



CEMENT & CONCRETE PRODUCTS™

Q•MAX PRO CONCRETE MIX

PRODUCT NO. 1004-81

PRODUCT DESCRIPTION

QUIKRETE® Q•MAX PRO Concrete Mix is a commercial grade blend of gravel, sand, fast setting cement, and other proprietary ingredients specially designed for extended working time, high early strength, and fast project completion. QUIKRETE® Q•MAX PRO Concrete Mix is fiber reinforced for crack resistance and includes an air-entraining admixture for superior workability and freeze-thaw durability. Corrosion protection is built into the design.

PRODUCT USE

QUIKRETE® Q•MAX PRO Concrete Mix is suitable for any concrete use requiring high early strength and rapid strength gains. QUIKRETE® Q•MAX PRO Concrete Mix provides a working time of 1 hour and a walk-on time of 3 hours. It achieves a compressive strength of 6500 PSI (44.8 MPa) in 28 days. QUIKRETE® Q•MAX PRO Concrete Mix can be used for any structural application requiring concrete in a minimum thickness of 2 inches (50 mm), such as slabs, footings, steps, columns, walls, floors, ramps, sidewalks, and patios. QUIKRETE® Q•MAX PRO Concrete Mix exceeds the compressive strength requirements of ASTM C387.

SIZES

- 50 lb (22.6 kg) bags
- 80 lb (36.2 kg) bags

YIELD

- A 50 lb (22.6 kg) bag and an 80 lb (36.2 kg) bag of QUIKRETE® Q•MAX PRO Concrete Mix will yield approximately 0.375 ft³ (10.6 L) and 0.6 ft³ (16.9 L) respectively, at the recommended consistency.

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C143 Standard Test Method for Slump of Hydraulic-Cement Concrete
- ASTM C387 Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar
- ICRI Guideline No. 310.2R Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair
- ACI 305R Guide to Hot Weather Concreting
- ACI 306R Guide to Cold Weather Concreting

PHYSICAL/CHEMICAL

Typical results obtained for QUIKRETE® Q•MAX PRO Concrete Mix, when tested in accordance with the referenced ASTM test methods, are shown in Table 2.

DIVISION 3 & 32

03 01 00 Maintenance of Concrete
03 31 00 Structural Concrete
32 01 29 Rigid Pavement Repair



INSTALLATION

SURFACE PREPARATION

For new concrete placement on an earthen substrate, first stake out the planned area and remove sod or soil to the desired depth. Nail and stake forms securely in place. Tamp and compact the sub-base until firm.

When using QUIKRETE® Q•MAX PRO Concrete Mix as a repair material, all surfaces should be clean and free of foreign substances, including corrosion present on reinforcing steel. Remove all spalled areas and areas of unsound concrete. The appropriate personal protective equipment should be worn. The repair area should have a vertical edge of 2 in (50 mm) or more. Preparation work done on the repair area should be completed by high pressure water blast, breaker hammer, or other appropriate mechanical means to obtain an exposed aggregate surface. Refer to current ICRI Guideline 310.2R for additional surface preparation information. Substrate and forms (if used) should be saturated with clean water before patching to ensure SSD condition. No standing water should be left in the repair area.

MIXING

QUIKRETE® Q•MAX PRO Concrete Mix can be mechanically mixed in a barrel type concrete mixer or a mortar mixer. Choose the mixer size most appropriate for the size of the job to be done. Allow at least 2/3 ft³ (18.7 L) and 1 ft³ (28.3 L) of mixer capacity, for each 50 lb (22.6 kg) and 80 lb (36.2 kg) bag respectively of QUIKRETE® Q•MAX PRO Concrete Mix to be mixed at one time. For each 50 lb (22.6 kg) of QUIKRETE® Q•MAX PRO Concrete Mix to be mixed, add approximately 4 pt (1.9 L) of potable water to the mixer. Turn on the mixer and begin adding the concrete to the mixer. Mixing must be completed in 3 to 4 minutes. If the material becomes too difficult to mix, add additional water until a workable mix is obtained. If a slump cone is available, adjust water to achieve a 3 in to 5 in (75 mm to 125 mm) slump. Final water content should be approximately 4 pt to 5 pt (1.9 L to 2.3 L) of water per 50 lb (22.6 kg) bag of concrete. Do not exceed recommended slump. Excessive water will reduce strength and increase permeability.

QUIKRETE® Q•MAX PRO Concrete Mix may also be mixed by hand. Empty concrete bags into a suitable mixing container. For each 50 lb

(22.6 kg) of QUIKRETE® Q•MAX PRO Concrete Mix to be mixed, add approximately 4 pt (1.9 L) of potable water. Work the mix with a shovel, rake or hoe and add water as needed until a stiff, moldable consistency is achieved. Be sure there are no dry pockets of material. Do not leave standing puddles of water. If a slump cone is available, adjust water to achieve a 3 in to 5 in (75 mm to 125 mm) slump. Final water content should be approximately 4 pt to 5 pt (1.9 L to 2.3 L) of water per 50 lb (22.6 kg) bag of concrete. Do not exceed recommended slump. Excessive water will reduce strength and increase permeability. For other package sizes, use Table 1 to determine water content.

