BUILDING TRUST

PRODUCT DATA SHEET

Sika® FerroGard®-908

Dual functional surface applied corrosion inhibitor and penetrating sealer for reinforced concrete

PRODUCT DESCRIPTION

Sika® FerroGard®-908 is designed to be applied to the concrete surface. Sika® FerroGard®-908 penetrates the concrete and mitigates active corrosion and/or delays the onset of corrosion.

USES

Sika® FerroGard®-908 is recommended for steel-reinforced concrete, pre-stressed, precast, post tensioned concrete or concrete in marine environments. Common applications include:

- Bridges and highways exposed to corrosive environments (deicing salts, weathering)
- Building facades and balconies
- Parking garages
- Piers, piles, and concrete dock structures
- Vertical, horizontal and overhead surfaces
- As part of Sika's system approach for buildings and civil engineering

CHARACTERISTICS / ADVANTAGES

- Passes - USBR M-82 Corrosion Mitigation Test Protocol
- Significantly reduces active corrosion due to chlorides and or carbonation, even in cracked concrete
- Increases the resistivity of the reinforced concrete
- Enhances the durability of reinforced concrete
- Long term efficiency, deep penetration
- Does not require concrete removal
- Repels additional water and chloride ions
- Contains amino alcohol corrosion inhibitor
- Ready to use and easily applied by spray or roller
- Adds additional benefits when used prior to protective coatings in concrete restoration systems
- Not a vapor barrier; allows vapor diffusion
- Proven effective per ASTM G109/Cracked Beams
- Increases the resistance of concrete to freeze and thaw cycles and de-icing salts

PRODUCT INFORMATION

Chemical Base	Alkylalkoxy Silane
Packaging	5 gal. (19 L) pails, 55 gal. (208 L) drums
Appearance / Color	Clear
Shelf Life	24 months from date of production if stored properly in original, unopened and undamaged sealed packaging
Storage Conditions	Store in unopened, undamaged and original sealed packaging in dry and cool conditions. Condition material between 40 °F (4 °C) and 95 °F (35 °C). Protect from moisture. If damp, discard material

Penetration Depth

Flash Point	104°F (40°C)
Chloride penetration (NCHRP 244)	@125 sq.ft./gal
	Series II – Absorbed chloride: 88%
	Series IV – Absorbed chloride: 98%

Corrosion Data
Cracked Concrete Beam (ASTM G 109 modified)
20 Ponding cycles: 2 weeks with 3.0% sodium chloride solution and 2 weeks drying at 68°F.
After the 20th cycle, the concentration of the sodium chloride solution was increased to 5.0%
Application **before** cracking – Measurement after 2.5 years of ponding

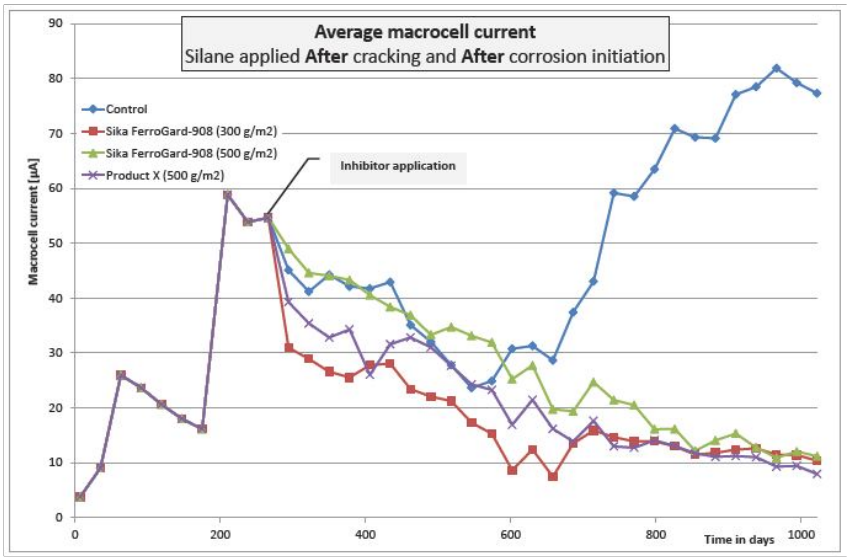
	MacroCell Current in µA	**Corrosion reduction**
Untreated	81.9	
Sika® FerroGard®-908	6.9	92%

Application **after** cracking – Measurement after 2.5 years of ponding

	MacroCell Current in µA	Corrosion reduction
Untreated	81.9	
Sika® FerroGard®-908	0.6	99%

Application after cracking and after corrosion initiation – Measurement after 2.5 years of ponding

	MacroCell Current in µA	Corrosion reduction
Untreated	81.9	
Sika® FerroGard®-908	10.0	87%



