



PRODUCT DATA SHEET

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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	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ 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. ▪ May be used with Sika® Ferrogard®-901 corrosion inhibitor. ▪ Can be used for underwater concrete pour (See Application Section) ▪ Ministère des Transports du Québec 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. 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	2.6 L/25 kg bag (0.69 US gal./55 lb)
Mixing Time	2 to 2 min 30 s
Application Time	25 to 30 min
Slump Flow ASTM C1611	600 - 700 mm (24 - 28 in)

Flow Rate ASTM C230	
0 min at standard water ratio	240 mm (9.5 in)
15 min at standard water ratio	180 mm (7 in)

Air Content ASTM C457	7 ± 2%
Compressive Strength ASTM C39, MPa (psi)	
24 hrs	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 Permeability ASTM C1202	< 900 Coulombs @ 28 days < 300 Coulombs @ 56 days

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 2.7 L (0.71 US gal.) total. Mix to a uniform consistency, maximum three (3) minutes. Mechanically mix with a low-speed drill (400 - 600 rpm) and paddle or in an appropriate-size mortar mixer or concrete mixer.

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 to 35 KPa (3 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 a tube of 2.5 to 5 cm (1 to 2 in) in diameter with the lower end of which is embedded in the concrete already in place. The tube 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. Moist-curing must be maintained for the first 24 hours only. 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. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

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 to 29 °C (65 to 84 °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.

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

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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