



The Chemical Company

RHEOCRETE[®] 222⁺

Dual mechanism corrosion inhibiting admixture

DESCRIPTION

RHEOCRETE 222+ is a state-of-the-art corrosion-inhibiting admixture formulated to inhibit the corrosion of steel reinforced concrete. **RHEOCRETE 222+** provides two levels of corrosion protection, making it the most effective corrosion-inhibiting admixture available.

Mechanism of action

RHEOCRETE 222+ functions by inhibiting corrosion at its most critical points. **RHEOCRETE 222+** lines the pores of the concrete matrix thus slowing the rate at which chlorides and moisture enter the concrete and denying the corrosion process of its two most important components.

RHEOCRETE 222+ provides additional protection by adsorbing onto the reinforcing steel to form a corrosion resistant protective film. This protective film dramatically slows the corrosion process by preventing chlorides from reacting with the reinforcing steel, and by depriving the corrosion process of moisture and oxygen, thus slowing the rate of corrosion once it begins.

RECOMMENDED FOR

RHEOCRETE 222+ is recommended for steel reinforced concrete where longer service lives are desired and it is expected that the concrete will be exposed to environmental chlorides from de-icing salts or massive exposure.

FEATURES AND BENEFITS

Slow down ingress of chlorides Slowing down the rate of corrosion.

Extends the service life of reinforced concrete.

Forms a protective film on the reinforcement steel Prevent chloride from reacting with and corroding the reinforcing steel.

TYPICAL PERFORMANCE DATA

Plastic Properties

The plastic properties of concrete are not significantly affected by the use of **RHEOCRETE 222+**.

Slump and Temperature Development

RHEOCRETE 222+ has no effect on slump or the temperature development profile of concrete although pumpability has been found to be improved.

Hardened Properties

The hardened properties of concrete are not significantly affected by the use of **RHEOCRETE 222+**.

Concrete-Steel Bond Strength

Concrete to steel bond strength is not affected by **RHEOCRETE 222+**.

The extension in service life due to the product is a function of the chloride exposure level, structural design factors and the transport. Please contact local BASF Construction Chemicals representatives for additional guidance regarding specific applications, service life and the use of corrosion inhibitors.

Corrosion-Inhibiting Systems

In order to control corrosion in steel reinforced concrete, the ACI Building Code (ACI 318) requires certain design considerations, such as limiting the water-cementitious materials ratio; providing adequate concrete cover over reinforcing steel; and limiting the initial chloride ion content of the concrete. Additionally, construction practices should be such that dense, void-free concrete is obtained.

In addition to the elements of good concrete practice required by the ACI Building Code, BASF Construction Chemicals recommends a corrosion-inhibiting system that inhibits corrosion at multiple levels for maximum protection.

Additional protection can be attained through the use of a high-range water-reducing admixture to provide adequate placeability and consolidation at low water-cement ratios and/or the use of RHEOMAC SF silica fume admixtures to reduce concrete permeability.

APPLICATION

RHEOCRETE 222+ may be added with concrete batch water. It should not be mixed with any other admixtures prior to being introduced into the concrete mixer. The use of this admixture does not require changes in normal batching procedures.

DOSAGE

RHEOCRETE 222+ is recommended for use at a dosage rate of 5 L/m³ of concrete for all applications and corrosion environments.

RHEOCRETE 222+ dosed at 5 L/m³ is formulated to provide optimum corrosion protection of reinforced concrete structures in severe corrosive environments and therefore provides excellent corrosion protection in less severe corrosion environments as well.

RHEOCRETE 222+ is recommended for use at a single

BASF Construction Chemicals offices in ASEAN

Singapore

Tel :+65-6861-6766

Fax :+65-6861-3186

Malaysia

Tel :+60-3-5628-3388

Fax :+60-3-7847-6781

Indonesia

Tel :+62-21-893-4339

Fax :+62-21-893-4342

Thailand

Tel :+66-2204-9427

Fax :+66-2664-9267

Vietnam

Tel :+84-650-743-100

Fax :+84-650-743-200

Philippines

Tel :+63-2-889-4321

Fax :+63-2-889-4361



The Chemical Company

RHEOCRETE[®] 222⁺

dosage in order to eliminate the confusion and uncertainties related to determining the severity of the corrosive environment and predicting the chloride exposure of the structure.

PACKAGING

RHEOCRETE 222+ is available in 208L drums and bulk delivery.

SHELF LIFE

RHEOCRETE 222+ can be stored for 9 months if stored at temperatures above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

PRECAUTIONS

Health : RHEOCRETE 222+ does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

1-1-2-0208

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF Construction Chemicals** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF Construction Chemicals**, are responsible for carrying out procedures appropriate to a specific application.