

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	<u>1 day</u>	<u>2,000 psi (13.8 MPa)</u>	(ASTM C-39) 73 °F (23 °C) 50 % R.H.
	<u>7 days</u>	<u>4,500 psi (31.0 MPa)</u>	
	<u>28 days</u>	<u>5,500 psi (37.9 MPa)</u>	
Flexural Strength	<u>28 days</u>	<u>700 psi (4.8 MPa)</u>	(ASTM C-293) 73 °F (23 °C) 50 % R.H.
Splitting tensile strength	<u>28 day</u>	<u>550 psi (3.8 MPa)</u>	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
Pull-Out Resistance	<u>28 days</u>	<u>> 250 psi (1.7 MPa)</u>	(ASTM C-1583) 73 °F (23 °C) 50 % R.H.
Shear Strength	<u>28 days</u>	<u>1,500 psi (10.3 MPa)</u>	(ASTM C-882 modified*)
* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.			
Shrinkage	<u>28 days</u>	<u>< 0.05 %</u>	(ASTM C-157 modified per ASTM C-928)
Freeze Thaw De-icing Salt Resistance	<u>300 cycles</u>	<u>> 98 %</u>	(ASTM C-666)
Rapid Chloride Permeability	<u>28 days</u>	<u>< 1,000 C</u>	(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.	
	<u>1" (25 mm)</u>	<u>8" (200 mm)</u>	
Full dept placements are possible. Please consult technical service.			
Flowability	<u>Initial slump</u>	<u>6-9" (15.2 - 22.9 cm)</u>	(ASTM C-143)
	<u>30 min slump</u>	<u>> 4" (10.2 cm)</u>	
Product Temperature	65–75 °F (18–24 °C)		
Ambient Air Temperature	> 40 °F (5 °C)		
Substrate Temperature	> 40 °F (5 °C)		

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.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an 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)

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.

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, scabblor 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.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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