



High Strength Concrete Mix

High strength concrete mix for construction or repairs exceeding 2" thick

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Product Description

SAKRETE® High Strength Concrete Mix is a pre-blended mixture sand, coarse aggregate, and cementitious materials. For new construction, slab placement, or repairs where concrete thickness exceeds 2 inches (50 mm). Also used for setting of posts and poles without mixing or bracing.

When/Where to Use

- Setting fence posts
- Curbs, stairs, and ramps
- Driveways, slabs, patios, walkways
- Foundation walls and footings
- Structural applications requiring a small volume of concrete

Advantages

- Pre-blended, add water or bonding admix
- High strength 4,000 psi
- Full depth applications 2 inch (50 mm) or greater

Packaging

50 lb. (22.7 kg) pail (BOM 120021)
60 lb. (27.2 kg) bag (BOM 100171)

Typical Yield

One 50 lb. (22.7 kg) pail will yield approximately 0.375 cu. ft. (0.01 m³)

One 60 lb. (27.2 kg) bag will yield approximately 0.45 cu. ft. (0.017 m³)

To determine coverage: Multiply Length (feet) x Width (feet) x Thickness (inches) and divide by 12 for cu. ft. Then divide by 0.38 cu. ft. coverage above to determine the numbers of 50 lb. pails needed or divide by 0.45 cu.ft. for the number of 60 lb. bags needed. See Calculator on SAKRETE.com for assistance.

Post Setting Typical Yield

Based on an average 10" diameter hole:
12" deep hole will use 75 lbs.
18" deep hole will use 100 lbs.
24" deep hole will use 125 lbs.
30" deep hole will use 150 lbs.

Technical Data

When used as directed High Strength Concrete Mix meets or exceeds the

compressive strength requirements of ASTM C 387 and compressive strength requirements of ASTM C 39.

Technical Data Tests	
ASTM C387 COMPRESSIVE STRENGTH	
7 Days	2,500 psi (17 MPa)
28 Days	4,000 psi (28 MPa)
Slump Range	2-3" (50-75 mm)
Division 3	Structural Concrete 30 31 00

Surface Preparation

Use only when the product, air and surface temperatures are between 40°-80°F (4°-27°C) with no rain in the forecast within 24 hours of application. For best results all materials should be stored between 40°-80°F (4°-27°C) 24 hours prior to installation. Protect from freezing for 48 hours.

Refer to:

- ACI 302.1 Guide for Concrete Flooring and Slab Construction
- ACI 304.1 Guide for Measuring, Mixing, Transportation, and Placing Concrete
- ACI 305R Guide to Hot Weather Concreting
- ACI 306R Guide to Cold Weather Concreting

Mixing

Empty contents of High Strength Concrete Mix into a wheel barrel or mortar pan forming a crater in the center of the dry mix for the addition of clean potable water. Add approximately 2-2½ qt. (1.9-2.4 L) of clean water per 50 lb. (22.7 kg) pail or, 2½-3 qt. (2.4-2.9 L) per 60 lb. bag, or enough to achieve a workable mix. If too stiff, add more water a little at a time. Do not add any materials other than clean potable water or SAKRETE Bonder and Fortifier. (See Bonder and Fortifier Technical Data Sheet for mixing instructions.) AVOID A SOUPY MIX.



Excess water reduces strength and durability and can cause cracking. In cold weather use warm water to accelerate the set. Use cold water to slow the set in hot weather. Mix with a shovel or hoe until all the material is mixed to a uniform consistency. Projects requiring multiple pails are mixed much easier with a mechanical concrete mixer.

Application

Read all directions before starting work.

Flatwork (Slabs, sidewalks, walkways, etc.): Stake out the area where the concrete will be placed. Cut and remove all soil, grass, sod, etc. For improved drainage place several inches of gravel into the excavated area. Remember to allow enough depth for both the gravel and a minimum of 4 inches (10 cm) of concrete. Pre-treat forms to be used with a release agent to prevent water absorption and for the ease of removing them once the concrete mix has set up. Place forms in the desired area assuring that they are level, square, and all corners sealed so no premixed material can escape once placed. Dampen the sub-grade before placing concrete, do not leave standing water. Place pre-mixed concrete into the forms to full depth. Consolidate by moving into corners and low areas to assure there are no voids.

WARNING: INJURIOUS TO EYES!

KEEP OUT OF REACH OF CHILDREN!

