



RT-342 RAPIDCRETE PLACEMENT AND BATCH TRUCK TECH GUIDE

Purpose: This guide details the procedure in handling ready mix concrete modified with RT-342 Rapid Crete.

Planning: Concrete containing RT-342 Rapid Crete has a 52% quicker set time (ASTM C-403) and requires appropriate planning to ensure a trouble free placement and finishing. The decreased set time allows RT-342 Rapid Crete Concrete to be top coated with a protective coating in 24 to 48 hours depending upon dosage, temperature, and mix design. RT-342 Rapid Crete Modified Concrete is significantly less expensive per cubic foot than epoxy and bagged cementitious grouts, plus may be placed in large quantities subject to this Tech Bulletin.

Equipment Considerations: Due to decreased set time, ready mix trucks should be limited to 5 yards maximum and should be discharged from truck between 30-60 minutes depending upon temperature. Projects requiring more than one truck should plan for additional trucks to arrive no later than 10 minutes from complete discharge of the previous truck. This should include time required to dose trucks as below. Additional transport equipment such as wheelbarrows and power buggies may be needed to place concrete in allotted time.

Mix Design: Unless specifications require otherwise, order 4000 PSI concrete with a 1-2 inch slump, 5 yards maximum per truck. Air-entraining admixtures are encouraged when concrete is placed in freeze thaw environments. No water reducers are needed.

Dosage Rate: For non-shrink concrete repairs and overlays, the dosage rate is 3 gallons per yard. For non-shrink grout, the dosage rate is 6 gallons per yard. For concrete to be top coated in 24 hours (at 70°F), dosage is 4 gallons per yard. In warmer temperatures, the dosage is 3 gallons per yard of concrete. The actual time for applying a coating is dependent upon moisture sensitivity of the coating, temperature at time of placement of the concrete, permeability of the concrete, and moisture content of the sub-grade. Follow ASTM F-2170 and do not coat until readings of 80% RH or below are recordable.

Procedure: Prior to the arrival of the ready mix truck have the correct amount of RT-342 Rapid Crete for each truck (i.e., 4 gallons per yard x 5 yards = 20 gallons). Each RT-342 Rapid Crete container should be thoroughly shaken to ensure the micro-silica is fully dispersed in solution and does not adhere to the bottom of the container. With the drum turning, slowly add RT-342 Rapid Crete to the truck at the job site. Then turn the drum 75 high-speed revolutions, test the slump and adjust if needed. In hot weather, the concrete should be out of the ready mix truck in 30 minutes. After the truck is empty, add approximately 20- 30 gallons of water, continue to turn the drum, and proceed to clean out area.

Curing: After placement, immediately cover using plastic or burlap. This must remain for 4 hours. Do not use spray membrane coatings unless specified by manufacturer. Failure to cure properly may result in plastic shrinkage cracks, slab curl and/or improper bond.

Equipment Clean Up: RT-342 Rapid Crete will not damage ready mix drum, hand tools, or pumps. To neutralize RT-342 Rapid Crete add 20-30 gallons of water to ready mix drum, turn slowly, and proceed with normal clean out procedure. For hand tools, wheelbarrows, and pumps, clean with water.