

DATA SHEET

Hycrete Endure CP

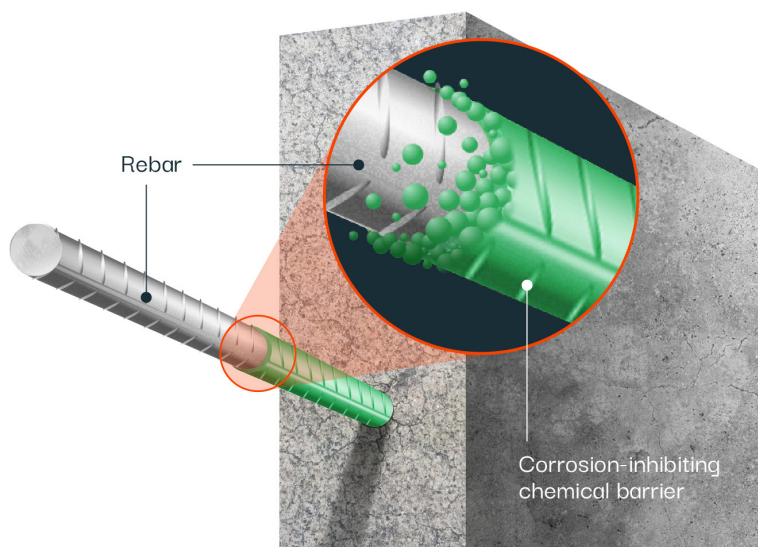
Dual-Action Corrosion Inhibitor in Concrete Mixes

PRODUCT DESCRIPTION

Hycrete Endure CP (formerly X1000) is a patented dual action corrosion-inhibiting and waterproofing concrete admixture that delivers industry leading performance. Hycrete Endure CP protects concrete and steel in two ways: a) Keeps water and corrosive agents out, reducing absorption to an industry low compared to control concrete. b) Protects steel by forming a protective passivating layer on the surface of reinforcement steel that dramatically reduces corrosion initiation and propagation. Hycrete Endure CP admixture in concrete provides an effective and robust barrier against water and chloride ingress that does not lose performance over time and never requires reapplication. Concrete treated with Endure CP outperforms High Performance Concrete (HPC) mixes that include silica fume, fly ash, slag and calcium nitrite corrosion inhibitors.

USES AND APPLICATIONS

- Bridges and Highway Infrastructure
- Dams, Reservoirs, and Water and Wastewater Systems
- Ports and Marine Structures
- Pilings
- Tunnels
- Airport Runways
- Rail and Metro Systems
- Power and Telecom Infrastructure
- Parking Structures

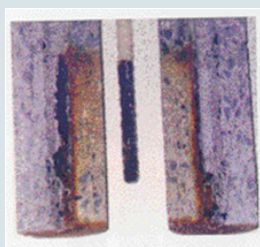


KEY BENEFITS

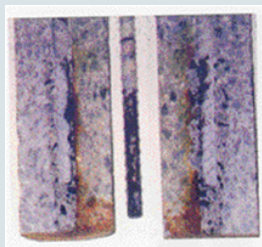
- Hycrete Endure CP (formerly X1000) improves the durability of concrete
- Industry leading performance level of up to 7 times reduction in water absorption
- Forms protective coating around steel reinforcement
- Enhanced healing of cracks up to 0.4mm
- Increases electrical resistivity of concrete
- Liquid form means more consistent performance and verifiable dosage
- Neutral concrete set time performance, even in high fly ash and GGBS (slag) mixes
- Easy to use, no workability issues

PRODUCT FEATURES

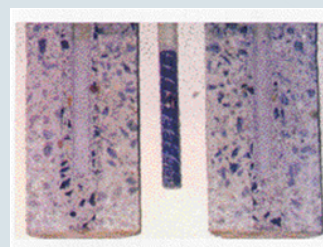
- NSF/ANSI 61 - approved for use in potable water tanks
- Compatible with standard admixture metering equipment
- Cradle to Cradle™ certified by MBDC
- Non-toxic, no VOCs



