CEMENT & CONCRETE PRODUCTS™

DIVISION 3

03 53 00 Concrete Topping

SAND/TOPPING MIX

PRODUCT NO. 1103

PRODUCT DESCRIPTION

QUIKRETE® Sand/Topping Mix consists of a uniformly blended mixture of portland cement and commercial grade sands, and other approved ingredients used for repairing and topping damaged horizontal concrete surfaces less than 2 in (50 mm) thick.

PRODUCT USE

QUIKRETE® Sand/Topping Mix is formulated for placing concrete overlays less than 2 in (50 mm) thick. It is also used for patching and leveling steps, walks and floors. Other applications for QUIKRETE® Sand/Topping Mix include:

- Chimney caps
- Large crack repairs
- Thick setting beds for ceramic floor tile
- Filling cores in masonry block or brick
- Resurfacing damaged concrete surfaces

SIZES

QUIKRETE® Sand/Topping Mix is available in the following bag sizes:

- 80 lb (36.2 kg) bags
- 60 lb (27.2 kg) bags
- 40 lb (18.1 kg) bags
- 10 lb (4.5 kg) bags
- 25 kg (55 lb) bags*
- 30 kg (66 lb) bags*

**Canada only package sizes*

YIELD

- 80 lb (36.2 kg) bag - Approximately 0.66 ft³ (18.7 L)
- 60 lb (27.2 kg) bag - Approximately 0.5 ft³ (14 L)
- 40 lb (18.1 kg) bag - Approximately 0.33 ft³ (10 L)
- 10 lb (4.5 kg) bag - Approximately 0.08 ft³ (2.26 L)
- 25 kg (55 lb) bag - Approximately 0.46 ft³ (13 L)
- 30 kg (66 lb) bag - Approximately 0.54 ft³ (15.4 L)

TECHNICAL DATA

APPLICABLE STANDARDS

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
- ASTM C387 Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete

PHYSICAL/CHEMICAL

QUIKRETE® Sand/Topping Mix exceeds the compressive strength requirements for high strength mortars per ASTM C387. Typical compressive strengths are shown in Table 1.

TABLE 1 TYPICAL PHYSICAL PROPERTIES

Compressive Strength, ASTM C109	
Age	*PSI (MPa)*
7 days	3000 (20.6)
28 days	5000 (34.4)

INSTALLATION

SURFACE PREPARATION

It is important to form a solid base for the new topping. Remove all broken and loose concrete. All surfaces must be clean and free of foreign substances. 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 ½ in (13 mm) or more. Saturate the repair area with clean water before resurfacing. No standing water should be left in the repair area

MIXING

QUIKRETE® Sand/Topping 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 1 ft³ (28.3 L) of mixer capacity for each 80 lb (36.2 kg) bag of QUIKRETE® Sand/Topping Mix to be mixed at one time. For each 80 lb (36.2 kg) bag of QUIKRETE® Sand/Topping Mix to be mixed, add approximately 8 pt (3.8 L) of potable water to the mixer. Turn on the mixer and begin adding QUIKRETE® Sand/Topping Mix bags to the mixer. If the material becomes too difficult to mix, add additional water until a workable mix is obtained.

QUIKRETE® Sand/Topping Mix may also be mixed by hand. Empty QUIKRETE® Sand/Topping Mix bags into a suitable mixing container. For each 80 lb (36.2 kg) bag of mix, add approximately 8 pt (3.8 L) of potable water. Work the mix with a shovel, rake or hoe and add additional water as needed to obtain a workable plastic-like consistency. Be sure there are no dry pockets of material. Do not leave standing puddles of water.

Final water content should be 8 pt to 12 pt (3.8 L to 5.6 L) of water per 80 lb (36.2 kg) bag of QUIKRETE® Sand/Topping Mix. For other bag sizes, use Table 2 to determine water content.

For toppings less than 1 in (25 mm) thick, replace part of the mixing water with QUIKRETE® Concrete Acrylic Fortifier (No. 8610) to improve bond strength. The recommended amount of QUIKRETE® Concrete Acrylic Fortifier is 2 qt (1.9 L) for each 80 lb (36.2 kg) bag. If colored concrete is desired, QUIKRETE® Liquid Cement Color (No. 1317) can be added directly to the mixing water following the Directions on the bottle. QUIKRETE® Liquid Cement Color is available in five colors: red, brown, buff, charcoal, and terra cotta.

