

## PRODUCT DATA SHEET

# Sikacrete® Self Consolidating Concrete

One-component, cementitious, polymer-modified, self consolidating concrete mix

### PRODUCT DESCRIPTION

Sikacrete® Self Consolidating Concrete is a one-component, self consolidating concrete containing factory blended coarse aggregate. This self consolidating concrete bag is silica fume and polymer modified and also contains a migrating corrosion inhibitor.

### USES

- Full depth repairs
- On grade, above and below grade on concrete
- On horizontal surfaces
- Vertical and overhead surfaces when formed and pumped or poured
- As a structural repair material for parking facilities, industrial plants, walkways, bridges, tunnels, dams, and balconies
- Filler for voids and cavities

### CHARACTERISTICS / ADVANTAGES

- Self consolidating concrete - Excellent placement characteristics
- Polymer-modified
- Integral Penetrating Corrosion Inhibitor
- Silica Fume Enhanced
- Prepackaged coarse aggregate. Eliminates the need to extend material in the field. Eliminates the risk of reactive aggregate
- Can be pumped or poured into forms and gets excellent consolidation without vibrating

### PRODUCT INFORMATION

<b>Packaging</b>	50 lb. (22.7 kg) bag
<b>Appearance / Color</b>	Concrete Gray
<b>Shelf Life</b>	12 months in original, unopened packaging
<b>Storage Conditions</b>	Store dry at 40 to 95 °F (4 to 35 °C). Condition material to 65 to 75°F (18 to 24 °C) before using

### TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	2,000 psi (13.8 MPa)	(ASTM C-39) Tested at: 73 °F (23 °C) 50 % R.H.
	7 days	5,500 psi (37.9 MPa)	
	28 days	6,500 psi (44.8 MPa)	

<b>Flexural Strength</b>	1 day	500 psi (3.4 MPa)	(ASTM C-78)
	7 days	750 psi (5.2 MPa)	Tested at:
	28 days	1,000 psi (6.9 MPa)	73 °F (23 °C) 50 % R.H.
<b>Splitting Tensile Strength</b>	7 days	750 psi (5.1 MPa)	(ASTM C-496)
	28 days	1,000 psi (6.9 MPa)	Tested at: 73 °F (23 °C) 50 % R.H.
<b>Tensile Adhesion Strength</b>	1 day	250 psi (1.7 MPa)	(ACI 503)
	7 days	300 psi (2.1 MPa)	Tested at: 73 °F (23 °C) 50 % R.H.
<b>Shear Strength</b>	1 day	1,000 psi (6.9 MPa)	(ASTM C-882 mod. *)
	7 days	1,500 psi (10.3 MPa)	Tested at:
	28 days	2,500 psi (17.2 MPa)	73 °F (23 °C) 50 % R.H.
* Mortar scrubbed into substrate.			
<b>Shrinkage</b>	<0.05% at 28 days		(ASTM C-157) Tested at: 73 °F (23 °C) 50 % R.H.
<b>Freeze Thaw De-icing Salt Resistance</b>	300 cycles > 99 %		(ASTM C-666)
	50 cycles = 2		(ASTM C-672) Tested at: 73 °F (23 °C) 50 % R.H.
<b>Sulfate Resistance</b>	Length change after 6 months is .006		(ASTM C-1012) Tested at: 73 °F (23 °C) 50 % R.H.
<b>Chloride Ion Ingress</b>	<650 Coloumb at 28 days		(ASTM C-1012) Tested at: 73 °F (23 °C) 50 % R.H.

## APPLICATION INFORMATION

<b>Coverage</b>	Approximately 0.38 ft <sup>3</sup> /bag (0.01 m <sup>3</sup> /bag). Actual results on site may vary
<b>Flowability</b>	<b>Initial Spread:</b> 27–33 in. (68–83 cm) approx. <b>Spread at 30 min:</b> > 15 in. (38 cm)
<b>Pot Life</b>	60 minutes

## APPLICATION INSTRUCTIONS

### SURFACE PREPARATION

Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair area is not less than 1 in. (25.4 mm) in depth. Preparation work should be done by high pressure water blast, scabblor, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of ±1/8 in. (3.2 mm) (CSP-7-8). 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.

## MIXING

Start mixing with 4.2 pints (2 L) of water. An additional 0.3 pint (0.15 L) can be added if needed. Do not over water as excess water will cause segregation. Add Sikacrete® Self Consolidating Concrete while continuing to mix. 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 (Saturated Surface Dry). 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.

## Tooling and Finishing

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 layers of mortar, leveling mortar or protective coatings. Moist curing should commence immediately after finishing. Protect newly applied material from direct sunlight, wind, rain and frost.

\* Pretesting of curing compound is recommended.

## LIMITATIONS

- Application thickness: Minimum 1 in. (25 mm); Maximum 8 in. (200 mm).
- Minimum ambient and surface temperatures 45 °F (7 °C) and rising at time of application.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Do not use on potential areas such as aluminum bars, rails, posts etc.

## 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.

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## OTHER RESTRICTIONS

See Legal Disclaimer.

## 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.

## LEGAL DISCLAIMER

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

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