US Bureau of Reclamation M-82

Standard Protocol to evaluate the performance of Corrosion Mitigation Techniques in Concrete Repairs

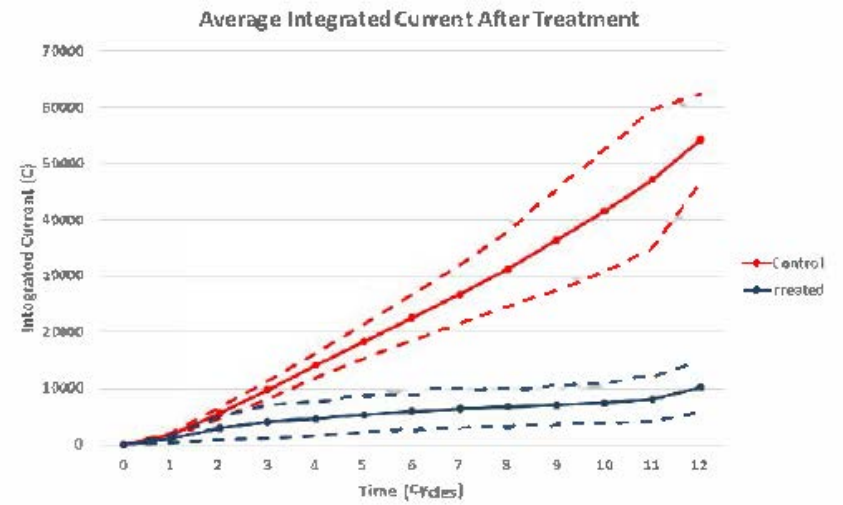
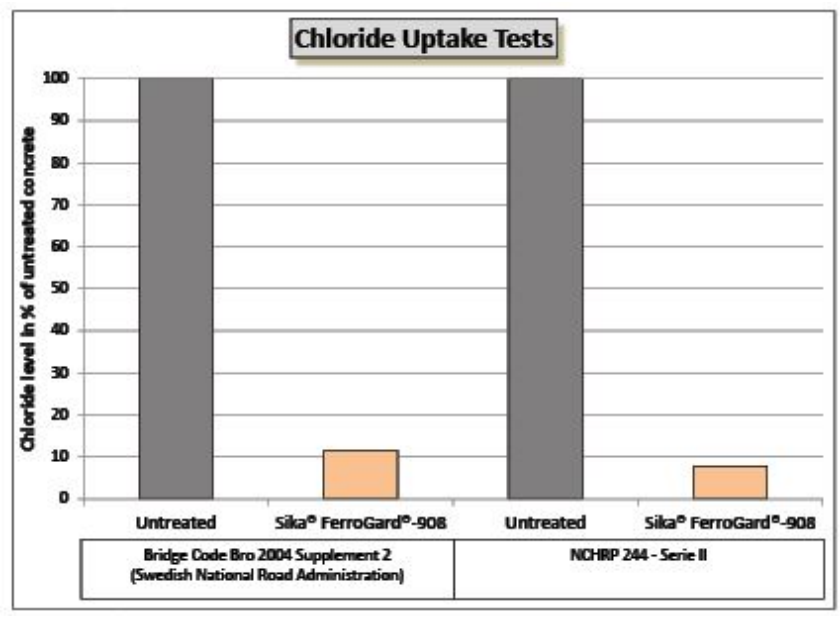


Figure 4 – Average Integrated Current after Treatment

Figure 4 taken from the test report indicates “the corrosion rate in the treated slabs was significantly lowered. This can be seen by the slope of the curves in figure 4”

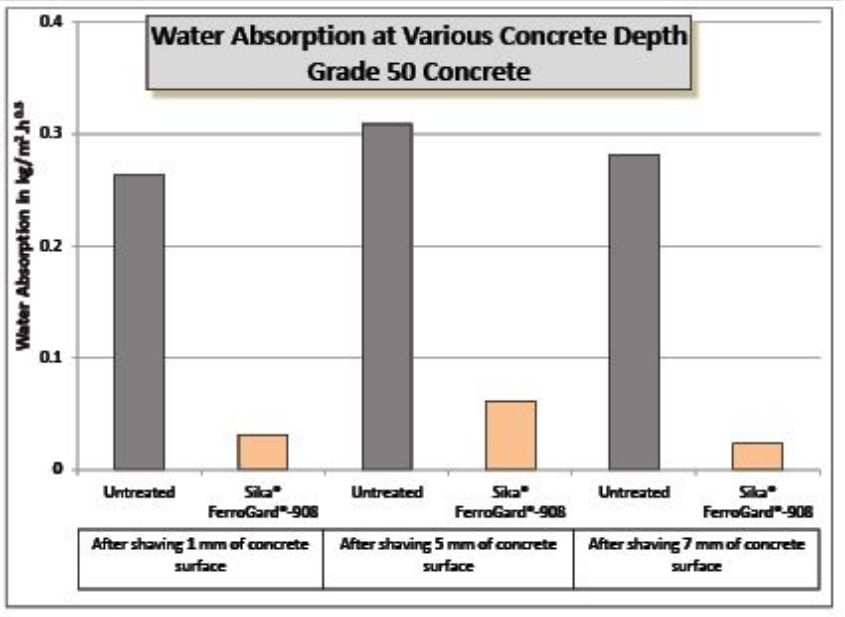
Chloride ion uptake reduction

Compared to untreated concrete, concrete treated with Sika® FerroGard®-908 shows a significantly reduced chloride uptake (test carried out using various methods).



