

## PRODUCT DATA SHEET

# Sika® FerroGard®-710 Reba

Discrete anode for corrosion mitigation of incipient anode adjacent to concrete repaired areas and for corrosion prevention in new construction

### DESCRIPTION

Sika® FerroGard®-710 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®-710 Reba anodes are placed along the perimeter of the repair area and fixed to the reinforcement prior to the application of a concrete repair system. The reinforcement outside the repaired area is at greatest corrosion risk owing to the passive condition of the reinforcement within the repaired area.

Sika® FerroGard®-710 Reba anodes corrode preferentially to the surrounding reinforcement offering protection against incipient corrosion damage.

Sika® FerroGard®-710 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®-710 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 concrete structures both in and above the tidal zone
- Corrosion prevention in new construction

### CHARACTERISTICS / ADVANTAGES

- Sika® FerroGard®-710 Reba anodes corrode preferentially to the surrounding reinforcement, offering protection from further corrosion damage
- Protects against incipient anode effect outside of repaired area
- No long term maintenance costs
- 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

<b>Composition</b>	Zinc alloy compound and mortar casing of pH >14
<b>Packaging</b>	25 anodes per box
<b>Appearance and colour</b>	Zinc anode core surrounded by an activating mortar casing with two integral conducting tie wires
<b>Shelf life</b>	5 years from date of production

<b>Storage conditions</b>	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. Do not allow contact with oxidizing materials.
<b>Length</b>	65 mm
<b>Width</b>	60 mm
<b>Thickness</b>	35 mm
<b>Zinc weight</b>	60 g

## TECHNICAL INFORMATION

<b>Current density</b>	>0,2–2 mA/m <sup>2</sup> * in corrosive environment *Dependent on local conditions, including chloride concentration, concrete properties, humidity and temperature.
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## SYSTEM INFORMATION

<b>System structure</b>	<ul style="list-style-type: none"> <li>▪ Sika® FerroGard®-710 Reba</li> </ul> Other anode sizes are available with different zinc contents: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th><b>Name</b></th> <th><b>Zinc content</b></th> </tr> </thead> <tbody> <tr> <td>Sika® FerroGard®-715 Reba</td> <td>100 g</td> </tr> <tr> <td>Sika® FerroGard®-720 Reba</td> <td>165 g</td> </tr> </tbody> </table>	<b>Name</b>	<b>Zinc content</b>	Sika® FerroGard®-715 Reba	100 g	Sika® FerroGard®-720 Reba	165 g
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Sika® FerroGard®-715 Reba	100 g						
Sika® FerroGard®-720 Reba	165 g						

## APPLICATION INFORMATION

<b>Ambient air temperature</b>	+5 °C min
<b>Substrate temperature</b>	+5 °C min

## 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.

## IMPORTANT CONSIDERATIONS

In order that suitable current flow and lifetime be achieved from the Sika® FerroGard®-710 Reba anode, certain practical considerations must be taken into account.

- The patch repair material cover for Sika® FerroGard®-710 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 to 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 shall follow the project specification but shall not be lower than 50 mm.

## 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 the 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).

## APPLICATION INSTRUCTIONS

### APPLICATION

Reference must also be made to the relevant Method Statements which are summarised below:

#### Control of incipient anodes

Within the repair area where the concrete has been removed, locate the Sika® FerroGard®-710 Reba anode along the perimeter edges of the repair at spacing's determined by the design engineer based on steel density.

After pre-soaking the individual Sika® FerroGard®-710 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®-710 Reba anode conductors and the reinforcement must be confirmed. The Sika® FerroGard®-710 Reba units must 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 within the repair area once the bridging mortar has stiffened sufficiently to prevent movement of the anode.

The Sika® FerroGard®-710 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®-710 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.

## LOCAL RESTRICTIONS

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

## 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.

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Product Data Sheet

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