Control



Calcium Nitrate



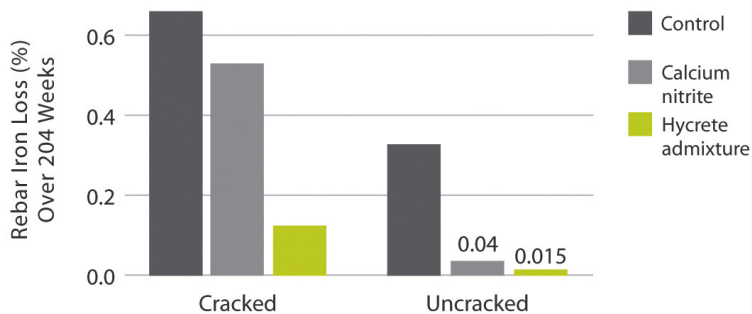
Hycrete

PRODUCT PERFORMANCE*

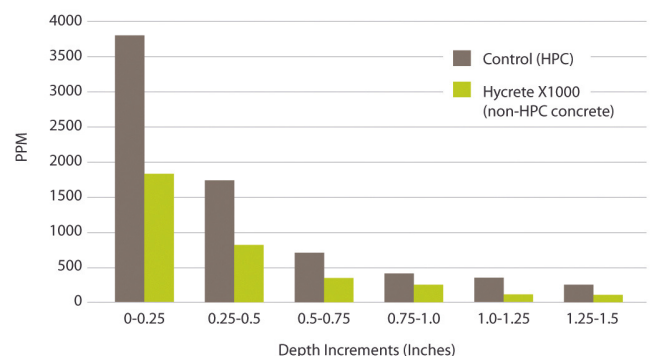
Water absorption	BSI 1881-122	Less than 1% absorption, up to seven times reduction compared to control
Capillary absorption	ASTM C1585	Up to 60% reduction at 7 days
Corrosion protection	ATSM G109 ASTM C1556	Demonstrated protection against reinforcement bar corrosion and chloride penetration
Permeability/hydrostatic pressure	DIN 1048 BS EN 12390-8	Passes DIN 1048; up to 70% reduction in permeability
Crack healing	ASTM C597	Hycrete heals faster and more completely compared to untreated concrete
Set time	ASTM C403	Set neutral
Drying shrinkage	ASTM C157	Neutral
Slump	ASTM C143	Neutral
Workability	N/A	Excellent
Effect on concrete color	N/A	None
Compressive strength	ASTM C39	Water/cement ratios may need to be lowered to account for possible, minor strength decreases associated with some materials. Perform trial mixes.
Potable water	NSF/ANSI 61	Approved for use in potable water tanks 50,000 gallons or greater and pipes 84" in diameter and greater
Adhesion	ASTM C1583, ASTM C1072, ASTM D3359	Neutral; no adverse effect on bond with concrete

*All benefits and results are based on actual test results. Results may vary according to concrete mix designs, Hycrete Endure CP (formerly X1000) dosage, or other factors.

CORROSION PERFORMANCE



CHLORIDE DIFFUSION IN DOT TEST BRIDGE



GENERAL PROPERTIES AND CHARACTERISTICS

Physical characteristics: Form: Liquid Specific gravity: 1.05 Chloride content: Nil pH: 8.5	Compatibility: <ul style="list-style-type: none"> • Most concrete admixtures • Most Portland cements or replacements including fly ash and GGBS (slag) • Shotcrete mixes and application • Most surface-applied sealants and external membrane protection systems
Recommended dosage: 0.5 to 1.0 U.S. gallon per cubic yard of concrete (10.0 liters per cubic meter)	
Packaging: 1 gallon bottles; 5 gallon pails; 55 gallon drums; 275 gallon totes; bulk tanker delivery	
Storage and handling: Store above 32°F (0°C) and below 120 °F (48 °C). Slight flocculation can occur over time due to pH reductions. Such flocculation does not affect product performance	

Notes

- For air-entrained concrete mixes speak to your local Hycrete Rep for proper mix design.
- User should perform trial mixes prior to placement and make necessary adjustments to the mix design as needed.
- If considering dosages other than recommended dosage contact Technical Services before use.

Safety

- Hycrete Endure CP (formerly X1000) is a water-based material and should not be swallowed or come into contact with skin or eyes. Wear suitable protective gloves and goggles. If material comes in contact with the skin, wash immediately with soap and water. In case of contact with eyes, rinse immediately with sufficient water and seek medical support. If swallowed, seek immediate medical attention. For further information please consult the Material Safety Data Sheet.

Related Documents

- Hycrete Mixing Instructions
- Hycrete Material Safety Data Sheet – Hycrete Endure CP
- For air-entrained concrete mixes speak to your local Hycrete Rep for proper mix design.
- Hycrete Testing Summary



Hycrete, Inc. | 14 Spielman Rd | Fairfield, NJ 07004 USA | Phone: (+1) 201.386.8110 | Fax: (+1) 201.386.8155 | www.hycrete.com

Copyright © 2022 Hycrete, Inc. All rights reserved. Hycrete, Inc. and the Hycrete logo are trademarks of Hycrete, Inc.

Hycrete warrants that its products are free from manufacturing defects and, when applied in accordance with the current specification and application instructions, will perform as so stated in its product literature.

Disclaimer: The information and recommendations relating to the application and end-use of Hycrete Products are based on data that Hycrete, Inc. considers to be true and accurate and is to be used for the users' consideration, examination, and confirmation, but Hycrete, Inc. does not warrant the results acquired. Materials, compositions, and site environments are varied, and no warranty can be implied from this information or from any written recommendations, or from any other offered guidance. All orders are accepted subject to Hycrete, Inc.'s terms of sale and delivery. Copies of the most recent version of the Product Data Sheet should always be referenced and are available upon request. See warranty sheet for warranty details (available upon request). Protected under one or more of the following U.S. patents: 7,261,923; 7,381,252; 7,407,535; 7,498,090; 7,513,948 and 7,670,415. Additional patents pending and/or issued in the U.S. and internationally.

1002002-DEC22