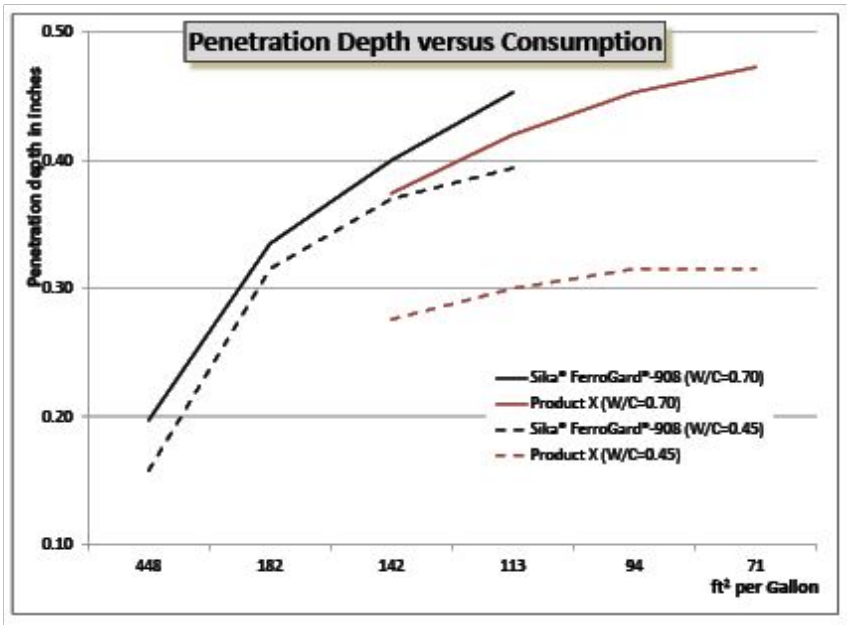
Water penetration reduction

Test performed according to the European Standard EN 13057:2002 modified (100 mm sample size). Capillary absorption measurement were carried out after shaving 1, 5 and 7 mm of the concrete surface to assess the reduction of water absorption in the depth of the concrete surface.



Penetration depth

Sika® FerroGard®-908 is compared to a product available in the market on two types of concrete mixes (one concrete with water cement ratio of 0.70 and the second one with 0.45). The results show clearly a higher penetration of **Sika® FerroGard®-908** into the test concrete when the same consumption was applied.



APPLICATION INFORMATION

Coverage

Required consumption is 125 sf / gallon. This is normally achieved with 2 coats (250 sf/gallon/coat); however 3 coats may be required for dense

	concrete and 1 coat may be achievable on porous concrete. Site mockups should be completed to verify.
Ambient Air Temperature	40–95 °F

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- Areas such as window frames which still need to be painted must be protected, avoid contact with Sika® FerroGard®-908
- Can damage some coatings and bituminous products
- May lead to darkening of concrete, apply sample areas first
- Cannot be overcoated with limewash or cement paint

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Surfaces must be sound, clean, dry and free of frost, dirt, dust, loose concrete, grease, oil, contaminants or other foreign matter that may adversely affect the penetration of Sika® FerroGard®-908. New concrete should cure a minimum of 28 days; however, sooner is possible, please contact Technical Services for more information.
Concrete surfaces must be prepared using mechanical means (sandblast, shotblast, high pressure water, etc.).
Cracks in concrete more than 12 mils (0.3 mm) should be repaired ahead of the treatment.

Mixing

No mixing required, comes ready to use. Do not dilute with water or solvent.

APPLICATION

Apply using a low-pressure spray, brush or roller, in a single pass from the bottom up taking care not to let the product run. Apply subsequent coats wet on wet. Avoid ponding on the surface.
If used as a corrosion treatment prior to the application of Sikagard® and Sikalastic® protective coatings please contact Sika Technical Services for more information.
To ensure excellent bond, use of Sika® Concrete Repair Systems, sealants and coatings is strongly encouraged.
Field mock ups are always recommended to verify final construction installation requirements.
Do not apply Sika® FerroGard®-908 to wet or damp substrates. Do not apply if rain is expected within four hours following application, or if high winds or other conditions prevent proper application.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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