

PRODUCT DATA SHEET

Sika® FerroGard®-901 S

CORROSION INHIBITING ADMIXTURE

PRODUCT DESCRIPTION

Sika® FerroGard®-901 S is a liquid concrete admixture formulated to protect embedded reinforcing steel from corrosion, and to provide an effective means for extending the service life of concrete structures.

How it Works:

In sound concrete, steel reinforcement is protected by the highly alkaline environment which deposits a passivating layer of iron oxides around the steel. This passivating layer can be broken down by a number of destructive mechanisms, including carbonation and chloride penetration. Once the steel loses its protective layer, corrosion can begin to occur. Steel corrosion is an electrochemical process consisting of two partial reactions, one at the cathode and one at the anode. Sika® FerroGard®-901 S is an active, dual purpose inhibitor containing a combination of aminoalcohols, and organic and inorganic inhibitors. This protects both the anodic and cathodic parts of the corrosion cell. Due to its high vapor pressure, Sika® FerroGard®-901 S penetrates through concrete to the steel reinforcement, where it is absorbed onto the surface. Sika® FerroGard®-901 S forms a continuous protective film around the steel presenting a physical barrier to chlorides and other deleterious substances. Because of its high affinity to steel, Sika® FerroGard®-901 S is also able to displace chloride ions from the metal surface to protect concrete from chloride induced corrosion.

USES

Sika® FerroGard®-901 S is recommended for all steel-reinforced concrete exposed to corrosive environments:

- Steel-reinforced concrete bridges and highways exposed to deicing salts
- Concrete in or near marine environments
- Parking garages
- Piers, piles, and concrete dock structures

CHARACTERISTICS / ADVANTAGES

Sika® FerroGard®-901 S offers owners, specifiers, port authorities, DOT's, and engineers a new technology in corrosion inhibition that is easily added to ready-mix or precast concrete. This dual action inhibitor dramatically delays the initiation of corrosion and greatly reduces the overall corrosion activity. Sika® FerroGard®-901 S:

- Extends the service life of concrete structures and reduces maintenance costs.
- Provides corrosion inhibition in the presence of varying chloride concentrations, even high concentration of deicing or marine salts.
- Does not affect the rheological properties of plastic concrete; no changes in mix design or placement operations are required.
- Does not affect the properties of hardened concrete, such as compressive strengths, permeability, etc.

PRODUCT INFORMATION

Packaging

Sika® FerroGard®-901 S is available in 5 gallon pails, 55 gallon drums (208 liters), 275 gallon totes (1040 liters) and bulk delivery.

Appearance / Color

Clear Blue - Green Liquid

Shelf Life	Shelf life when stored in dry warehouse conditions between 50°F and 80°F (10°C to 27°C) is one year minimum.
Storage Conditions	Sika® FerroGard®-901 S should be stored at 40 °F to 95 °F (4–35 °C). Protect from freezing. If frozen, discard.
Specific Gravity	Approx. 1.055

APPLICATION INFORMATION

Recommended Dosage	Sika® FerroGard®-901 S is recommended for use at the rate of 2 gallons per cubic yard of concrete. For extremely high chloride and severe marine exposure, it is recommended to increase the dosage rate to 3 gallons per cubic yard of concrete.
Mixing	Add the correct amount of Sika® FerroGard®-901 S at the concrete plant. For best results, add directly to freshly mixed concrete. Sika® FerroGard®-901 S may also be added to a ready-mix truck at the concrete plant or at a job-site. Minor adjustments in air entrainment may be required. The addition of two or three gallons of liquid admixture will increase the water to cement ratio in the concrete. Therefore, the mix water added at the batch plant should be reduced by an equivalent amount, e.g., if two gallons per cubic yard of Sika® FerroGard®-901 S are added, mix water should be reduced by two gallons per yard. Do not pre-mix with dry cement. When used in combination with other admixtures, care must be taken to dispense each admixture into the mix individually. Do not pre-mix with air entraining agents.

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.

OTHER RESTRICTIONS

See Legal Disclaimer.

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.

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 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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Product Data Sheet
Sika® FerroGard®-901 S
November 2018, Version 01.03
021403051000000011

SikaFerroGard-901S-en-US-(11-2018)-1-3.pdf

