

### TECHNICAL DATA

**DESCRIPTION:** HP Concrete Mix is a single component, high early strength concrete. HP Concrete Mix combines the latest concrete technologies and high quality raw materials, including graded coarse aggregate and an integral corrosion inhibitor, to yield a long lasting, high strength, durable concrete repair anywhere long down times cannot be tolerated.

**USE ON:** Highway bridge decks, concrete slabs on grade, airport runways, parking decks, and elevated concrete slabs

- ADVANTAGES:**
- High early compressive strength
  - Pre-extended with C33 coarse aggregate
  - Excellent workability
  - Easy mixing and placement
  - Fully cured in 2 hours
  - Shrinkage compensated
  - Excellent finishing characteristics
  - Bonds very well to concrete structures
  - Able to coat in 24 to 48 hours

	2 hours	1 day	7 days	28 days
Compressive Strength (ASTM C 39 Extended)	2800 psi (19.1 MPa)	4500 psi (30.8 MPa)	5500 psi (37.7 MPa)	6000 psi (41.1 MPa)
Length Change (ASTM C 157 Dry Cured)		-.001%	-.001%	-.01%
Flexural Strength (ASTM C 293)	410 psi (2.1 MPa)	610 psi (4.2 MPa)	778 psi (5.3 MPa)	900 psi (6.1 MPa)
Bond Strength (ASTM C 882 Modified)	2600 psi (17.9 MPa)			
Set Time (ASTM C 266)	Initial 22 minutes		Final 30 minutes	
Freeze Thaw Resistance (ASTM C 666)	99.2% @ 300 cycles			
Air Content	6% (+/- 1.5 %)			
Approximate Yield	60 lb bag neat = .5 ft <sup>3</sup> ; 3000 lb bag neat = 25 ft <sup>3</sup>			

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- SURFACE PREPARATION:** Remove all deteriorated concrete, dirt, oil, grease and all bond inhibiting materials from the surface. Be sure repair is not less than 1" in depth. Preparation work should be done by the most efficient mechanical means to obtain a CSP 6 as defined by the International Concrete Repair Institute (ICRI). Saturate surface with clean water, substrate should be saturated, surface dry (SSD) with no standing water. Embedded steel reinforcement should be thoroughly cleaned by mechanical means to remove all traces of rust, revealing a white metal. For priming reinforcing steel use HP Bondit III.
- MIXING:** HP Concrete Mix should be mixed in rotary drum or other suitable mechanical mixer. Introduce measured amount of water to mixer, no more than 2.5 quarts per 60 lb. bag. Add 3/4 the required water to mechanical mixer. Add HP Concrete Mix to water with mixer turning; add the remaining water as needed, mixing for no more than three minutes to obtain desired consistency. Dump batch and immediately deliver HP Concrete Mix to properly prepared substrate. For 3,000 lb. bags, follow the directions above, adding no more than 31 gallons of clean water.
- APPLICATION:** After properly preparing the substrate, force material against the edge of the repair and work toward the center. Fill the repair area entirely, consolidate and screed. Do not layer the material.
- CURING:** Follow ACI Guidelines for curing Portland cement concrete. Water cure immediately after finishing. The use of a curing compound meeting ASTM C 309, such as US Cure and Seal, is also recommended where moist curing is not practical. (For thin patches) If material is applied in multiple lifts only apply curing compound on final surface. Applying curing compound on primary lifts may inhibit mechanical bond.
- LIMITATIONS:** HP Concrete mix should be used when ambient temperatures are 40°F (4°C) and rising. Lower temperatures produce a slower set; higher temperatures produce a faster set. For temperatures below 40°F (4°C) consult with the manufacturer for special cold weather placement provisions which include but are not limited to conditioning of the materials, use of heated mix water and thermal protection. In hot weather use chilled water for mixing. HP Concrete should not be applied at less than 1" (12.7 mm) thick.
- PACKAGING:** HP Concrete is packaged in 60 lb. (27.2 Kilo) bags. Each 60 lb bag yields approximately .5 ft<sup>3</sup> when mixed with water.

**CAUTION:** WARNING! CONTAINS FREE SILICA & PORTLAND CEMENT. DO NOT BREATHE DUST. May cause delayed lung injury (silicosis). Follow OSHA safety and health standards for crystalline silica (quartz). Cement powder or freshly mixed concrete grout or mortar may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into the eyes, rinse immediately and repeatedly with water and get prompt medical attention.