



# SELF-CONSOLIDATING CONCRETE MIX



**Sakrete® Self-Consolidating Concrete Mix** is a dry, preblended, one-component, self-consolidating, cementitious, polymer-modified concrete mix containing coarse aggregate, silica fume, and an integral migrating corrosion inhibitor. Designed for application thickness minimum of 1 in. (2.5 cm) and maximum thickness of 8 in. (20 cm).

## Features:

- Self-Consolidating, excellent placement characteristics
- Polymer-modified for increased adhesion and flexural strength
- Integral penetrating corrosion inhibitor
- Enhanced with silica fume
- Convenient and consistent, made with coarse aggregate to eliminate the need to extend the material in the field, and the risk of reactive aggregate.
- Does not require mechanical vibration consolidation.
- Fiber reinforced to control shrinkage cracking

## Use For:

- Full depth repairs
- On grade, above, and below grade on concrete
- 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

## Yield/Coverage/Water:

Bag Size: 50 lb. (22.7 kg)

60 bags will cover approximately 1 cu. yd. (0.76 m<sup>3</sup>)

Bag Size	Approximate Coverage	Water
50 lb (22.7 kg)	0.45 ft <sup>3</sup> (0.013 m <sup>3</sup> )	4.0-4.5 pt. (1.89-2.13 L)

NOTE: Yield and water are approximate. The yield above does not allow for waste and spillage.

## Technical Data:

Application Time	Slump Flow ASTM C1611
60 minutes	24-30 in (61-76 cm)

Flexural Strength, psi (ASTM C78)	
24 hours	500 psi (3.4 MPa)
7 days	750 psi (5.2 MPa)
28 days	1,000 psi (6.9 MPa)

Splitting Tensile Strength, psi (ASTM C496)	
7 days	750 psi (5.2 MPa)
28 days	1,000 psi (6.9 MPa)

Slant Shear Bond Strength, psi (ASTM C882)	
24 hours	1,000 psi (6.9 MPa)
7 days	1,500 psi (10.3 MPa)
28 days	2,500 psi (17.2 MPa)

Direct Tensile Bond, psi (ACI 503)	
7 days	250 psi (1.7 MPa)
28 days	300 psi (2.1 MPa)

Compressive Strength, psi (ASTM C39)	
24 hours	2,000 psi (13.8 MPa)
7 days	5,500 psi (37.9 MPa)
28 days	6,500 psi (44.8 MPa)

Shrinkage (ASTM C157)	
28 days	<0.05%

Chloride ion permeability (ASTM C1202)	
28 days	<650 Coulombs

Freeze/Thaw Resistance (ASTM C666)	
300 cycles	>99%

Scaling Resistance (ASTM C672)	
50 cycles	0

Sulfate Resistance (ASTM C1012)	
Length change after 6 mo.	0.006

NOTE: Independent test results obtained under controlled laboratory conditions at 73° F (22.7° C) and 50% relative humidity.

## DIVISION 3

Structural Concrete – 03 31 00



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## **Color:**

Gray

*NOTE: Weather and temperatures, amount of water used as well as care used in the application are all factors over which we have no control. We assume no warranty for finished work, expressed or implied. Our liability is limited to the replacement of defective materials.*

## **Preparation:**

### **Concrete:**

1. All materials should be conditioned to 65° – 75° F (4° C) and 80° F (18° - 24° C) 24 hours prior to installation.
2. Proper Surface repair preparation is crucial to achieving a successful application. Be sure repair area is not less than 1 in. in depth.
3. Roughen surface and remove all unsound concrete.
4. Clean area and remove all grease, oil, asphalt, curing compounds, acids, dirt, loose debris, paint and any other foreign materials that will inhibit performance.
5. Preparation work should be done by high pressure water blast, scabber, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of +/- 1/8 in. (CSP 7-8).
6. The surface should be saturated with water, Saturated Surface Dry (SSD) with no puddling of water, prior to placement.

### **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 and primed with appropriate protective primer.

*Note: Before installing Sakrete Fast Setting Self-Leveling Resurfacer the installer is responsible for ensuring that the wood subfloor is structurally sound, clean and capable of support the weight.*

## **Forming:**

1. Forms must be sealed to prevent material from escaping.
2. Release agents are recommended for pre-treating wood form surfaces that can absorb moisture. The design of the form work should take into consideration the consistency of the mix, the method of placement and the distance the material must travel.
3. Form sides must be squared off.

