

## PRODUCT DATA SHEET

# Sika® FerroGard® MN-15 RE

### REFERENCE ELECTRODE FOR CORROSION MONITORING

#### DESCRIPTION

Sika® FerroGard® MN-15 RE is a manganese dioxide based long life reference electrode used to measure steel potentials in reinforced concrete and steel framed structures. The electrode measures the effectiveness of impressed current / galvanic cathodic protection systems and monitors steel corrosion activity. The Sika® FerroGard® MN-15 RE reference electrode comprises of a core of manganese oxide encased in a polyethylene double walled tube which is capped with a cementitious plug. The connection from the reference electrode is incorporated into an epoxy filled IP68 gland to maintain long term integrity. Sika® FerroGard® MN-15 RE operates as a solid state electrode and does not require the addition of aggressive materials, such as chloride salts to initiate operation.

#### USES

Sika® FerroGard® MN-15 RE may only be used by experienced professionals.

- A reference electrode for monitoring cathodic protection systems.
- Works with Sika® FerroGard® Duo and Sika® FerroGard® Patch and Sika® FerroGard® Patch CC.

#### CHARACTERISTICS / ADVANTAGES

- Chloride free
- Exceptional polarisation characteristics
- Compact construction
- Supplied electrode potentials  $\pm 20\text{mVt}$
- Long life (>50 years)
- No release of aggressive salts
- Reliable long term performance
- Highly stable potential when current is drawn from electrode
- Simple installation
- Accurate potential measurement

#### PRODUCT INFORMATION

<b>Composition</b>	Manganese dioxide
<b>Packaging</b>	10 reference anodes per box
<b>Shelf life</b>	12 months 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.
<b>Length</b>	70 mm
<b>Diameter</b>	16 mm

#### APPLICATION INFORMATION

<b>Ambient Air Temperature</b>	+5 °C min
<b>Substrate Temperature</b>	+5 °C min

## APPLICATION INSTRUCTIONS

### APPLICATION

Reference should also be made to the Method Statement.

A suitable location for the electrode must be identified, which avoids contact with any steel in the structure (EN 12696:2000 offers guidance on the positioning of reference electrodes used in the monitoring of cathodic protection systems).

Prior to installation, the Sika® FerroGard® MN-15 RE electrode must be soaked in water for a minimum of 2 hours and a maximum of 24 hours.

Install into a 130 L x 30 Ø mm pre-drilled hole. The hole should be soaked with water prior to insertion of an embedding mortar. The Sika® FerroGard® MN-15 RE electrode should then be pushed into the embedding mortar to ensure complete encapsulation of the anode and elimination of air voids. A minimum cover of 20 mm should be achieved.

The embedding mortar should be allowed to harden as detailed in the manufacturer's instructions, but generally at least 72 hours before operation. Correct installation should be confirmed using a variable impedance voltmeter. This will confirm electrolytic contact and the absence of cable breaks.

### IMPORTANT CONSIDERATIONS

The hardened resistivity of the embedding mortar should not exceed 20 kΩ/cm.

### 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.

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## 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.

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