



# SILATEC CONCRETE

## Microsilica Enhanced Concrete Mix

### MANUFACTURER

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### DESCRIPTION

A specially formulated prepackaged blend of Portland cement, aggregates, microsilica, fibers and other unique chemicals. Microsilica reacts chemically with the calcium hydroxide in the cement paste to produce a calcium silicate hydrate gel which yields a substantially improved in place concrete. Ideal for use where a fast setting time and high strength are desired. All ingredients are thoroughly premixed to ensure maximum strength and workability. Simply add water and mix.

### BENEFITS

- Prepackaged to eliminate jobsite mixing errors.
- Contains a corrosion inhibitor
- Faster strength gains
- Less down time
- Very low porosity
- Better chemical resistance
- Can be coated in 48 hours.

### SUGGESTED USES

2" topping of deteriorated concrete (epoxy bonding agent is recommended)  
Pouring pedestals, curbs, equipment bases, etc.  
Can be coated earlier than normal concrete.  
(typically in 48 hours)

### APPLICATION

*As a Topping:* Begin by preparing the substrate. Substrate must be sound and free from laitance, loose particles, dust, dirt, from oils, paints, curing compounds or any thing that would be a barrier to the existing concrete. Remove deteriorated concrete, and/or anti-adherents by mechanical means i.e.: chipping, sandblasting, grinding, shot blasting, etc. The use of a long open time epoxy bonding agent is recommended.

*For Placing:* Use similar placement/forming techniques as conventional concrete.

### MIXING

Begin by adding cool, clean water to the mixing vessel at a rate of 3 ½ to 4 quarts per 65 lb. bag of SILATEC CONCRETE. Add powder and mix to a smooth, lump free, low slump consistency. Avoid a soupy mix: excess water will reduce the strength and durability.

### PACKAGING

65 pound bag yields approx. .53 cu. ft.

### FOR BEST RESULTS

In cold weather use warm (not hot) water for mixing. Dampen the surface of the work area before applying the new material. For a rough or non-slip surface, use a wooden float or broom. For a smooth finish, use a steel trowel. Avoid over troweling. For proper curing, keep moist for 3 days with an occasional fine spraying with water or cover with wet burlap or plastic. The use of a curing compound conforming to ASTM C-309 will also work; however curing compounds will need to be mechanically removed prior to coating. (Check with the coating manufacturer.) Hot weather: (above 80 degrees) will cause faster setting; mix with cold water or ice to slow setting time.

### CLEAN UP

Clean up is simple and easy with soap and water. Clean tools before material hardens.

### PRECAUTIONS

Contains Portland cement; avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. In case of eye contact, flush with plenty of water for at least 15 minutes. Consult a physician immediately. Keep out of reach of children. Contains free silica - DO NOT breathe dust. May cause delayed lung injury. Follow OSHA safety and health standards for crystalline silica (quartz).



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### TECHNICAL DATA

Compressive Strength  
ASTM C-109 (modified)

|        |          |
|--------|----------|
| 24 hr. | 4062 PSI |
| 3 day  | 6850 PSI |
| 7 day  | 7500 PSI |
| 28 day | 8670 PSI |

Bond Strength  
ASTM C-882 (modified)

|        |          |
|--------|----------|
| 28 day | 2000 PSI |
|--------|----------|

Flexural Strength  
ASTM C-293

|        |         |
|--------|---------|
| 7 day  | 605 PSI |
| 28 day | 960 PSI |

Split Tensile Strength  
ASTM C-496

|        |         |
|--------|---------|
| 28 day | 500 PSI |
|--------|---------|

Shrinkage  
28 day (0.03)

Freeze/Thaw  
ASTM C-666  
100 cycles – no damage