

PSI 6000 CONCRETE MIX

PRODUCT No. 1007-25

DIVISION 3

03 31 00 Maintenance of Concrete

PRODUCT DESCRIPTION

QUIKRETE® PSI 6000 Concrete Mix is suitable for projects requiring normal setting time with high early strength development after final set has occurred or where a high final strength is required. QUIKRETE® PSI 6000 Concrete Mix is a construction-grade concrete, consisting of a uniformly blended and properly proportioned mixture of properly graded aggregates, portland cement, and other concrete approved ingredients.

PRODUCT USE

QUIKRETE® PSI 6000 Concrete Mix is suitable for any concrete use requiring high early and ultimate strengths. The mix is air-entrained to provide superior durability in situations where concrete will be exposed to cycles of freezing and thawing. It has a walk-on time of about 8 hours. QUIKRETE® PSI 6000 Concrete Mix can be used for any application requiring concrete in a minimum thickness of 50 mm (2 in), such as slabs, footings, steps, columns, walls, and patios.

SIZES

QUIKRETE® PSI 6000 Concrete Mix - 25 kg (55 lb) bags

YIELD

Each 25 kg (55 lb) bag of QUIKRETE® PSI 6000 Concrete Mix will yield approximately 12.2 L (0.43 cu ft) of mixed concrete.

TECHNICAL DATA

APPLICABLE STANDARDS

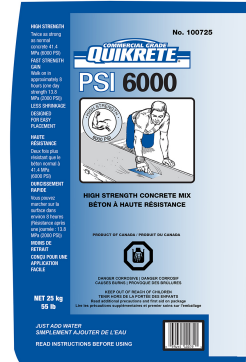
- ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C138 Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
- ASTM C143 Standard Test Method for Slump of Hydraulic-Cement Concrete
- ASTM C387 Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar

PHYSICAL/CHEMICAL

QUIKRETE® PSI 6000 Concrete Mix exceeds the performance requirements of ASTM C387. A properly handled mix will achieve the typical properties shown in Table 1 when tested in accordance with that specification:

TABLE 1 TYPICAL PHYSICAL PROPERTIES

Compressive Strength, ASTM C39	
Age	MPa (PSI)
24 Hours	13.8 (2000)
7 Days	27.6 (4000)
28 Days	41.4 (6000)



INSTALLATION

SURFACE PREPARATION

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

MIXING

QUIKRETE® PSI 6000 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 21 L (0.75 cu ft) of mixer capacity for each 25 kg (55 lb) bag of QUIKRETE® PSI 6000 Concrete Mix to be mixed at one time.

For each 25 kg (55 lb) bag of QUIKRETE® PSI 6000 Concrete Mix to be mixed, add approximately 1.9 L (1/2 US gallon) of potable 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 sparingly until a workable mix is achieved. If a slump cone is available, adjust water to achieve a 50 mm to 75 mm (2 in to 3 in) slump. Do not exceed 2.5 L (0.7 US gal) per 25 kg (55 lb) bag.

QUIKRETE® PSI 6000 Concrete Mix may also be mixed by hand. Empty concrete bags into a suitable mixing container. Add approximately 1.9 L (1/2 US gallon) of potable water for each 25 kg (55 lb) bag. Work the mix with a shovel, rake or hoe and add water as needed to achieve a stiff, moldable consistency. Do not exceed 2.5 L (0.7 US gallons) of water per 25 kg (55 lb) bag. Be sure there are no dry pockets of material. Do not leave unabsorbed puddles of water.

APPLICATION

Site Preparation

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

Method for Pouring a Slab

Dampen the sub base 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 25 mm (1 in) control joints into the slab every 1.8 m to 2.4 m (6 ft to 8 ft) 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.

CURING

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 the weather is too hot, dry, or windy, water is lost by evaporation from the concrete, which will hinder the hydration reaction, which may result in finishing difficulties and shrinkage cracking. 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).

PRECAUTIONS

- Curing compounds should not be applied if rain or temperatures below 10 °C (50 °F) are expected within 24 hours.
- Curing with plastic or burlap can cause patchy discoloration, especially in colored concrete. For colored concrete, wet curing or chemical curing compounds are recommended.
- Use of QUIKRETE® Acrylic Cure & Seal – Satin Finish (No. 8730-02) or other curing compounds is not recommended during late fall in northern climates on surfaces where deicers 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 freezing.
- Avoid mechanical vibration in placements which will be exposed to de-icing salts.

SAFETY

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

DANGER: Causes severe 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. © Quikrete International, Inc. Manufactured by or under the authority of Quikrete Canada Holdings, Limited. © 2023 Quikrete International, Inc..