

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

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	(1275 psi)	7 days	12.0 MPa	(1700 psi)
6 hours	15.6 MPa	(2260 psi)	HARDENING		
1 day	34.5 MPa	(5000 psi)	Working time	25 minutes	
3 days	38.0 MPa	(5500 psi)	Initial set time ASTM C403 @ 21°C	45 minutes	
7 days	41.4 MPa	(6000 psi)	Final set time ASTM C403@ 21°C	55 minutes	
28 days	49.0 MPa	(7100 psi)	SCALING RESISTANCE ASTM C672		
FLEXURAL STRENGTH ASTM C78			50 cycles	1A	loss 84g/m ²
7 days	10.8 MPa	(1565 psi)	LENGTH CHANGE ASTM C157 WITH C928 MODIFICATION		
FREEZE/THAW RESISTANCE ASTM C666 B MODIFIED			Time	Air cure	Water cure (immersion)
Cycles	Durability factor (RDF)		7 days	- 0.0490%	- 0.0005%
300	94.0%		28 days	- 0.0620%	- 0.0140%

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ESTIMATING/YIELD

SOLHYDCRETE in 22.7kg (50lbs) bag yields 12L (0.42ft³) of material when mixed with 2.4L (0.63 US gal) of clean potable water and will cover approximately 0.8m² (8.6ft²) at a thickness of 13mm.

Coverage: Per 22.7kg (50lbs) bag.

Nominal Thickness	Approximate Coverage
13mm (½")	0.8m ² (8.6 ft ²)
25mm (1")	0.4m ² (4.3 ft ²)

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

PRODUCT MIXING

Place mixing equipments close to repair area. Approximate initial set of **SOLHYDCRETE** is **45 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 2.3L to 2.4L (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 **SOLHYDROC** representative.

PRODUCT APPLICATION

PLACING:

No bonding agent is required with **SOLHYDCRETE**. It may be better to apply a **SOLHYDCRETE** grout to the surface with a brush. 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.

PACKAGING

SOLHYDCRETE 22.7kg (50lbs) 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.

SECURITY

See Material Safety Data Sheet.

SOLHYDROC WARRANTS that the product conforms to its chemical description and is reasonably fit for the purpose stated on its Technical Bulletin when used in accordance with its directions. SOLHYDROC makes NO OTHER WARRANTY either expressed or implied. Buyer assumes all risk in handling.

For Professional Use Only

www.solhydroc.com