chemical Base	Zinc alloy compound and mortar casing of pH >14
Packaging	25 anodes per box
Appearance / Colour	Zinc anode core surrounded by an activating mortar casing with an integral titanium tie wire on one side.
Shelf Life	5 years from date of production
Storage Conditions	Product must be stores in original, unopened and undamaged sealed packaging in dry conditions at temperature between +5°C and +30°C. Always refer to packaging. Do not allow contact with oxidizing materials.

Length	140 mm
Diameter	40 mm
Zinc Weight	165 g

TECHNICAL INFORMATION

Current Density	> 0,2–2 mA/m² * in corrosive environment. * Dependent on local conditions, including chloride concentration, concrete properties, humidity and temperature.

SYSTEM INFORMATION

System Structure

- Sika® FerroGard®-720 Reba

Other anode sizes are available with different zinc contents:

Name	Zinc content
Sika® FerroGard®-710 Reba	60 g
Sika® FerroGard®-715 Reba	100 g

APPLICATION INSTRUCTIONS

APPLICATION

Reference must also be made to the full Method Statement which is summarised below:

Control of incipient anodes

Within the repair area where the concrete has been removed,locate the Sika® FerroGard®-720 Reba anodes along the perimeter edges of the repair at spacing's determined by the design engineer based on the steel density. After pre-soaking the individual Sika® FerroGard®-720 Reba anodes, they are attached parallel or beneath the cleaned reinforcement in the location of the anodes using the conducting tie wires. Electrical continuity of the Sika® FerroGard®-720 Reba anode conductors and the reinforcement must be confirmed. The Sika® FerroGard®-720 Reba units must be then be encased in the relevant Sika® low resistivity bridging mortar ensuring complete coverage of the anode surface. The appropriate Sika® concrete repair system is then applied with the repair area once the bridging mortar has stiffened sufficiently to prevent movement of the anodes.

The Sika® FerroGard®-720 Reba anode installation can be monitored using half-cell potential surveys, current outputs and reinforcement corrosion rate measurements.

Corrosion prevention in new construction

Sika® FerroGard®-720 Reba anodes are attached to the reinforcement by the integral tie wires at regular spacing’s (refer to the Method Statement). They must be properly fixed to the bar with additional plastic tie wires to prevent the anodes being displaced during concrete casting.

LIMITATIONS

In order that suitable current flow and lifetime be achieved from the Sika® FerroGard®-720 Reba anode, certain practical considerations must be taken into consideration:

- The patch repair material cover for Sika® FerroGard®-720 Reba unit must be a minimum depth of 20 mm.
- Concrete repairs must be undertaken in accordance to an acknowledged national standard such as EN 1504.
- Any discontinuous reinforcement must be either electrically bonded or electrically isolated from the system negative.
- The time to achieve passivity will be dependent on site conditions. Depolarisation of treated reinforcement will be slower in moist conditions.
- Design of the galvanic protection system must be undertaken by an experienced qualified corrosion design engineer.
- Installation must be carried out in accordance with engineers design and specification.
- When used in new construction the concrete cover must follow the project specification but must not be lower than 50 mm.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY HEALTH AND SAFETY

REGULATION (EC) NO 1907/2006 - REACH

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in this product data sheet.Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w)

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

Sika (NZ) Limited
85-91 Patiki Road
Avondale, Auckland 1026
New Zealand
0800 745 269
www.sika.co.nz