

FASTSET™ CONCRETE MIX

PRODUCT No. 1004-51

DIVISION 3 & 32

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

PRODUCT DESCRIPTION

FastSet™ Concrete Mix is a rapid hardening structural concrete mix for use in construction and repair of pavements, driveways, floors, bridge decks, highways, sidewalks and concrete parking lots.



PRODUCT USE

BASIC USE

FastSet™ Concrete Mix has fast-setting characteristics and rapid strength gain, which are ideal for structural concrete repair and concrete construction applications. Use at any thickness from 1 1/2" - 24" (38 - 610 mm). FastSet™ Concrete Mix has less shrinkage than ordinary Portland cement concrete. FastSet™ Concrete Mix is available with an integral corrosion inhibitor in cases where maximum corrosion protection is desired. The addition of corrosion inhibitor has no adverse effect on the other physical properties of the product.

COMPOSITION & MATERIALS

FastSet™ Concrete Mix is made from a specially blended cement with carefully graded fine and coarse aggregates.

SIZE

- 70 lb (31.8 kg) bag

YIELD

One 70 lb (31.8 kg) bag of FastSet™ Concrete Mix will yield approximately 0.52 cu ft (14.7 L).

TECHNICAL DATA

APPLICABLE STANDARDS

ASTM International

- ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- ASTM C191 Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle
- ASTM C928 Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs

PHYSICAL/CHEMICAL PROPERTIES

FastSet™ Concrete Mix when tested in accordance with ASTM procedures provides typical results as listed in Table 1. FastSet™ Concrete Mix meets the requirements of ASTM C928 Type R3. It can be modified to meet specific requirements of the Department of Transportation of various states.

**TABLE 1 - FASTSET™ CONCRETE MIX
TYPICAL PHYSICAL PROPERTIES**

<u>Setting time final, ASTM C191</u>	
Final	25 - 45 min.
<u>Slump, inches (mm) (per ASTM C928)</u>	
	> 3 (> 76)
<u>Compressive strength, ASTM C39</u>	
3 hours	3000 psi (20.7 MPa)
24 hours	5000 psi (34.5 MPa)
7 days	6000 psi (41.3 MPa)
28 days	7000 psi (48.3 MPa)
<u>Slant shear bond strength, ASTM C928</u>	
1 day	1000 psi (6.9 MPa)
7 days	1500 psi (10.3 MPa)
<u>Shrinkage, ASTM C928</u>	
28 days in air	> -0.03
28 days in water	< +0.01
<u>Scaling Resistance, ASTM C928</u>	
Visual	2

INSTALLATION

MIXING

- FastSet™ Concrete can be mixed in a barrel-type concrete mixer or a mortar mixer
- Allow about 1 cu ft (28 L) of mixer capacity for each 70 lb (31.8 kg) bag to be mixed at one time
- Add approximately 3 qt (2.8 L) of fresh water to the mixer for each bag to be mixed
- Turn on the mixer and begin adding the dry concrete
- If the material becomes too difficult to mix, add additional water until a workable mix is obtained. Do not use more than 4 qt (3.8 L) of mixing water per bag
- Mixing must be completed in 3 - 4 minutes

TEMPERATURE OF WATER

Because of the rapid setting time, special precautions must be taken as 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.

PLACING

- The forms, hole or subbase should be thoroughly dampened
- Fill the forms completely working from one end to the other. Avoid partial depth lifts which could result in cold joints
- Consolidate the material using hand tamping and/or chopping with a shovel. It is particularly important to compact around the edges of the forms or patches
- Screed the surface, and then apply a trowel or broom finish as desired

CURING

FastSet™ Concrete is often placed in service within a few hours after it sets, so conventional moist curing methods are not practical. Sealing the surface with QUIKRETE Acrylic Concrete Cure & Seal (#8800) after the concrete has hardened will ensure proper curing and provide an additional measure of protection against salt and water penetration. Under hot, dry and windy placing conditions, all concrete tends to lose moisture unevenly and may develop plastic shrinkage cracks. The use of sheeting, monomolecular films (either sprayed or rolled on) as well as application of a very fine fog spray of water, has been quite successful in arresting shrinkage cracking.

PRECAUTIONS

- During extremely hot or dry conditions, cold water should be used to maintain mix at a moderate placement temperature
- Mix no more than can be used in 20 minutes

AVAILABILITY

QUIKRETE® FastSet™ Concrete Mix is available at leading concrete construction supply houses and distributors. Contact QUIKRETE® Construction Products representative for the name of the nearest dealer.

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.

MAINTENANCE

None required.

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.

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



www.quikrete.com