



Rapid Set® DOT Cement — DATASHEET

Industrial Grade, Fast-Setting Cement

Rapid Set® DOT Cement is ideal for the repair of pavement, bridge decks, industrial floors, parking garage decks, freezer floors and vertical & overhead repairs. DOT Cement a highly durable calcium sulfoaluminate based hydraulic cement with exceptional workability characteristics. This cement is formulated for long life in freeze thaw regions. When mixed with aggregates and water, a very Fast-Setting, high quality concrete repair concrete is produced. DOT Cement may be batched to yield about 2 cu. ft. per 50-lb bag.

PRODUCT DESCRIPTION:

Rapid Set® DOT Cement is a specially formulated blend of Rapid Set® Cement and other ingredients. Rapid Set® DOT Cement should be mixed with local concrete sand and stone at a 1-2-2 ratio (cement,sand and stone). This unique formulation produces a high quality repair material with excellent durability. The development of high early strength provides conformance with CRD-C-621 in only 3 hours.

APPLICATIONS:

Ideal for the repair of highways, bridge decks, airport pavement, industrial floors, parking garage decks, and freezer floor.

ESTIMATING:

Rapid Set® DOT Cement is packaged in 50 lb.bags. When properly mixed it will yield approximately 2 cu.ft.

SURFACE PREPARATION:

A sound base is essential for good repairs. Remove all oil, grease, joint material, dirt or unsound concrete. Areas to be repaired should be trimmed vertically about the perimeter. Bond is achieved when the adjacent material is wet, saturated surface dry (SSD). There should not be any standing water in the area to be repaired at the time of placement. Feather edging should be avoided in heavy traffic areas.

DIRECTIONS FOR USE:

Mix one 50 lb. bag of Rapid Set® DOT Cement with 100 lbs. of sand and 100 lbs. of 3/8" – 3/4" stone and 2 gallons of potable water. Place material into repair area and strike off with screed, allow to stiffen and finish to desired texture. Once the desired finish has been applied, water mist curing should begin immediately. Repaired area needs to be kept damp for approximately 1 hour after final set. Working time is 20 minutes at 70 ° F. For extended working time, use Rapid Set® Set Control™. At 70 ° F one packet will extend the working time approximately 20 minutes. Up to eight packets per bag may be used. For cold weather applications, use warm water.

MIXING PROCEDURE:

Place all sand and stone in mixer, add 2/3 of the mixing water, add Rapid Set® DOT Cement and mix for 2 to 3 minutes. Add additional water to bring to desired consistency. A 5 " ± 1 " slump is recommended.

PHYSICAL PROPERTIES:

- **Set Time:** @70 F
Initial: 17 Minutes
Final: 20 Minutes
- **Compressive Strength:**
ASTM C 39/C 109
1 Hour, 3140-psi
3 Hours, 3725-psi
24 Hours, 4650-psi
28 Days, 5,500
- **Flexural:**
ASTM C 78
4 Hours, 500-psi
1 Day, 650-psi
28 Days, 1,200-psi
- **Bond Strength:**
ASTM C 882
24 Hours, 2000-psi
28 Days, 2200-psi
- **Freeze/Thaw:**
ASTM C 666
1,000 cycles (weight loss 1.07%)
Dynamic modulus: 91%
- **ASTM C 666 in a 10% solution of Sodium-Chloride:**
(as per North Eastern spec.)
10 cycles, 0.0%loss
15 cycles, 0.0%loss
25 cycles, 0.3%loss