Helpful Items:



Safety Glasses Gloves Mortar Tub Concrete Mixer Trowel

How Much Concrete Do You Need?
Estimate the number of whole 50 lb. (22.7 kg) pails of SAKRETE High Strength Concrete Mix to place a slab.

Area in Sq. Ft. (sq. m)	3 (.03)	6 (.06)	9 (0.8)	15 (1.4)	24 (2.2)	45 (4.2)	
Slab 4" thick (100 mm)	3	5	8	13	20	38	Bags
Slab 6" thick (150 mm)	4	8	15	24	39	56	Bags

Using a straight edge strike the surface by rodding back and forth to level with the top of the forms, allow the bleed water to evaporate. Float surface to remove any imperfections. Cut 1 inch deep control joints using a grooving tool every 6 ft. to 8 ft. Expansion joints should be placed every 8 ft. x 12 ft. in each direction and must be completely through the slab with enough allowance for movement. Use a trowel or edging tool to compact the slab edges for easier removal of the forms. Once concrete has stiffened slightly and the water has evaporated from the surface a broom finish can be applied. Forms can be removed the day following placement. Finishing cementitious materials too early, or over-working the materials can cause dusting, cracking, scaling, and a weak surface

Posts and Poles: Dig hole to required depth and diameter (depth should be 1/5 the length of the post or pole and hole should be 3 times the diameter of the pole or post width). Place the post or pole in the center of the hole. Level and support post or pole in place. Fill hole with mixed concrete and consolidate to remove any air voids. Slope concrete at the surface to allow water to drain away. Wait a minimum of 24 hours before posts or poles are subjected to any strain. If load bearing consult with your local building code requirements before proceeding.

Repairs: Surfaces to be repaired must be sound, dimensionally stable, and clean. Slick or sealed surfaces must be thoroughly roughened to an ICRI CSP of 3 to 5. Sides of repair area must be squared off. Clean all reinforcing steel to bare white metal and coat with a rust preventative if not covering within 8 hours. All surfaces that will come in contact with the concrete mix should be brought to a SSD (Surface Saturated Dry condition) before application of the material. Clean and remove all loose materials and debris before proceeding. Place the mixed concrete mix into the area that is being repaired. Use a float to remove any surface imperfections.

Curing (required only for Flatwork)

Proper curing is critical for sound results. Curing means maintaining proper moisture and temperature. The concrete must be kept continuously moist for several days. Covering the concrete slab with plastic is a practical way to help retain moisture. Place plastic after concrete has set. If surface begins to appear dry remove the plastic moisten the surface and replace the plastic. New concrete can be opened to foot traffic in 24 hours and vehicular traffic in 72 hours.

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.

Notes and Limitations

- Rubber gloves and goggles are recommended safety equipment
- Do not over water
- Do not add any materials other than clean potable water or SAKRETE Bonder and Fortifier (See Technical Data Sheet for mixing instructions)
- Do not over trowel
- Protect from freezing for 48 hours
- Colder temperatures or higher humidity conditions will retard set times
- Use only clean mixing container and tools
- Store in tightly closed container off the floor in a dry place

Proper application and installation of all SAKRETE products are the responsibility of the end user.

Warning

WARNING! CAUSES IRRITATION - Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Exposure may result in irritation of the skin, eyes or nasal passages from alkali in Portland cement. When wet, contact with the skin or eyes may result in irritation or burns. **FIRST AID:** In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get prompt medical attention; for skin, wash thoroughly with plenty of soap and water. If irritation persists, get medical attention. **WARNING! HARMFUL IF INHALED** - Avoid breathing dust. Keep container closed. Use with adequate ventilation. Excessive exposure by

inhalation over an extended period of time may result in the development of pulmonary diseases including pneumoconiosis and silicosis. Crystalline Silica has been classified by IARC and NTP as a carcinogen. **WARNING:** Wear protective clothing and equipment. **KEEP OUT OF REACH OF CHILDREN.** READ and UNDERSTAND the Safety Data Sheet (SDS) before using this product.



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 of defective products or, at the manufacturer's option, refund of the purchase price. **CONSEQUENTIAL AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY.**

Environmental Advisory

Uncured or crushed cured cement is an environmental hazard, which may adversely affect fish and wildlife. Dispose of construction debris containing cement, including empty bags, at a permitted municipal disposal firm. Do not use crushed concrete as a fill near an aquatic habitat.

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Shelf Life	One year in original, unopened container.
Storage Conditions	Store dry in tightly sealed
Color	Gray.