

### TECHNICAL DATA

**DESCRIPTION:** Gunitite 7100 is a shrinkage-compensated, cement based mortar. Gunitite 7100 contains polymers and special additives which improve the properties and offer high strength and superior performance for structural concrete repair. Gunitite 7100 is specially designed for concrete or masonry substrates and can be applied vertically or overhead by low pressure spraying and hand troweling.

**USE FOR:** Bridges and roadways, tunnels and piers, manhole and sewer repairs, elevated concrete slabs, parking decks, piers and bulkheads

- ADVANTAGES:**
- Designed for concrete or masonry substrates
  - Shrinkage compensated
  - Contains polymers/ additives for high strength/ high bond structural repairs
  - Use on vertical or overhead repairs
  - Formulated for wet or dry process equipment

|   | 3 DAYS  | 7 DAYS                 | 28 DAYS                |
|---|---|------------------------|------------------------|
| Compressive Strength<br>(ASTM C 109 Modified) | 4000 psi<br>(27.4 MPa)                            | 7500 psi<br>(51.4 MPa) | 8000 psi<br>(55.0 MPa) |
| Bond Strength<br>(ASTM C 882 Modified)        | 1000 psi<br>(6.9 MPa)                             | 1550 psi<br>(10.3 MPa) | 2250 psi<br>(15.4 MPa) |
| Flexural Strength<br>(ASTM C 348)             |   | 1200psi<br>(8.2 MPa)   | 2000 psi<br>(13.7 MPa) |
| Splitting Tensile<br>(ASTM C 496)             |   | 500 psi<br>(3.4 MPa)   | 900 psi<br>(6.2 MPa)   |
| Unit Weight                                   | 135 lb/ft <sup>3</sup> (2.275 kg/m <sup>3</sup> ) |                        |                        |
| Drying Shrinkage<br>(ASTM C 157 Modified)     | -.035 % (Dry Cured)                               |                        |                        |
| Scaling Resistance 50 cycles<br>(ASTM C 672)  | none  |                        |                        |
| Rapid Chloride Permeability<br>(ASTM C 1202)  | <500 Coulombs                                     |                        |                        |
| Freeze Thaw 300 cycles                        | < 1% loss 99% RDM                                 |                        |                        |
| Pot Life                                      | 45 minutes  |                        |                        |

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- PREPARATION:** Concrete: Perform surface preparation in compliance with ICRI Technical Guideline No. 03730 "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion". Remove all unsound or delaminated concrete providing a minimum of 1/4" (6 mm) substrate profile and 3/4" (20 mm) clearance behind corroded reinforcing steel. The perimeter of the area to be patched should saw cut to a minimum depth of 1/4" (6 mm) to prevent feathered edges. After concrete removal and prior to placement, mechanically abrade the concrete surface to remove all bond-inhibiting materials from the concrete substrate and to provide additional mechanical bond. Presoak the prepared concrete surface to provide a saturated, surface dry (SSD) condition.
- Corroded Reinforcing Steel: Remove all oxidation and scale from the exposed reinforcing steel in accordance with ICRI Technical Guideline No. 03730 "Guide to Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion". For additional protection from future corrosion, coat the prepared reinforcing steel with HP Bondit III.
- MIXING:** Add 100 to 105 oz of potable water per 50 lb bag of Gunitite 7100. Mechanically mix using a mixer of an appropriate size. Pour approximately 75% of the water into the mixing container then charge the mixer with the bagged material. Add the remaining water as required. Mix for 3 to 5 minutes until a homogeneous consistency is achieved.
- APPLICATION:** If applying by hand, scrub a bond coat of Gunitite 7100 into the prepared surface with a stiff bristle broom or brush. Gunitite 7100 must be placed before the bond coat dries. When applying with multiple lifts, scratch the preliminary lift before initial set. Apply the next lift after the preliminary lift has reached final set. If the succeeding lift is not to be immediately placed, keep the surface continually moist. Cut-off or level as required matching the original concrete elevation. For spray applications, confirm with pump supplier suitability of equipment to spray Gunitite 7100. Remove all excess water from the saturated substrate and apply while taking proper consideration for compaction around reinforcing steel. Finish the final surface as required.
- APPLICATION THICKNESS:** Vertical & Overhead: 3/8 to 2" (10 to 50 mm) per lift.
- CURING:** Proper curing is extremely important and should be conducted in accordance with ACI 308 "Standard Practice for Curing Concrete". Apply a curing compound such as US Cure & Seal that complies with the moisture retention requirements of ASTM C 309 or moist cure for a minimum of 7 days.
- LIMITATIONS:** Gunitite 7100 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.
- PACKAGING:** Gunitite 7100 is packaged in 50 lb bags. Each 50 lb bag yields approximately .42 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.