

Sikacrete® 211

One-component, cementitious,
pumpable and pourable concrete mix

Description	Sikacrete 211 is a 1-component, portland-cement concrete containing factory blended coarse aggregate.
Where to Use	<ul style="list-style-type: none"> ■ 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"> ■ Pre-packaged coarse aggregate: Eliminates need to extend material in the field; Eliminates 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. ■ Good freeze/thaw resistance. ■ Easily applied to clean, sound substrate. ■ Not a vapor barrier. ■ Not flammable, non-toxic.
Yield	Approximately 0.65 ft. ³ /unit
Packaging	80 lb. multi-wall bag.

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

Shelf Life	1 year in original, unopened packaging.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Color	Concrete gray when mixed.	
Mixing Ratio	Mix with clean potable water at rate of up to 1 gallon per bag. Start with 4/5 gallon and mix to consistency required with remainder of gallon.	
Application Time	Initial Slump 5"-7"; Slump at 30 minutes >4"	
Flexural Strength (ASTM C-78) 28 days	700 psi	(5.0 MPa)
Splitting Tensile Strength (ASTM C-496) 28 days	750 psi	(3.4 MPa)
Bond Strength* (ASTM C-882 modified) 28 days	1,500 psi	(15.2 MPa)
Compressive Strength (ASTM C-39)		
1 day	2,000 psi	(13.8 MPa)
7 days	4,500 psi	(31.0 MPa)
28 days	5,000 psi	(37.9 MPa)
Shrinkage (ASTM C-157) 28 days	<0.05%	
Chloride ion permeability (Astm C-1202) 28 days	<1,500	Coloumbs

* Mortar scrubbed into substrate.

How to Use

Substrate	Concrete, mortar, and masonry products.
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 1 in. in depth. 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). 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 Sika Armatec 110 EpoCem (consult Technical Data Sheet).

Priming	For priming of reinforcing steel use Sika Armatec 110 EpoCem (consult Technical Data Sheet).
Mixing	Place 4/5 of 1 gallon water in mixing container. Add Sikacrete 211 while continuing to mix. Add additional water up to 1 gallon total. 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 & Finish	Form and pour or pump applications: 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	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. <small>*Pretesting of curing compound is recommended.</small>
Limitations	<ul style="list-style-type: none"> ■ 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. ■ Using SikaLatex, SikaLatex R or similar products will result in loss of slump and slump retention. Field tests for suitability are strongly recommended.
Caution	
Irritant	Suspect carcinogen - Contains portland cement and sand (crystalline silica). Skin and eye irritant. Avoid contact. Dust may cause respiratory tract irritation. Avoid breathing dust. Use only with adequate ventilation. May cause delayed lung injury (silicosis). IARC lists crystalline silica as having sufficient evidence of carcinogenicity in laboratory animals and limited evidence of carcinogenicity in humans. NTP also lists crystalline silica as a suspect carcinogen. Use of safety goggles and chemical resistant gloves is recommended. If PELs are exceeded, an appropriate, NIOSH approved respirator is required. Remove contaminated clothing.
First Aid	In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes, and contact a physician. For respiratory problems, remove person to fresh air.
Clean Up	In case of spillage, scoop or vacuum into appropriate container, and dispose of in accordance with current, applicable local, state and federal regulations. Keep container tightly closed and in an upright position to prevent spillage and leakage. Mixed components: Uncured material can be removed with water. Cured material can only be removed mechanically.

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

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