TABLE 2: MIXING WATER FOR QUIKRETE® SAND/TOPPING MIX

Package Size lb (kg)	Starting Water Content pt (L)	Maximum Expected Water Content pt (L)
10 (4.5)	1 (0.5)	1-1/2 (0.7)
40 (18.1)	4 (1.9)	6 (2.8)
60 (27.2)	6 (2.8)	9 (4.3)
80 (36.2)	8 (3.8)	12 (5.6)
55 (25)*	5-1/2 (2.6)	8-1/4 (3.9)
66 (30)*	7 (3.3)	10 (4.7)

*Canada only package sizes

APPLICATION

Resurfacing Damaged Concrete Surfaces ½ in to 2 in (13 mm to 50 mm) Thick

It is important to form a solid base for the new topping. Remove all broken and loose concrete. Clean the surface thoroughly with QUIKRETE® Concrete & Asphalt Cleaner (No. 8601). For best results, use a heavy duty pressure washer.

Note — If the area to be resurfaced requires a topping from 1 in to 2 in (25 mm to 50 mm) thick, first coat the damaged area with QUIKRETE® Premium Concrete Bonding Adhesive (No. 9902). Allow the QUIKRETE® Premium Concrete Bonding Adhesive to dry before proceeding.

Mix using a machine or by hand according to the mixing instructions above. Using heavy trowel pressure, work the material into the surface of the damaged area and then build up to the desired thickness. Trowel the surface smooth using a steel finishing trowel or wood float. If a skid-resistant surface is desired, wait until the surface is thumb-print hard and apply a broom finish. Pull the broom toward you using light pressure. Be careful not to overlap strokes. Edge using a concrete edging tool if desired. If the topping is placed over an existing joint, it is important to tool a joint into the QUIKRETE® Sand/Topping Mix directly over the existing joint. Use a trowel or jointer to form the joint at least half the depth of the patch.

Building a Brick or Flagstone Patio or Walkway

Stake out the site and excavate deep enough to allow 1 in to 2 in (25 mm to 50 mm) bed of QUIKRETE® Sand/Topping Mix beneath the brick or flagstone. Construct an edging around the perimeter of the site using brick or concrete. Pour dry QUIKRETE® Sand/Topping mix to a depth of 1 in to 2 in (25 mm to 50 mm) using a 2 x 4 board, screed the QUIKRETE® Sand/Topping Mix level and then wet the surface with a fine mist. Dampen only an area that can be completed within 30 minutes. Do not leave standing water. Lay the bricks or flagstone outward from a corner. Check your alignment and level every 3 to 4 bricks or stone. Maintain a joint width of 1/2 in (13 mm). Sweep QUIKRETE® Sand/Topping Mix into the joints. Remove any excess mix from the paving surface. Wet the joints with a fine mist of water. Once the joints are thumb-print hard, use a jointing tool or wooden dowel to smooth and seal the joints.

Note — Any excess QUIKRETE® Sand/Topping Mix not removed from the paving surface can potentially discolor the paving bricks.

FINISHING

QUIKRETE® Sand/Topping Mix can be broom finished or hand trowel finished. Power finishing is not recommended. Specialty finishes are also acceptable.

CURING

General

Curing is one of the most important steps in the use of QUIKRETE® Sand/Topping Mix. Proper curing increases the strength and durability of the repair, 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 repair, 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 for 7 days in colder weather at 50 °F to 70 °F (10 °C to 21 °C).

Specific Curing Methods

QUIKRETE® Acrylic Concrete Cure & Seal – Satin Finish (No. 8730) provides the easiest and most convenient method of curing. Apply with sprayer, brush, or roller soon 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, 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.

PRECAUTIONS

- 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 of the repair. For repairs to colored surfaces, wet curing or the use of QUIKRETE® Acrylic 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 can prevent proper air drying of the repair, which is necessary to enhance its resistance to damage caused by de-icers.
- Protect QUIKRETE® Sand/Topping Mix 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)

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. Manufactured by or under the authority of The Quikrete Companies, LLC. © 2022 Quikrete International, Inc.