

PRODUCT DATA SHEET

Sika® CNI

CORROSION INHIBITING ADMIXTURE

PRODUCT DESCRIPTION

Sika® CNI is a calcium nitrite-based admixture designed to inhibit the corrosion of steel in reinforced concrete. Sika® CNI contains a minimum of 30 % calcium nitrite by mass and meets the requirements of ASTM C 1582, Corrosion Inhibiting Admixture and ASTM C494, Type C, Accelerating Admixture.

USES

In the high alkalinity of concrete, reinforcing steel builds up a natural passivation layer. This layer protects the steel from corrosion. This passive ferric oxide layer however can be damaged by the presence of chlorides and combined with the presence of moisture and oxygen which will lead to corrosion of the steel.

Sika® CNI will help oxidize the steel to form ferric oxide, which resists chloride attack. This reduces the areas of ferrous oxide ions that are susceptible to attack by chlorides. Ferrous oxide creates a ferrous oxide complex (rust), if attacked by chlorides. In the presence of these chlorides, rust continues to generate in these areas (corrosion pits) and ultimately leads to staining, cracking and spalling of the concrete.

Sika® CNI fortifies the ferric oxide passivating layer prior to the penetration of chlorides. The nitrite ions in Sika® CNI will convert ferrous oxide to more resistant ferric oxide, thereby protecting the steel reinforcement from corroding.

CHARACTERISTICS / ADVANTAGES

Sika® CNI is recommended for conventional steel reinforcement as well as prestressed or post-tensioned concrete that will be exposed to chlorides from marine environments or deicing salts. Sika® CNI will extend the service life of structures by effectively inhibiting corrosion, in areas such as parking garage decks and support structures, bridge decks, marine structures and many others.

Sika® CNI may also be used in concrete elements where chlorides are added initially to the concrete mix.

Sika® CNI is a corrosion-inhibiting admixture that provides protection against corrosion in reinforced concrete structures. Sika® CNI:

- Extends the service life of reinforced concrete structures.
- Is recommended for use in all types of reinforced concrete, precast and/or prestressed concrete as well as ready mix applications.

PRODUCT INFORMATION

Packaging	Available in 55 gallon (208 liter) drums, 275 gallon (1040 liters) totes and bulk delivery.
Appearance / Color	Greenish Liquid
Shelf Life	Shelf life when stored in dry warehouse conditions between 50 °F and 80 °F (10–27 °C) is one year minimum.
Storage Conditions	Sika® CNI should be stored above 40 °F (5 °C). If frozen, thaw out and agitate thoroughly to return to normal state before use.
Specific Gravity	Approx. 1.3

APPLICATION INFORMATION

Recommended Dosage The recommended dosage rate will vary between 2 and 6 gallons per cubic yard (10-30 L /m³) of concrete, depending on the severity of the corrosion environment. In absence of a specified dosage rate, please contact your local Sika representative. Adjust water content accordingly. Sika® CNI may accelerate the setting time. In order to prevent slump loss or finishing characteristics, a set retarding admixture, like Plastiment®, may be required, especially in warm weather application. The full accelerating effect of Sika® CNI may be used for cold weather concreting.

Mixing Measure the required quantity manually or by automated dispenser. Add Sika® CNI directly into the freshly mixed concrete at the end of the batching cycle. When used in combination with other admixtures, care must be taken to dispense each admixture separately into the mix. Mix water adjustment is necessary to account for the water in Sika® CNI and thus, maintain the required water/cementitious ratio. The batch water must be adjusted by reducing 7.0 lbs. (0.839 kg) of water per gal. (Liter) of Sika® CNI.

Compatibility with other Admixtures: Sika® CNI can be used with Portland cements compliant with ASTM, AASHTO or CRD specifications. It can be used in combination with other Sika admixtures including microsilica, water reducers, superplasticizers, set retarders and air entrainment agents. Admixtures have to be added separately to the concrete mix in order to deliver the results required. Sika® CNI may slightly reduce the entrained air content and a higher dosage of the air entrainment agent may be required.

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.

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.

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

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.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

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