



CEMENT & CONCRETE PRODUCTS™

PSI 6000 CONCRETE MIX

DIVISION 3

Maintenance of Concrete
03 31 00

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.

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. PSI 6000 can be used for any application requiring concrete in a minimum thickness of 50 mm (2"), such as slabs, footings, steps, columns, walls and patios.

SIZES

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

YIELD

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

TECHNICAL DATA

QUIKRETE® PSI 6000 Concrete Mix is a construction-grade concrete, consisting of a uniformly blended and properly proportioned mixture of -9mm (-3/8") aggregates, Portland cement, and other concrete approved ingredients. QUIKRETE® PSI 6000 exceeds the performance requirements of ASTM C387, "Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete." A properly handled mix will achieve the following typical properties when tested in accordance with that specification:

TABLE 1 TYPICAL PHYSICAL PROPERTIES

Compressive strength

Age	Typical Values
24 hours	13.8 MPa (2000 psi)
7 days	27.6 MPa (4000 psi)
28 days	41.4 MPa (6000 psi)

INSTALLATION

MIXING & PLACEMENT

MACHINE MIXING

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

- For each 25 kg (55 lb) bag of PSI 6000 to be mixed, add approximately 1.9 L (½ US gallon) of clean 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 50-75 mm (2"-3") slump. Do not exceed 2.5 L (0.7 US gal) per 25 kg (55 lb) bag.
- Avoid mechanical vibration in placements which will be exposed to de-icing salts.

HAND MIXING

- Empty bags into a suitable container.
- Add approximately 1.9 L (½ US gallon) of clean 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 all material is wet; do not leave unabsorbed puddles of water.

TEMPERATURE OF WATER

Setting 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 sub base until firm.

APPLICATION

- 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") control joints into the slab every 1.8-2.4 M (6' - 8') 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

Proper curing increases the strength and durability of concrete. Proper water content and temperatures 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 (21°C (70°F)) or higher, or 7 days in colder weather (10-21°C (50-70°F)).

LIMITATIONS

- 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 (#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.

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.

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** Refer to www.quikrete.com for the most current technical data, MSDS, and guide specifications*