TABLE 1 MIXING WATER FOR QUIKRETE® Q•MAX PRO

Package Size lb (kg)	Starting Water Content pt (L)	Maximum Expected Water Content pt (L)
50 (22.6)	4 (1.9)	5 (2.3)
80 (36.2)	6-1/2 (3.1)	8 (3.8)

APPLICATION

Start by dampening the sub-grade before concrete is placed. Do not leave standing puddles of water. Shovel or place concrete into the form or repair area, working continuously from one end to the other. Avoid partial depth fills which could lead to cold joints. After concrete has been compacted and spread to completely fill the forms or repair area without air pockets, strike off and float immediately. To strike off, use a straight board (screed), moving the edge back and forth with a saw-like motion to smooth the surface. Use a darby or bull float to float the surface; this will level any ridges and fills voids left by the straight edge. Cut the concrete away from the forms by running an edging tool or trowel along the forms to compact the slab edges. Cut 1 in (25 mm) deep control joints into the slab every 6 ft to 8 ft (1.8 m to 2.4 m) using a grooving tool. Allow concrete to stiffen slightly, waiting until all water has evaporated from the surface before troweling or applying a broom finish. Any standard concrete finishing technique is acceptable for use with QUIKRETE® Q•MAX PRO Concrete Mix. Concrete can be hand troweled, power-troweled, broom finished or finished with other specialty finishes.

Note - For best results, do not overwork the material.

CURING

General

No special curing methods are required. QUIKRETE® Q•MAX PRO Concrete Mix is often placed in service within a few hours after it sets, so conventional moist curing methods may not be practical; however, moist curing is still beneficial. For demanding structural applications, the ideal circumstances for curing are ample moisture and moderate temperature and wind conditions. Curing should be started as soon as possible 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 at 50 °F to 70 °F (10 °C to 21 °C).

Alternative Curing Method

QUIKRETE® Acrylic Concrete Cure & Seal – Satin Finish (No. 8730) provides the easiest and most convenient method of curing. Apply by spray, brush, or roller soon after the final finishing operation when the concrete is hard and the surface sheen has disappeared. The surface may be damp, but not wet, when applying curing compound. Complete coverage is essential. Other methods of providing proper curing include covering the surface with wet burlap, plastic sheeting, or waterproof paper to prevent moisture loss; keeping the surface wet with a lawn sprinkler is also acceptable. If burlap is used, it should be free of chemicals that could

weaken or discolor the concrete. New burlap should be washed before use. Place it when the concrete is hard enough to withstand surface damage and sprinkle it periodically to keep the concrete surface continuously moist. Water curing with lawn sprinklers, nozzles or soaking hoses must be continuous to prevent interruption of the curing process. Curing with plastic sheets is convenient. They must be laid flat, thoroughly sealed at joints, and anchored carefully along edges.

TABLE 2 TYPICAL PHYSICAL PROPERTIES

Slump, ASTM C143	
At 5 Minutes	3 in to 5 in (75 mm to 125 mm)
Compressive Strength, ASTM C39	
Age	PSI (MPa)
3 hours	1000 (6.8)
24 hours	3000 (20.6)
7 days	5000 (34.4)
28 days	6500 (44.8)

PRECAUTIONS

- When used in structural elements, comply with applicable building codes regarding steel reinforcement and any additional requirements.
- Follow ACI 305R when using product in hot weather. An example of an additional step would be using cold water when mixing in extremely hot weather.
- Follow ACI 306R when using product in cold weather. Examples of additional steps would be using hot water when mixing in severely cold weather and using plastic sheeting and insulation blankets if temperatures are expected to fall below 32 °F (0 °C).
- Curing compounds should not be applied if rain or temperatures below 50 °F (10 °C) are expected within 24 hours.
- Curing with plastic or burlap can cause patchy discoloration in colored concrete. For colored concrete, wet curing or the use of QUIKRETE® Acrylic Concrete Cure & Seal – Satin Finish (No. 8730) is recommended.
- Do not use curing compounds during late fall on surfaces where de-icers will be used to melt ice and snow. Using curing compounds at that time may prevent proper air drying of the concrete, which is necessary to enhance its resistance to damage caused by de-icers.
- Protect concrete from freezing during the first 48 hours. Plastic sheeting and insulation blankets should be used if temperatures are expected to fall below 32 °F (0 °C).
- Mix no more material than can be placed in 40 minutes.

SAFETY

IMPORTANT: Read Safety Data Sheet carefully before using. **WEAR IMPERVIOUS GLOVES**, such as nitrile, mask, and eye protection.

DANGER: Causes sever skin burns and serious eye damage. Prolonged or repeated inhalation of dust may cause lung damage or cancer.

KEEP OUT OF REACH OF CHILDREN

WARRANTY

NOTICE: Obtain the applicable **LIMITED WARRANTY** at www.quikrete.com/product-warranty or send a written request to The Quikrete Companies, LLC, Five Concourse Parkway, Atlanta, GA 30328, USA. Manufactured by or under the authority of The Quikrete Companies, LLC. © 2022 Quikrete International, Inc.