



## R-Crete Plus

### Installation Bulletin (Bucket Mix)

Revised September 03  
Bulletin RC-100

#### Unit Description

Each (90 lb.) unit consists of:

- 1 - 3.5 gal. (53 lb.) pail of powder
- 1 - 30 lb. bag of aggregate
- 1 - 1 gal. (7 lb.) jug of Polymer Bonding Solution (P.B.S.)

#### Coverage / Yield

1 unit = .54 cu. ft.

#### Working Time

<u>Standard Bucket Mix</u>	<u>Pumpable Mix</u>
85° F = 1.5 hr..	85° F = 1.5 hr.
60° F = 2.5 hr.	60° F = 2.5 hr.

#### Cure Time

	<u>24 hr.</u>	<u>3 day</u>	<u>7 day</u>
R-Crete Plus	5000	-	-
4000 lb. concrete	500	1800	3200

**ALLOW R-CRETE PLUS TO CURE 24 HRS. BEFORE REMOVING FORMS AND CHIPPING. WET CURE WITH DAMP RAGS OR PONDING FOR TWELVE HRS. AFTER INITIAL SET. REMOVE ALL WATER AND RAGS AFTER TWELVE HRS.**

#### Hot Weather (65° F to 95° F)

**Important - do not use if ambient or material temperature is above 95° F without contacting Robt. L. Rowan & Assoc., Inc., first.**

Above 85°, chill Hot Weather P.B.S. to 50° F and condition powder and aggregate to 70° F. Shade pour area and materials for 24 to 48 hours prior to the pour. 75° F is best pour temperature. Check material temperature inside pallet as edges cool first. If material and pour area temperature is 65° F or below, use the Cold Weather P.B.S.

#### Cold Weather (40° F to 65° F)

**Below 65° F, you must use the Cold Weather P.B.S. to achieve design strength and workability. Please contact Robt. L. Rowan & Assoc., Inc. for information on cold Weather P.B.S. mixture. Do not use below 40° F or above 65° F. Do not let P.B.S. FREEZE, as this alters design strengths. Do not use once frozen.**

The pour area and material should be enclosed and heated to at least 50° F for at least 36 hours in cold conditions. The optimum temperature is 65° F for material and pour area for Cold Weather P.B.S. Reduced flow and associated problems will result if above precautions are not followed. When warming material, check temperature of material in the middle of pallet as edges warm first.

**NOTE: If you are unsure if you have hot or cold weather PBS, please contact Robt. L. Rowan & Assoc., Inc. for assistance at 1-800-231-2908**

#### Preparation

1. The concrete should be clean. All oil, contaminants, and dust must be removed.
2. The concrete should be chipped with a **chisel point** to provide an adequate bonding profile. A general rule of thumb is that when the aggregate breaks during chipping, then the concrete is good. Please consult Robt. L. Rowan & Assoc., Inc. if you have any doubts as to the condition of the old concrete.
3. Wet the pour area with potable water 24 hours before the pour and again 30 minutes prior to the pour. All standing water, if any, must be removed before placing the material.
4. The forms must be waxed, sufficiently braced, and water tight.
5. Wickets and dowels should be utilized to provide a mechanical lock. These should be pregrouted a day in advance. Contact Robt. L. Rowan & Assoc., Inc. for more detailed information and installation drawings.



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6. The pour area and materials should be shaded in hot weather and protected in cold weather one to two days in advance per Hot and Cold Weather sections of this bulletin.
7. Adequate manpower is needed to ensure a successful installation. A minimum of three men per mixer, with two mixing the material and one transporting it with a wheelbarrow. If the material is to be transported by bucket because of access problems, then additional men will be needed. A designated vibrator operator(s) is also needed. The material must be vibrated and, as with all concrete, be careful not to over vibrate.
8. An extra mixer, gasoline and vibrator are good insurance to avoid job delay and possible cold joints from excessive delay. Start each mixer and vibrator before beginning the job.
9. A bucket of clean water should be kept by each mixer so the crew can clean up as needed.
10. The mixing crew should wear a NIOSH approved dust mask, eye protection, impervious gloves, and should avoid skin contact with the material, as well as breathing the dust during mixing. Do not wear contact lenses when working with this product. The mixing area should be properly ventilated.

#### Placing

Since R-Crete™ bucket mix is a fast setting material, it is important to pre-plan the job. Materials should be located within easy reach of the mixing crew. Open 50% of materials before starting the mixers. If using a wheelbarrow it may be necessary to raise the mixer on blocks for easy dumping into the wheelbarrow, as well as build any ramps necessary to cross any piping and to allow for pouring R-Crete™ from the wheelbarrow into forms.

Start at one end and build to final elevation. Continue toward opposite end, building to final elevation before moving forward. Work continuously without interruption, placing the latest batch against the previous batch until completion. This way a successful job will result even on large pours where the initial batch will set before the final batch is placed. For large pours, over 10 cubic yards, R-Crete Plus is finished in a pumpable grade is mixed and placed with standard concrete pumps and mixers.

**Vibrators must be used as required to consolidate the R-Crete Plus around the reinforcing steel and to eliminate voids. Do not over vibrate as this can cause aggregate segregation.**

#### Mixing

1. Use a mortar mixer.
2. Since the mixer is dry, pre-wet the mixer barrel with potable water and drain, before mixing the first batch.
3. Pour all of the P.B.S., followed by the 30 lb. bag of aggregate, into the mixer. Engage the blades and let this spin 1 or 2 times to keep the powder from building up on the mixer blades.
4. Add the 50 lb. bucket of powder and mix until the powder is thoroughly wet out. Do not over mix.
5. **Place the material immediately after mixing.** The standard bucket mix material will be hard enough to stand on in **50 minutes or less** from the time the material is mixed. Clean mixer with H<sub>2</sub>O immediately after mixing last batch.
6. Material and mixer must be located to facilitate easy and quick placement of material to ensure maximum flowability and workability.
7. Do not add extra P.B.S. or potable water to R-Crete without first contacting Robt. L. Rowan & Assoc., Inc., as loss of physical properties can result.