

## DATA SHEET

# Hycrete Endure W400

## For Mid-Range Waterproof Concrete

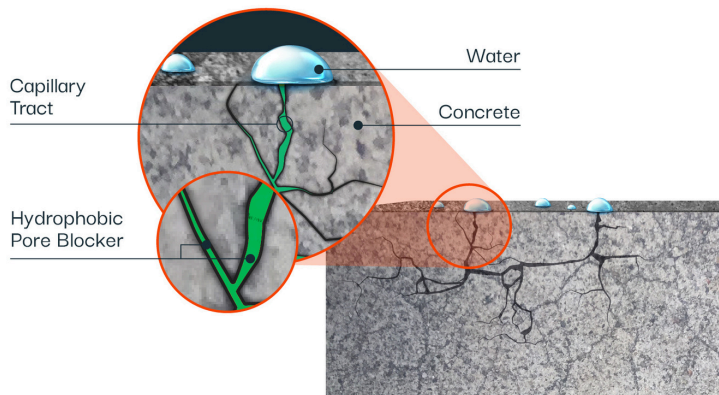
### PRODUCT DESCRIPTION

**Hycrete Endure W400** (formerly W400) is a mid-range concrete waterproofing admixture that reduces water ingress through concrete. Ordinary concrete absorbs water and dissolved salts through its network of pores, leading to water infiltration and corrosion of steel reinforcement. Hycrete Endure W400 reduces absorption and forms a protective coating around steel reinforcement. Less water and fewer chlorides are able to penetrate the concrete and the reinforcement has enhanced protection from corrosion.

Hycrete Endure W400 delivers consistent and reliable performance and is easy to use. Hycrete Endure W400 is an environmentally responsible, Cradle to Cradle™ certified product. Using Hycrete Endure W400 allows owners and builders to have the comfort of knowing they have taken appropriate measures to ensure their concrete has improved resistance to one of nature's most damaging elements ...water.

### USES AND APPLICATIONS

- Extra protection for walls and slabs
- Above and below grade construction
- Water containment reservoirs
- Sewage and water treatment plants
- Secondary containment structures
- Underground vaults
- Tilt-up panel walls
- Pre-cast components
- Architectural water features and fountains
- Bridges, dams and highway infrastructure
- Aquatic centers, marinas and zoos
- Swimming pools

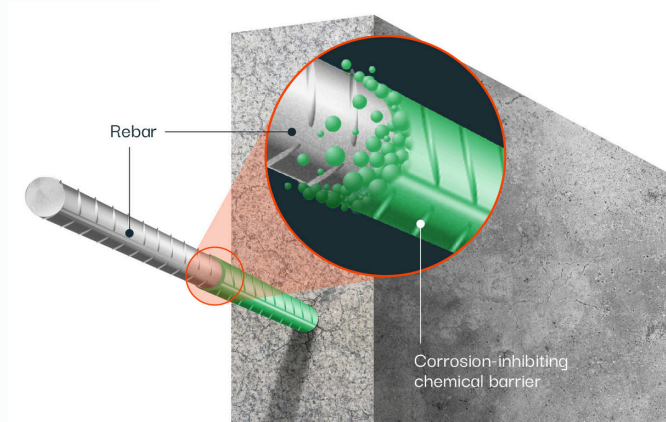


### KEY BENEFITS

- Improved water-resistance
- 50% or more reduction in water absorption
- Corrosion protection; protective coating formed around steel reinforcement
- Neutral concrete set time performance, even in high fly ash and GGBS (slag) mixes
- Resists hydrostatic pressure
- Can heal cracks up to 0.4mm
- Consistent performance and verifiable dosage
- Easy to use; no additional labor required
- Safe to use; does not contain carcinogenic silicas

### PRODUCT FEATURES

- Cradle to Cradle™ certified by MBDC
- NSF/ANSI 61 - approved for use in potable water tanks
- Compatible with standard admixture metering equipment
- ISO 14021 compliant - recycled content in accordance with Type II environmental labeling; applicable for LEED Materials and Resources Credit 4.1/4.2 - Recycled Content



## PRODUCT PERFORMANCE\*

Water absorption	BSI 1881-122	50% reduction compared to control
Permeability/hydrostatic pressure	DIN 1048 BS EN 12390-8	Passes DIN 1048; up to 70% reduction in permeability
Crack healing	ASTM C597	Concrete with Hycrete fosters faster and 100% complete healing compared to untreated control
Set time	ASTM C403	Set neutral
Drying shrinkage	ASTM C157	Neutral to the control
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 200,000 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 W400 dosage, or other factors.

## GENERAL PROPERTIES AND CHARACTERISTICS

<b>Physical characteristics:</b> Form: Liquid Specific gravity: 1.05 +-0.05 Chloride content: Nil pH: 8.5	<b>Compatibility:</b> <ul style="list-style-type: none"> <li>• Most concrete admixtures</li> <li>• Most Portland cements or replacements including fly ash and GGBS (slag)</li> <li>• Shotcrete mixes and application</li> <li>• Most surface-applied sealants and external membrane protection systems</li> </ul>
<b>Recommended dosage:</b> 0.5 U.S. gallon per cubic yard of concrete (2.5 liters per cubic meter)	
<b>Usage guidelines:</b> <ul style="list-style-type: none"> <li>• Superplasticizer at the manufacturer's recommended rate and appropriate for the placement requirements of the project.</li> <li>• Cementitious Content: The cementitious content of concrete containing Hydrophobic Concrete Admixture will not be less than 550 lbs/yd<sup>3</sup> (325 kg/m<sup>3</sup>) with up to 15% fly ash or 50% slag maximum.</li> <li>• Water-Cement Ratio: 0.42 maximum. Water content of Hydrophobic Concrete Admixture and other admixtures to be included in the water-to cementitious ratio.</li> </ul>	
<b>Packaging:</b> 1 gallon bottles; 5 gallon pails; 55 gallon drums; 275 gallon totes; bulk tanker delivery	
<b>Storage and handling:</b> 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 W400 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 W400
- For air-entrained concrete mixes speak to your local Hycrete Rep for proper mix design.



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