CONCRETE ADMIXTURES AND FIBER

NITRICOR

Corrosion Inhibiting Admixture

PERFORMANCE DESCRIPTION

Although structural steel components exist within concrete's naturally protective, high P.H. environment, the presence of moisture or chlorides will effectively taint this environment, causing the conversion of ferrous oxide ions into a damaging ferrous chloride complex, or rust. Left untreated, the process continues, now affecting the metal newly exposed as a result of the previous rusting and pitting. Unchecked, this conversion will lead to severe levels of structural decay and possible catastrophic results.

NITRICOR is a liquid concrete additive formulated specifically to protect structural steel components from corrosion. NITRICOR injects nitrite ions into this chemical equation, thereby protecting the ferrous oxide ions from damaging chlorides. NITRICOR competes with the chloride ions, not only slowing them down, but also bonding with the ferrous oxide ions present, converting them to stable ferric ions. This process restabilizes the protective passive layer around the metal, making it more resistant to damaging chloride ions. NITRICOR is primarily used to provide the most proven and effective corrosion protection that will extend the service life of concrete structures.

USES

NITRICOR should be used for any concrete that will be exposed to an environment which can induce corrosion in reinforcing steel such as:

- Bridge components
- Exterior steel reinforced concrete
- Structural concrete
- Post tensioned concrete
- Precast/Prestressed concrete
- Parking structures
- Exposed balconies
- Concrete in contact with seawater or near the ocean
- Docks, pilings and marine environments
- Concrete parking garages
- Bridges and roads exposed to de-icing salts

ADVANTAGES

- Provides protection against corrosion in the presence of sea salts and other corrosive agents
- Directly proportional dosages and chloride levels
- Slows overall rate of corrosion
- Top tier protection of reinforced steel and prestressed strands in ready mix concrete
- Top tier protection of reinforced steel and prestressed strands in precast/prestressed concrete
- Facilitates application using conventional methods
- Extends the working life of concrete structures
- Reduces maintenance costs

TECHNICAL INFORMATION AND COMPLIANCE

NITRICOR has the following physical characteristics as a chloride free corrosion inhibitor:

Thirty Percent (30%) solids Calcium Nitrite Solution
Specific Gravity: 1.26 to 1.31
Freezing Point 0F (-18C)

NITRICOR complies with:

ASTM C-494, Type C and E
ASTM C 1582
AASHTO Classification M 194 Type C

GENERAL APPLICATION GUIDELINES

As a corrosion inhibitor, dosage rates of 2 gallons (7.5 liters) to 6 gallons (22.7 liters) per cubic yard are recommended, depending upon the level of corrosion present in the environment and the amount of chloride bearing materials in the mix design.

In order to account for the water that will be introduced into the concrete mix design via the NITRICOR , .85 gallons (3.21 liters) of water should be subtracted from the mix design's water content for each gallon (3.78 liters) of NITRICOR used.

NITRICOR may accelerate concrete setting times. Please contact your sales representative for technical support to mitigate this effect.

NITRICOR may not be compatible with certain admixtures. For compatibility questions, please contact your sales representative.

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