



SOLHYDCRETE SCC-10

High-Performance
Self-Consolidating Concrete

SOLHYDCRETE SCC-10 is a high performance self-consolidating concrete that offers prolonged working time and improved placeability to produce a permanent repair of concrete.

SOLHYDCRETE SCC-10 is dimensionally stable and forms an integral bond with the existing concrete to restore its structural integrity. SOLHYDCRETE SCC-10 can be placed at thicknesses ranging from 25 mm to 450 mm (1" to 18") in a single operation.

■ USES

SOLHYDCRETE SCC-10 is placed in indoor and outdoor formwork for partial or full depth repair of concrete slabs, beams, columns, soffits and walls.

TYPICAL USES:

- Parking garages, balconies, walkways, elevated slabs, slabs on grade and underground slabs
- Bridges and overpass repairs
- Structural repairs for tunnels and dams
- Vertical, horizontal and overhead structural repair

■ PRODUCT FEATURES & BENEFITS

- Can be easily pumped and placed requiring little manpower
- Self-consolidating concrete MTQ approved: no vibration needed when placing material
- No bleeding or segregation
- Compatible with the use of corrosion inhibitor*
- Prolonged workability and set times
- Low shrinkage and permeability
- Excellent bond strength and chemical resistance
- Excellent resistance to freeze/thaw cycles and de-icer salts
- Modulus properties 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 Reactions (AAR)

■ SURFACE PREPARATION

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

■ FORMWORK

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. Injection ports when using SOLHYDCRETE SCC-10 should not exceed 500mm (20 in). Formwork should be constructed to avoid trapping substrate pre-wetting water and should be sufficiently strong to avoid deflection during pumping operation. Minimum thickness required in a formwork should be 25 mm (1 in).

■ PRIMER

No primer required. If necessary, prime rebars and substrate with SOLHYDBOND ARMATURE.

*For more information regarding the use of corrosion inhibitors, contact your BMQ SOLUTIONS representative.

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

COMPRESSIVE STRENGTH CSA A23.2-3C CYLINDERS OF 100 X 200 MM (4" X 6")			FREEZE/THAW RESISTANCE ASTM C666 MODIFIED B PROCEDURE	
24 hours	12.5 MPa	1,812 psi	Cycles	Cycles Durability Factor (RDF)
3 days	22.0 MPa	3,200 psi	>300	85%
28 days	35.4 MPa	5,100 psi		
BENDING STRENGTH			BOND STRENGTH ASTM C-882 SLANT SHEAR	
7 days	2.3 MPa	335 psi	18.0 MPa	2,600 psi
28 days	3.1 MPa	450 psi	SETTING TIME	
			Setting time	4 hours
BOND STRENGTH CSA A23.2-6B			SCALING RESISTANCE ASTM C672	
7 days	1.1 MPa Failure in concrete matrix	150 psi	50 cycles	0 Loss of 0.54 kg/m ²
CHLORIDE PERMEABILITY ASTM C1202			LENGTH CHANGE ASTM C157 WITH C928 MODIFICATION	
28 days			28 days	-0.065 %
≤ 1,000 coulombs				



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ESTIMATION / YIELD

SOLHYDCRETE SCC-10, 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-10.
- 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 between 350 - 500 rpm until a smooth and homogeneous mix is obtained.

PRODUCT APPLICATION

PLACING

Place 2.4 liters of potable water into mixer and slowly introduce SOLHYDCRETE SCC-10. 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 between 350 - 500 rpm until a smooth and homogeneous mix is obtained.

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 use bonding agents
- Do not apply at temperatures below 5 °C
- Lower temperature can provide slower compressive strength result.
- Do not add admixture to this product

PACKAGING

SOLHYDCRETE SCC-10:

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 (Ref ACI 308). 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.

RECOMMENDED TOOLS

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

- Bunker 100 mortar pump or other suitable 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 12 months after manufacturing date if kept in closed bags.

SAFETY

See Material Safety Data Sheet.

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

Flow Rate (at recommended water ratio)

Initial	675 mm (26.5")
After 15 minutes	500 mm (19.5")
Air Content ASTM C457	5 to 9 %
Color	Concrete grey
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