QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

1. Product Name

QUIKRETE® 5000 High Early Strength Concrete Mix #1007

2. Manufacturer

The QUIKRETE Companies
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3. Product Description

BASIC USE

For any concrete use requiring high early strength and rapid strength gains. QUIKRETE 5000 sets quickly, making it ideal for cold weather applications. It has a walk-on time of 10 - 12 hours. QUIKRETE 5000 can be used for any application requiring concrete in a minimum thickness of 2" (51 mm), such as slabs, footings, steps, columns, walls and patios.

COMPOSITION & MATERIALS

QUIKRETE 5000 consists of a uniformly blended, properly proportioned mixture of stone or gravel, sand, Portland cement and other ingredients approved for use in concrete.

SIZES

- 60 lb (27.2 kg) bags
- 80 lb (36.3 kg) bags

YIELD

An 80 lb (36.3 kg) bag yields approximately 0.60 cu ft (17 L). A 60 lb (27.2 kg) bag yields approximately 0.45 cu ft (12.7 L).

LIMITATIONS

When used in structural elements, comply with the steel reinforcing and additional requirements of applicable building codes.

4. Technical Data

APPLICABLE STANDARDS

ASTM International - ASTM C387 Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete

PHYSICAL/CHEMICAL PROPERTIES

QUIKRETE 5000 High Early Strength Concrete Mix exceeds the compressive strength requirements of ASTM C387, as shown in Table 1.

TABLE 1 TYPICAL PROPERTIES OF QUIKRETE 5000 CONCRETE MIX [1]

Cure time	Compressive strength
1 day	1500 psi (10.3 MPa)
3 day	2500 psi (17.2 MPa)
7 days	3500 psi (24.1 MPa)
28 days	5000 psi (34.5 MPa)
Slump range	2" - 3" (51 - 76 mm)

[1] Tested under standard laboratory conditions in accordance with ASTM C387.

5. Installation

MACHINE MIXING

- QUIKRETE 5000 can be 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 1 cu ft (28 L) of mixer capacity for each 80 lb (36.3 kg) bag of QUIKRETE 5000 to be mixed at 1 time
- For each 80 lb (36.3 kg) bag of QUIKRETE 5000 to be mixed, add approximately 6 pt (2.8 L) of fresh water to the mixer. Turn on the mixer and begin adding the bags of concrete to the mixer
- 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 2" - 3" (51 - 76 mm) slump

Note - Final water content should be approximately 6 - 10 pt (2.8 - 4.7 L) per 80 lb (36.3 kg) bag and 4.5 - 7 pt (2.1 - 3.3 L) per 60 lb (27.2 kg) bag.

HAND MIXING

- Empty bags into a suitable mixing container
- Add approximately 6 pt (2.8 L) of clean water for each 80 lb (36.3 kg) bag
- Work the mix with a shovel, rake or hoe and add water as needed until a stiff, moldable consistency is achieved
- Do not exceed a total volume of 10 pt (4.7 L) per 80 lb (36.3 kg) bag or 7 pt (3.3 L) per 60 lb (27.2 kg) bag
- Be sure all material is wet; do not leave unabsorbed puddles of water

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TEMPERATURE OF WATER

Set times will fluctuate in extremely hot or cold weather. Use cold water or water mixed with ice cubes in severely hot weather; use hot water when mixing in severely cold weather.

SITE PREPARATION

Stake out the area and remove sod or soil to the desired depth. Nail and stake forms securely in place. Tamp the subbase until firm.

APPLICATION

- Dampen the subgrade before concrete is placed. Do not leave standing puddles
- Shovel or place the concrete into the form. Fill to the full depth of the form
- After the concrete has been compacted and spread to completely fill the forms, 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. Then use a darby or bull float to float the surface. This helps level any ridges and fill 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" (25.4 mm) control joints into the slab every 6' - 8' (1.8 - 2.4 m) using a grooving tool
- Allow the concrete to stiffen slightly, waiting until all water has evaporated from the surface before troweling or applying a broom finish

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

CURING

General

Curing is one of the most important steps in concrete construction. Proper curing increases the strength and durability of concrete, and a poor curing job can ruin an otherwise well-done project. Proper water content and temperature are essential for good curing. In near freezing temperatures, the hydration process slows considerably. 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. 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, 70 degrees F (21 degrees C) or higher, or 7 days in colder weather, 50 - 70 degrees F (10 - 21 degrees C).

Specific Curing Methods

QUIKRETE Concrete Sealer provides the easiest and most convenient method of curing concrete.

- Apply by sprayer or roller after the final finishing operation when the surface is hard. 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, keeping the surface wet with a lawn sprinkler and sealing the concrete surface with plastic sheeting
- 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 or 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

PRECAUTIONS

- Curing compounds should not be applied if rain or temperatures below 50 degrees F (10 degrees C) are expected within 24 hours
- Curing with plastic or burlap can cause patchy discoloration in colored concrete. For colored concrete, wet curing or chemical curing compounds are recommended
- Use of Acrylic Concrete Sealer or other curing compounds is not recommended during late fall in northern climates on surfaces where de-icers will be used to melt ice and snow. Using curing compounds at that time may prevent proper air curing of the concrete, which is necessary to enhance its resistance to damage caused by deicers
- 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 degrees F (0 degrees C)

6. Availability

QUIKRETE 5000 is available at leading concrete construction supply houses and distributors. Contact QUIKRETE Construction Products for the name of the nearest dealer.

7. Warranty

The QUIKRETE Companies warrant this product to be of merchantable quality when used or applied in accordance with the instructions herein. The product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of its product (as purchased) found to be defective or, at the shipping companies' option, to refund the purchase price. In the event of a claim under this warranty, notice must be given to The QUIKRETE Companies in writing. This limited warranty is issued and accepted in lieu of all other express warranties and expressly excludes liability for consequential damages.

8. Maintenance

None required.

9. Technical Services

The QUIKRETE Companies maintain technical field representatives throughout the country. Contact a local distributor for the name and number of the nearest representative, or call QUIKRETE Construction Products.

10. Filing Systems

- Reed First Source
- Additional product information is available from the manufacturer.