



# SPEED CRETE 2028

## Rapid-Setting Horizontal Repair Mortar with Corrosion Inhibitor

### Description

SPEED CRETE 2028 is a cement-based, ready to use, repair mortar that sets quickly, and achieves rapid strength gain. SPEED CRETE 2028 is a proprietary formulation of blended cements, selected aggregates and it contains an integral corrosion inhibitor.

### Primary Applications

- Highways
- Loading docks
- Bridge decks
- Pavement joint repairs
- Parking decks
- Industrial floors

### Features/Benefits

- Fast-setting, with rapid strength gain
- Very low permeability
- Contains an integral corrosion inhibitor
- Develops a tenacious bond
- Excellent resistance to freeze-thaw conditions and deicing chemicals
- Repair can be coated or overlaid with an epoxy or other products after a 24 hour cure
- ▲ Can contribute to LEED points

### Technical Information

#### Material Properties at 75°F (24°C)

**Initial Set Time**, min ASTM C 266..... 15 to 25

**Final Set Time**, min ASTM C 266..... 30 to 35

**Compressive Strength**, psi (MPa) ASTM C 109

1 hour .....1,000 (6.9)

2 hours .....3,900 (26.9)

3 hours .....5,000 (34.5)

24 hours .....7,000 (48.3)

7 days .....8,600 (59.3)

28 days .....9,000 (62.1)

**Compressive Strength**, ASTM C 39

Extended 50% with 3/8" (9.5 mm) pea gravel, psi (MPa)

3 hour .....3,000 (20.7)

24 hours .....4,000 (27.6)

**Flexural Strength**, psi (MPa) ASTM C 78

24 hours .....700 (4.8)

3 days .....750 (5.2)

7 days .....900 (6.2)

28 days .....950 (6.6)

**Bond Strength**, psi (MPa) ASTM C 882 (mod)

1 day .....1,800 (12.4)

28 days .....2,400 (16.5)

**Scaling Resistance**, ASTM C 672

100 cycles .....No scaling

**Freeze-Thaw**, Durability Factor ASTM C 666

350 cycles .....98%

**Chloride Permeability** ASTM C 1202

200 coulombs ..... "very low"

**Volumetric Resistivity**

28 days .....65,000 ohm/cm

Typical results obtained under laboratory conditions

### Packaging

SPEED CRETE 2028 is packaged in 50 lb (22.7 kg) poly-lined bags

### Shelf Life

1 year in original, unopened package

## Specifications/Compliances

Meets or exceeds ASTM C 928, Type R3

## Coverage/Yield

One 50 lb (22.7 kg) bag yields approximately 0.42 ft<sup>3</sup> (0.012 m<sup>3</sup>). Extending with 40 lb (18.1 kg) of 3/8" (9.5 mm) pea gravel increases the yield to approximately 0.70 ft<sup>3</sup> (0.02 m<sup>3</sup>).

## Directions for Use

**Surface Preparation:** Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 5-7 in accordance with ICRI Guideline 310.2. Properly clean profiled area. **Priming:** Clean and prime exposed steel with DURALPREP A.C.. Concrete should be primed with a spray or brush coat of DURALPREP A.C.. The primer coat of DURALPREP A.C. must be allowed to thoroughly dry prior to the application of the repair mortar. Alternatively, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of SPEEDCRETE 2028. The repair must be made before the scrub coat dries out.

**Mixing:** SPEED CRETE 2028 requires 2.25 to 2.5 qt (2.13 to 2.37 L) of water per 50 lb (22.7 kg) bag. Use a drill with a "jiffy" type mixer for optimal mixing of single bags. For larger applications use a paddle type, horizontal shaft mortar mixer. The material is stiff initially but relaxes after 4 to 5 minutes of mixing. Do not add any additional water to loosen up the mix. For repair areas over 1½" (38 mm) deep, extend by adding up to 40 lb (18.1 kg) of 3/8" (9.5 mm) clean, well-graded, damp pea gravel per 50 lb (22.7 kg) of SPEED CRETE 2028. Proper mixing sequence involves; first, adding the measured quantity of water to the mortar mixer, second, adding the SPEED CRETE 2028 and mixing for 4 minutes to thoroughly wet it out, and third, adding pea gravel, if required.

**Application:** SPEED CRETE 2028 should be mixed, placed and finished within 15 minutes. Place the mixed material into the prepared area to be repaired. Work the material firmly into the bottom and sides of the repair area to ensure good adhesion. Screed and trowel the material so as to level with the existing concrete, and finish the surface as desired. Thickness of SPEED CRETE 2028 repair must be a minimum of 1/2" (12 mm) and a maximum of 1½" (38 mm) per lift. When applying multiple lifts, allow the repair to reach final set, score the surface and then place the subsequent lift. Repair areas over 1½" (38 mm) deep should either be extended or applied in multiple lifts. Do not over-trowel or featheredge. Follow ACI guidelines for proper curing. On windy or hot days or when under direct sunlight, wet curing is recommended.

**Cold Weather Application:** Application at temperatures below 45°F (7°C) extends the set time. Heating the repair area until warm, using warm water for mixing and tenting or insulating the repair area after application will assist in reaching higher strength development. Do not use direct heat on the repair after its installation.

## Clean-Up

To prevent buildup, clean application tools and mixer with water immediately after use.

## Precautions/Limitations

- Do not featheredge, overwork, retemper or over-trowel the repair material.
- Minimum depth of patching is 1/2" (12 mm).
- Do not add any admixtures or bonding agents to SPEED CRETE 2028.
- The repair area should be frost free prior to application.
- In all cases, consult the Safety Data Sheet before use.

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