### **Refer To:**

ACI 302 Guide for Concrete Flooring and Slab Construction  
ACI 304 Guide for Measuring, Mixing, Transportation and Placing Concrete

## **Mixing:**

1. For best results, use a low-speed drill (400-600 rpm) and paddle or in an appropriate size mortar mixer or concrete mixer.
2. Add dry mix to cool, clean potable water at the ratio of approximately 4 pt. (1.89 L) per 50 lb. (22.7 kg) bag of powder. Add additional water sparingly, if needed, up to 4.5 pt. (2.13 L), while mixing a maximum of 3 minutes to a lump-free, uniform consistency.
3. Only mix with clean potable water. Addition of cold water at high temperatures or warm water at low temperatures will aid in adjusting the mix temperature.
4. Do not mix more material than can be placed in a 60 minute time frame.

## **Placement:**

1. Ideal application conditions are when air, material, and substrate temperatures are between 45° F and below 100° F (7° C – 38° C) within 24 hours of application and placement and 7 days after with no rain in the forecast for 24 hours after.
2. Ensure good intimate contact with the substrate is achieved by scrubbing the material into the substrate or by other suitable means such as vibration of the material or pumping under pressure. Vibrate form while pouring or pumping. Pump with a variable pressure pump.
3. 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.

## **Notes and Limitations:**

1. Minimum ambient and surface temperature is 45° F (7° C) and rising at time of application.
2. Do not overwater or over mix.
3. Install in accordance with local building codes and applicable ASTM standards.
4. Use a mechanical batch type mixer, mix for 3 minutes. Hand-mixing is not recommended.
5. Mixing time and water amounts should be consistent from batch to batch.
6. Minimum application thickness is 1 in. (25 mm); Maximum is 8 in. (200 mm).
7. As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure.

## **Curing:**

1. Curing means maintaining proper moisture and temperature to increase the strength and durability of concrete and is one of the most important steps in concrete construction.
2. Under hot and windy conditions, all concrete tends to lose moisture unevenly and may develop plastic shrinkage cracks. When weather is too hot, dry or windy, water is lost by evaporation from the concrete, and hydration stops, resulting in finishing difficulties and cracks. In such cases, concrete can be moist cured by a gentle mist of water applied to the surface or covering the concrete surface with clean wet burlap or flat-laid plastic sheeting.
3. Curing should be started as soon as possible without damaging the concrete finish and should continue for a period of 5 days in warm weather at 70° F (21° C) or higher or 7 days in colder weather 50° – 70° F (10° – 21° C).
4. In near freezing temperatures the hydration process slow considerably. Protect concrete from freezing during the first 48 hours; if temperatures are expected to fall below 32° F (1° C), plastic sheeting and insulation blankets should be used.
5. The final appearance will be affected by the curing method used. Coverings such as burlap or plastic sheets may affect the color in spots.

### **Refer To:**

ACI 308 Standard Practice for Curing Concrete

## **Clean Up:**

Use warm, soapy water for cleaning hands and tools while product is wet. Sakrete concrete mortar dissolver can be used if dried or hardened on tools and equipment.

*NOTE: Proper application and installation of all Sakrete products are the responsibility of the end user.*

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## **Safety:**

READ and UNDERSTAND the Safety Data Sheet (SDS) before using this product.

WARNING: Wear protective clothing and equipment. For emergency information, call CHEMTREC at 800-424-9300 or 703-527-3887 (outside USA).

**KEEP OUT OF REACH OF CHILDREN.**

## **Limited Product Warranty:**

The manufacturer warrants that this product shall be of merchantable quality when used or applied in accordance with the manufacturer's instructions. This product is not warranted as suitable for any purpose other than the general purpose for which it is intended. This warranty runs for one (1) year from the dates the product is purchased. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE DURATION OF THIS WARRANTY. Liability under this warranty is limited to replacement or defective products or, at the manufacturer's option, refund of the purchase price. CONSEQUENTIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY.