

# SOLHYDCRETE

## High Strength Rapid Setting Concrete for Deep Repairs

SOLHYDCRETE is a fast setting, high strength repair concrete that produces a rapid and permanent repair for existing damaged concrete. It is dimensionally stable and forms an integral bond with the existing concrete to restore its structural integrity.

SOLHYDCRETE can be placed at thicknesses ranging from 12mm to 300mm (1/2 in to 12 in) in one single operation.

### ■ USES

For horizontal or vertical leveling or deep repair with or without formwork.

#### TYPICALS USES

- Deep repairs to damaged and spalled concrete floors, walls and bases
- Repair sloping and leveling of concrete surfaces prior to the application of SOLHYDFLOW self-leveling products
- Quick repair and turnaround of industrial floors which can be put in service in 3 hours after application
- Indoor or outdoor repair of slab, wall and concrete bases
- Tunnels, bridges, undergrounds parking, columns and balconies

### ■ PRODUCT FEATURES

- Single component
- Reduced shrinkage
- Resistant to crack development
- High early and ultimate compressive strength
- Freeze/thaw resistant
- Rapid Set
- High compressive & flexural strengths
- Excellent bond strength
- For applications greater than 12 in. depth, please consult your BMQ SOLUTIONS representative

### ■ SURFACE PREPARATION

A good repair is achieved when the repair concrete is securely bonded to the base concrete surface. The surface to be repaired must be rough, sound and clean. Liberate the existing concrete surface by mechanical means, from any curing membrane, oil, grease, delaminated concrete, dust, dirt and other substances which could harm the bond. Prepare the surface and remove the damaged concrete until rough, healthy and clean concrete is obtained. Saturate the concrete surface to be repaired with water for at least 12 hours before applying the concrete. During its application the surface must be well saturated but free from any standing water.

### ■ PRIMING

No primer required.

### PHYSICAL MATERIAL PROPERTIES @ 21°C (70°F)

COMPRESSIVE STRENGTH ASTM C109-93 2" (50MM) CUBES			BOND STRENGTH ASTM C882		
3 hours	8.8 MPa	(1,275 psi)	7 days	12.0 MPa	(1,700 psi)
6 hours	15.6 MPa	(2,260 psi)			
1 day	34.5 MPa	(5,000 psi)			
3 days	38.0 MPa	(5,500 psi)			
7 days	41.4 MPa	(6,000 psi)			
28 days	49.0 MPa	(7,100 psi)			
FLEXURAL STRENGTH ASTM C78			SCALING RESISTANCE ASTM C672		
7 days	10.8 MPa	(1,565 psi)	50 cycles	1A	loss 84g/m <sup>2</sup>
FREEZE/THAW RESISTANCE ASTM C666 B MODIFIED			LENGTH CHANGE ASTM C157 WITH C928 MODIFICATION		
Cycles	Durability factor (RDF)		Time	Air cure	Water cure (immersion)
300	94.0%		7 days	- 0.0490%	- 0.0005%
			28 days	- 0.0620%	- 0.0140%



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for Deep Repairs

## ■ ESTIMATING / YIELD

SOLHYDCRETE in 22.7 kg (50lbs) bag yields 12 L (0.42 ft<sup>3</sup>) of material when mixed with 2.4 L (0.63 US gal) of clean potable water and will cover approximately 0.444 m<sup>2</sup> (4.7 ft<sup>2</sup>) at 25 mm (1") thickness.

## ■ PRODUCT MIXING

- Place mixing equipments close to repair area.
- Approximate initial set of SOLHYDCRETE is 35 minutes @ 21°C (70°F).
- Therefore mix only an amount that can be placed and finished before initial set.
- Always mix by adding the dry product to the mixing water.
- For every 2.3 L to 2.4 L (0.60 US gal to 0.63 US gal) of water add a bag of SOLHYDCRETE.
- Use a mortar mixer or ¾" Heavy Duty drill with mixing paddles.
- Place the measured water into a clean mixing container.
- Slowly and gradually add the powder while mixing for a minimum of 2 to 3 minutes in order to obtain a uniform consistency.
- Dispense directly into worksite or wheelbarrows.
- Discard any material that stiffens.
- Do not retemper. For large pours or for temperatures that are below 5°C (40°F) or above 35°C (95°F), contact your local BMQ SOLUTIONS representative.

## ■ PRODUCT APPLICATION

### PLACING

No bonding agent is required with SOLHYDCRETE. Immediately upon completion of mixing, place material in repair area. Place from one side of area only; not toward middle from opposite directions.

### FINISHING

Level and screed material to proper height. Float edges with wooden or magnesium trowel only.

### ■ CURING

As soon as the repaired surface has sufficiently hardened apply water and wet burlap or rags to finished area and cover with polyethylene or keep water ponded on patch, for a minimum of 2 hours.

## ■ PRECAUTIONS / RESTRICTIONS

- Apply to pre saturated surface only
- Do not apply on fresh concrete
- Do not use bonding agent
- Do not apply at temperature under 5°C (41°F)
- Do not add admixture to this product
- Do not use limestone as fill aggregate

## ■ PACKAGING

### SOLHYDCRETE:

22.7 kg (50 lbs) bags  
Qty: 56 units per pallet

## ■ RECOMMENDED TOOLS

The following tools will assure a cost effective, satisfactory installation:

- Steel, Wooden or Magnesium Trowels
- ¾" Heavy Duty drill with mixing paddles
- Mortar mixer (for large volume)

## ■ CLEANING

Use water to clean all tools immediately after use.

## ■ STORAGE

Store in cool dry area avoiding all moisture. Can be kept in unopened bags for 12 months.

## ■ SAFETY

See Material Safety Data Sheet.