



The Chemical Company

RHEOCRETE[®] 222+

Organic corrosion inhibiting admixture

Description of Product

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

Advantages

RHEOCRETE 222+ extends the service life of reinforced concrete by slowing the ingress of chlorides and moisture into the concrete and by forming a strong, durable, protective film on the reinforcing steel for a second level of corrosion protection. This dual mechanism system makes RHEOCRETE 222+ effective with all cement factors, as well as in cracked concrete where the elements that cause corrosion have direct access to the reinforcing steel.

Packaging

RHEOCRETE 222+ is available in 208ltr drums.

How It Works

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.

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.

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+.

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 a dense, void-free concrete is obtained.

In addition to the elements of good concrete practice required by the ACI Building Code, BASF recommends a corrosion inhibiting system that inhibits corrosion at multiple levels for maximum protection. The basis for this system can be established through the use of RHEOCRETE 222+, which restricts the ingress of chlorides and moisture and slows the rate of corrosion by forming a protective film on the reinforcing steel. Additional protection can be attained through the use of high-range water-reducing admixtures to provide adequate placeability and consolidation at low w/c ratios and/or the use of silica fume admixtures to reduce concrete permeability.

Dosage

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

Adding Value to Concrete

RHEOCRETE[®] 222+

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 formulated for use at a single 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.

Directions for Use

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.

Temperature Precaution

Store at ambient temperatures above 2°C but not exceeding 52°C. Precautions should be taken to protect RHEOCRETE 222+ from freezing. If product freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurised air for agitation.

Non-chloride

RHEOCRETE 222+ will not initiate or promote corrosion of reinforcing steel embedded in concrete, pre-stressed concrete or concrete placed on galvanised steel floor and roof systems. Neither calcium chloride nor any chloride-based ingredients are used in the manufacture of RHEOCRETE 222+ corrosion inhibiting admixture.

Storage

Store under cover, out of direct sunlight and protect from extremes of temperature. Powder should be protected from rain and stored off the ground on pallets.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult BASF's Technical Services Department.

Shelf Life

Up to 24 months if stored according to manufacturer's instructions in unopened containers.

Safety Precautions

RHEOCRETE 222+ is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information, refer to the material safety data sheet.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information, contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality Statement

All products manufactured by BASF Egypt, or imported from BASF affiliate companies worldwide, are manufactured to procedures certified to conform to the quality, environment, health & safety management systems described in the ISO 9001:2000, ISO 14001:2004 & OHSAS 18001:1999 standards.

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* Properties listed are only for guidance and are not a guarantee of performance.

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