BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET
Edition 11.2021/v1
CSC Master Format™ 03 31 26
SELF-COMPACTING CONCRETE

Sikacrete®-08 SCC

SELF-COMPACTING CONCRETE (SCC) BASED ON Sika® ViscoCrete® TECHNOLOGY

Description

Sikacrete®-08 SCC is a ready-to-use, highly flowable, self-compacting, cement-based concrete, usable for concrete thickness between 25 and 450 mm (1 and 18 in).

Where to Use

- Partial or full depth repairs
- On grade, above, and below grade on concrete
- On horizontal, vertical and overhead surfaces
- As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, dams and balconies
- Filler for voids and cavities

Advantages

- Simple-to-use labour-saving system
- May be pumped or poured
- High bond strength
- Compatible with coefficient of thermal expansion of concrete
- Increased resistance to de-icing salts
- Good freeze/thaw resistance
- Easily applied to clean, sound substrate
- Not a vapour barrier
- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR)
- Aesthetic, high quality surface finish
- Contains an integrated corrosion inhibitor based on a proven technology
- Can be used for underwater concreting (See Application Section)
- Ministère des Transports du Québec (MTQ) approved
- Product recognized by the British Columbia Ministry of Transportation(BC MoT)
- Meets Alberta Transportation (AT B391) specification for patching materials

Technical Data

Packaging	25 kg (55 lb) bag
Colour	Concrete Grey
Yield	Approx. 13 L (0.46 ft³) of fresh concrete per bag.
Shelf Life	1 year in original, unopened packaging. Store dry between 4 and 35 °C (40 and 95 °F), ensuring that product is not exposed to rain, condensation or high humidity. For best results, condition material between 18 and 24 °C (65 and 75 °F) before using.
Mix Ratio	Mix with clean potable water at rate of between 2.5 and 2.7 L (0.66 and 0.71 US gal.) per bag. Start with 2.5 L (0.66 US gal.) and mix to consistency required with remaining water.

Properties at 23 °C (73 °F) and 50 % R.H.

Standard Water Ratio	Between 2.5 - 2.7 L/25 kg bag (0.71 US gal./55 lb)
Mixing Time	2 to 3 min
Application Time	25 to 30 min
Slump Flow ASTM C1611	600 - 700 mm (24 - 28 in)
Air Content ASTM C457	7 ± 2 %
Compressive Strength ASTM C39, MPa (psi)	
24 hours	11 (1595)
3 days	39 (5656)
28 days	55 (7977)

***Compressive Strength ASTM C39,** MPa (psi)
(tested with Sikacem® Accelerator)

Temperature	Dosage	24 hours	2 days	3 days	28 days
-5 °C (23 °F)	1 bottle (150 mL)	2 (290)	3 (435)	7 (1015)	35 (5076)
-5 °C (23 °F)	2 bottles (300 mL)	4 (580)	8 (1160)	10 (1450)	40 (5800)
0 °C (32 °F)	1 bottle (150 mL)	4 (580)	6 (870)	9 (1305)	40 (5800)
0 °C (32 °F)	2 bottles (300 mL)	7 (1015)	10 (1450)	13 (1885)	44 (6380)
10 °C (50 °F)	1 bottle (150 mL)	10 (1450)	13 (1885)	20 (2900)	44 (6380)
10 °C (50 °F)	2 bottles (300 mL)	14 (2030)	15 (2175)	22 (3190)	45 (6527)
23 °C (73 °F)	1 bottle (150 mL)	16 (2320)	23 (3335)	-	-
23 °C (73 °F)	2 bottles (300 mL)	18 (2610)	25 (3625)	-	-

**All moulds, mixing tools and powder components were pre-conditioned to the test temperatures. Prepared test specimens were cast and then cured at the indicated test temperatures until the time of testing.*
Liquid/solids ratio (water + Sikacem® Accelerator/Sikacrete®-08 SCC) = 0.104; [2.6 L (0.69 US gal.) of liquid per 25 kg (55 lb) bag of Sikacrete®-08 SCC].

Bond Strength CAN A23.2-6B	
7 days	2.5 MPa (362 psi) failure in substrate (Substrate 35 MPa concrete)
Bond Strength ASTM C882	
(slant shear)	14 MPa (2030 psi) failure in mold
Freeze/Thaw Durability ASTM C666	Modulus of elasticity greater than 90 % after 300 cycles
Shrinkage ASTM C157	< 0.065 %
Rapid Chloride Permeabilty ASTM C1202	< 900 Coulombs @ 28 days < 300 Coulombs @ 56 days
VOC Content	0 g/L
Chemical Resistance	Consult Sika Canada

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

HOW TO USE

Surface Preparation

Concrete - Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair area is not less than 25 mm (1 in) in depth. Preparation work should be done by high pressure water blast, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of ± 3 mm (1/8 in) (CSP 6 - 10 as ICRI). Saturate surface with clean water. Substrate should be saturated, surface dry (SSD) with no standing water during application.

Reinforcing Steel - Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use SikaTop® Armatec-110 EpoCem® (Consult Product Data Sheet).

Mixing

Place 2.5 L (0.66 US gal.) of water in mixing container. Add Sikacrete®-08 SCC while continuing to mix. Add additional water up to 0.2 L (0.05 US gal.) to obtain desired consistency. Mix to a uniform consistency, maximum three (3) minutes. Mechanically mix with a low-speed, D-handle style drill (400 - 500 rpm) fitted with either a *jiffy*, ribbon-mud mixer or a mud mixer type paddle. For larger volume mixing, utilize a mortar or concrete mixer with paddles for best results.

Application & Finishing

Form and pour or pump applications: At time of application, surface should be saturated surface dry (SSD) with no glistening water. Ensure good intimate contact with the substrate is achieved. Pump with a variable pressure pump. Continue pumping until a 20 KPa to 35 KPa (3 psi to 5 psi) increase in normal line pressure is evident then STOP pumping. Form should not deflect. Vent to be capped when steady flow is evident, and forms stripped when appropriate.

Underwater applications (using the minimum permissible water for mixing): To place the concrete underwater with minimum of loss, inject the concrete through tremie of 50 mm (2 in.) in diameter keeping the discharge end embedded into the previously placed concrete. The tremie is then raised as the injection proceeds, taking care that the extremity always remains sufficiently embedded in the concrete to prevent any material washout.

Curing

As per ACI 308 recommendations for cement concrete, curing is required. To achieve performance consistent with Technical Data, curing must be provided by recognized curing methods, such as wet burlap covered with white polyethylene film or approved water-based curing compound, such as Sika® Florseal WB-18 & -25. Alternatively, the use of Sika® Ultracure DOT™ or NCF™ wet curing blankets is strongly recommended. Curing must commence immediately after placing and finishing. Protect freshly applied mortar from direct sunlight, wind, rain and frost.

Clean Up

Clean all tools and equipment after use with water. Once hardened, the product can only be removed mechanically.

Limitations

- **Important:** protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product to 18 °C to 24 °C (65 °F to 75 °F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer cure times.
- Application thickness: minimum 25 mm (1 in); maximum 450 mm (18 in).
- Minimum ambient and surface temperatures 7 °C (45 °F) and rising at time of application unless using with Sikacem® Accelerator (refer to Technical Data section).
- Do not overwater mix.
- Avoid using both single or duo type mixing drills capable of mixing speeds higher than 500 rpm (contact Sika Canada for further information)

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

SIKA CANADA INC.
Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

Certified ISO 9001 (CERT-0102780)
Certified ISO 14001 (CERT-0102791)