

PRODUCT DATA SHEET

Sikacrete[®]-100 CI

ONE COMPONENT, CEMENTITIOUS PUMPABLE AND POURABLE CONCRETE MIX WITH A CORROSION INHIBITOR

PRODUCT DESCRIPTION

Sikacrete[®]-100 CI is a one-component, portland-cement concrete containing factory blended coarse aggregate.

USES

- 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.

CHARACTERISTICS / ADVANTAGES

- Contains corrosion inhibitor
- Air Entrained for good Freeze / Thaw resistance
- Pre-packaged coarse aggregate: Eliminates need to extend material in the field and the risk of reactive aggregate
- High bond strength
- Compatible with coefficient of thermal expansion of concrete
- Increased resistance to deicing salts
- Simple-to-use labor-saving system
- Easily mixed
- Not flammable

PRODUCT INFORMATION

Packaging	80 lb (36.3 kg) bag
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging
Storage Conditions	Store dry at 40–95 °F (4–35 °C). Protect from moisture. If damp, discard material

TECHNICAL INFORMATION

Compressive Strength	1 day	2,200 psi (15.7 MPa)	(ASTM C-39)
	7 days	4,500 psi (31.0 MPa)	73 °F (23 °C)
	28 days	5,500 psi (37.9 MPa)	50 % R.H.
Flexural Strength	28 days	700 psi (4.8 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H.
Splitting Tensile Strength	28 day	550 psi (3.8 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
Pull-Out Resistance	28 days	>250 psi (1.7 MPa)	(ASTM C-1583) 73 °F (23 °C) 50 % R.H.
Shear Strength	28 days	1,500 psi (10.3 MPa)	(ASTM C-882 modified*)
	* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.		
Shrinkage	28 days	< 0.05 %	(ASTM C-157 modified per ASTM C-928)
Freeze Thaw De-Icing Salt Resistance	300 cycles	>98 %	(ASTM C-666)
Chloride Ion Diffusion Resistance	28 days	< 1,000 C	(ASTM C-1202 AASHTO T-277)

APPLICATION INFORMATION

Mixing Ratio	4/5 - 1 gal (3 - 3.76 L) per bag		
Coverage	0.65 ft ³ (0.03 m ³) per bag (Coverage figures do not include allowance for surface profile and porosity or material waste)		
Layer Thickness	Min.	Max.	
	1" (25 mm)	8" (200 mm)	
	Full dept placements are possible. Please consult technical service.		
Flowability	Initial slump	5-7" (12.7 - 17.8 cm)	(ASTM C-143)
	30 min slump	>4" (10.2 cm)	
Product Temperature	65–75 °F (18–24 °C)		
Ambient Air Temperature	> 40 °F (5 °C)		
Substrate Temperature	> 40 °F (5 °C)		

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Preparation work should be done by high pressure water blast, scabbler or other appropriate mechanical means to obtain an exposed aggregate surface profile of $\pm 1/8"$ (3 mm) (CSP-7).
- To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

PRIMING

- **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 Sika® Armatec® 110 EpoCem (consult PDS).
- **Concrete Substrate:** Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult PDS). Alternately, a scrub coat of Sikacrete®-100 CI can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

MIXING

- Place 4/5 gallon (3 L) water in mixing container.
- Add Sikacrete®-100 CI while continuing to mix.
- Add additional 1/5 gallon (0.76 L) if needed.
- Mix to a uniform consistency, maximum 3 minutes.
- Mechanically mix with a low-speed drill (400–600 rpm) and paddle or in appropriate size mortar mixer or concrete mixer.

APPLICATION

- Pre-wet surface to SSD.
- Ensure good intimate contact with the substrate is achieved. To accomplish this, material should be scrubbed into the substrate or other suitable means should be employed such as vibration of the material or pumping under pressure.
- Vibrate form while pouring or pumping.
- Pump with a variable pressure pump.
- Continue pumping until a 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.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Moist cure with wet burlap and polyethylene, a fine mist of water or a water based* compatible curing compound.
- Curing compounds adversely affect the adhesion of following lifts of mortar, leveling mortar or protective coatings.
- Moist curing should commence immediately after finishing.
- Protect freshly applied mortar from direct sunlight, wind, rain and frost.

* Pretesting of curing compound is recommended.

LIMITATIONS

- Using SikaLatex®, SikaLatex® R or similar products will result in loss of slump and slump retention. Field tests for suitability are strongly recommended.
- Not a vapor barrier
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® 32, Hi-Mod.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LOCAL RESTRICTIONS

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <http://usa.sika.com/> or by calling Sika's Technical Service Department at 800.933.7452 nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instructions for each Sika product for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

ECOLOGY, HEALTH AND SAFETY

Keep container tightly closed. Keep out of reach of children. Not for internal consumption. For industrial use only. For professional use only. For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/l (EPA method 24)

LEGAL DISCLAIMER

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