



SOLHYDCRETE SCC

High performance self consolidating
Concrete Repair Material

SOLHYDCRETE SCC is a high performance self-consolidating concrete that offers prolonged working time and improved placeability to produce a permanent repair of concrete. SOLHYDCRETE SCC is dimensionally stable and forms an integral bond with the existing concrete to restore its structural integrity. SOLHYDCRETE SCC can be placed at thicknesses ranging from 25 mm to 450 mm (1 in to 18 in).

■ USES

SOLHYDCRETE SCC is used for partial or full depth repair of concrete slabs, beams, columns, soffits and walls.

TYPICAL USES:

- Parking garages, balconies, walkways, elevated slabs and slabs on grade
- Bridges and overpass repairs
- Structural repairs for tunnels and dams
- Industrial plants

■ PRODUCT FEATURES

- Can be easily pumped and placed
- Self Consolidating Concrete: no vibration needed while placing material
- No bleeding or segregation
- Compatible with corrosion inhibitor*
- Low shrinkage and low permeability
- Excellent bond strength
- Excellent resistance to freeze/thaw cycling and salt scaling
- Modulus similar to conventional concrete resulting in an excellent compatibility with existing concrete
- Designed and formulated using inert non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR)

■ SURFACE PREPARATION

The surface to be repaired must be clean and rough and must be free from any curing agent, oil, grease, delaminated concrete, dirt and dust or any other substance that may impair adhesion. Remove any damaged concrete to obtain a healthy substrate. Delimit with a saw cut at least 25 mm around the surface to be repaired. Preparation must be done mechanically to achieve a contoured surface condition (CSP) of 6 - 10 according to the guide 310.2 from ICRI. Saturate the surface to be repaired with clean water; remove any stagnant water before and during the works. The surface must be saturated, superficially dry (SSS). Reinforcing steel must be well cleaned and free from all traces of rust according to SSPC SP10. A space of at least 25 mm must be released behind any exposed reinforcing steel.

■ FORM WORK

An acceptable form release agent should be used to ensure easy removal of all forms. For soffit and wall repairs, vent holes should be included in form work. Entry ports for the SOLHYDCRETE SCC should not exceed 500 mm (20 in). Formwork should be constructed to avoid trapping substrate pre-wetting water and should be sufficiently strong to avoid deflection during pumping. Minimum thickness required in formwork is 25 mm (1 in).

*For more information regarding corrosion inhibitor use, contact your BMO SOLUTIONS representative.

MATERIAL PHYSICAL PROPERTIES @ 22.2°C (72°F)

| COMPRESSIVE STRENGTH CSA A23.2-3C CYLINDERS OF 100MM X 200MM (4" X 8") | | | FREEZE / THAW RESISTANCE ASTM C666 MODIFIED B PROCEDURE | |
|--|--|-----------|---|-------------------------------------|
| 24 hours | 3.4 MPa | 493 psi | Cycles | Cycles Durability Factor (RDF) |
| 3 days | 10.6 MPa | 1,537 psi | > 300 | Pass |
| 28 days | 22.5 MPa | 3,300 psi | | |
| BOND STRENGTH CSA A23.2-6B | | | CURING | |
| 7 days | 1.6 MPa Failure in substrate matrix | 230 psi | Temps de prise | 300 minutes |
| BOND STRENGTH ASTM C-882 SLANT SHEAR | | | SCALING RESISTANCE ASTM C672 | |
| 7 days | 15.5 MPa | 2,300 psi | 50 cycles | 0 Loss of 29,7 kg/m ² |
| | | | LENGTH CHANGE ASTM C157 WITH C928 MODIFICATION | |
| | | | 28 days | 0.065 % |



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■ ESTIMATING / YIELD

SOLHYDCRETE SCC, is packaged in 25 kg (55 lbs) bags that yield 13 L (0.46 ft³) when mixed with 2.6 liters of clean, potable water.

COVERAGE PER 25KG (55LB) BAG:

| Nominal Thickness | Approximate Coverage |
|-------------------|--|
| 25 mm (1") | 0.5 m ² (5.5 ft ²) |
| 50 mm (2") | 0.25 m ² (2.75 ft ²) |
| 100 mm (4") | 0.125 m ² (1.38 ft ²) |

■ PRODUCT MIXING

- Place 2.4 liters of potable water into mixer and slowly introduce SOLHYDCRETE SCC.
- Once the entire bag has been added, add balance of required water while mixer is running.
- Do not exceed 2.62 liters of water per bag.
- Mix material for 2 to 3 minutes until a smooth and homogeneous mix is obtained.

■ PRODUCT APPLICATION

PLACING

Pour or pump SOLHYDCRETE SCC into form and allow material to penetrate and encapsulate exposed rebar. Continue pumping and pouring until all voids have been filled in order to avoid air entrapment and bugholes. Formwork should not be removed until material has reached a minimum of 70 % of its ultimate design strength.

FINISHING

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

■ PRECAUTIONS / RESTRICTIONS

- Do not apply on fresh concrete
- Do not apply when material, substrate or ambient temperatures are below 5°C
- Do not add admixture not recommended to this product

■ CONDITIONNEMENT

SOLHYDCRETE SCC :

25 kg (55 lbs) bags

■ CURING

Wet curing with burlap immediately after the forms are removed is crucial to maximize physical properties of the self consolidating concrete and to minimize any plastic shrinkage.

Moist curing should be performed for a minimum period of 7 days following the removal of the formwork. Prior to the installation of a curing compound, a minimum of 24 hour moist cure is recommended. Conditions such as high temperatures, direct sun light, wind and low humidity will increase the potential for plastic shrinkage and further increase the need for proper moist curing. The first 24 hours following the removal of formwork are critical. After this critical 24 hour moist cure period, a curing compound is a viable alternative to moist curing

■ RECOMMENDED TOOLS

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

- Bunker 100 mortar pump or other acceptable pumping equipment
- 3/4" power drill with paddle mixer
- Mortar mixer
- Wood or magnesium trowel

■ CLEANING

Use water to clean all tools immediately after use.

■ STORAGE

Store in cool dry area avoiding all moisture. Product will remain usable for 6 months after manufacturing date.

■ SAFETY

See Material Safety Data Sheet.

MATERIAL FLOW CHARACTERISTICS CSA Standard A23.5 - 5°C

Flow Rate (at recommended water ratio)

| | |
|-----------------------|---------------------------|
| Initial | 600 mm ± 50 mm (24" ± 2") |
| After 15 minutes | 500 mm ± 50 mm (20" ± 2") |
| Air Content ASTM C457 | 5 to 9 % |
| Color | Concrete gray |
| Working time | 20 - 25 min |

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

For Professional Use Only