**SikaQuick® 1000**

Rapid hardening repair mortar with extended working time

**Description**

SikaQuick® 1000 is a 1-component, rapid hardening, early strength gaining, cementitious, patching material for concrete.

**Where to Use**

- Use on grade, above, and below grade on concrete.
- Highway overlays and repairs.
- Structural repair material for concrete roadways, parking structures, bridges, dams and ramps.
- Full depth patching repairs.
- Economical patching material for horizontal repairs of concrete and mortar.

**Advantages**

- Specially suited for hot weather applications when extended working time is required.
- Rapid hardening as defined by ASTM C-928.
- Epoxy coatings can be applied as early as 6 hrs. On site testing is recommended for verification. Please consult coatings manufacturer for recommendations.
- Freeze/thaw resistant.
- Easy to use, labor-saving material.
- Not gypsum-based.
- High early strength.
- Open to foot traffic in 4 hours; to vehicle traffic in 6 hours (at 73°F).
- Easily applied to clean, sound substrate.
- Not a vapor barrier.

**Typical Data**

(Material and curing conditions @ 73°F (23°C) and 50% R.H.) (Water/powder = 0.10)

**Shelf Life**

1 year in original, unopened bag.

**Storage Conditions**

Store dry at 40°-95°F (4°-35°C). For best results, condition material to 65°-75°F before using.

**Color**

Concrete gray.

**Mixing Ratio**

Approximately 4.5 - 5 pints of liquid per 50 lb. bag.

**Application Life**

Approximately 30 minutes after adding powder to the water.

**Compressiv Strength, psi (Mortar - ASTM C-109)**

- 3 hours: 1,250 psi (8.6 MPa)
- 1 day: 4,000 psi (27.6 MPa)
- 7 days: 5,000 psi (34.5 MPa)
- 28 days: 7,000 psi (49.2 MPa)

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

- 1 day: 700 psi (4.8 MPa)
- 7 days: 900 psi (6.2 MPa)
- 28 days: 1,000 psi (6.9 MPa)

**Splitting Tensile Strength, psi (ASTM C-496)**

- 1 day: 300 psi (2.0 MPa)
- 7 days: 400 psi (2.7 MPa)
- 28 days: 500 psi (3.4 MPa)

**Bond Strength, psi (ASTM C-882) modified**

- 1 day: 1,750 psi (12.0 MPa)
- 7 days: 2,000 psi (13.8 MPa)
- 28 days: 2,500 psi (17.2 MPa)

**Direct Tensile Bond, psi (ACI 503)**

- 28 days: 300 psi (substrate failure)

**Drying Shrinkage, % (ASTM C-596)**

- 28 days: 0.06

**Modulus of Elasticity, psi (ASTM C-469)**

- 28 days: 4.6 x 10^6

**Chloride Permeability, Coulombs (ASTM C-1202)**

- 28 days: < 1,000

**Freeze/Thaw Resistance, % (ASTM C-666)**

- 28 days: 98%

**Scaling Resistance, lb./ft^2 (ASTM C-672)**

- 50 cycles: 0.080

**Initial Set, Minutes (ASTM C-266)**

- 40-90

**Final Set, Minutes (ASTM C-266)**

- 60-120

**Abrasion Resistance, Inches of Wear at 1 hr. (ASTM C-779)**

- 28 days: 0.026

*Independent certificates available upon request.*
**Construction**

**Surface Preparation**

Surface must be clean and sound. Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired. Be sure repair area is not less than 1/4 in. deep. Preparation work should be done by appropriate means. Obtain an exposed aggregate surface with a minimum surface profile of ± 1/8 in. (CSP-6) on clean, sound concrete. To ensure optimum repair results, the effectiveness of decontamination and preparation should be assessed by a pull-off test. Saw cutting of edges is preferred and a dovetail is recommended. Saturate surface to be repaired with clean water. Substrate should be saturated surface dry (SSD) prior to application.

**How to Use**

**Coverage**

Approximately 0.42 cu. ft. When extended with 25 lbs. of 3/8 in. gravel yield is approximately 0.58 cu. ft.

50 lb. multi-wall bag.

**Mixing**

To control setting times, cold water should be used in hot weather and hot water used in cold weather.

- **Approximately 0.42 cu. ft.** When extended with 25 lbs. of 3/8 in. gravel yield is approximately 0.58 cu. ft.
- **50 lb. multi-wall bag.**

**Priming**

For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult Technical Data Sheet). Concrete Substrate: Prime the prepared substrate with a scrub coat of SikaQuick® 1000 prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

**Mixing**

Mechanically mix in an appropriately sized mortar mixer. Wet down all tools and mixer to be used.

- **With water:** Start with 4.5 pints of water added to the mixing vessel. Add 1 bag of SikaQuick® 1000 while continuing to mix. Add up to another 1/2 pint of water to achieve desired consistency. Do not over-water.
- **With Latex R:** Pour 4.5 pints of SikaLatex® R into the mixing container. Slowly add powder, mix and adjust as above.
- **With diluted Latex R:** SikaLatex® R may be diluted up to 5:1 (water: SikaLatex® R) for projects requiring minimal polymer modification. Pour 4.5 pints of the mixture into the mixing container. Slowly add powder, mix and adjust as above. For applications greater than 1 in. in depth, add 3/8 in. coarse aggregate. The aggregate must be non-reactive (reference ASTM C-1260, C-227 and C-269), clean, well graded, saturated surface dry, have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2.

**Tooling & Finishing**

As per ACI recommendations for Portland cement concrete, curing is required. Moisture with wet burlap and polyethylene, a fine mist of water or a curing compound meeting ASTM C-309. Moisture should commence immediately after finishing. If necessary, protect newly applied material from rain. To prevent from freezing, cover with insulating material.

**Limitations**

- Minimum ambient and surface temperatures 45°F and rising.
- Minimum application thickness 1/4 in. as a mortar and 1 in. extended with aggregate.
- Maximum application thickness 1 in. as a mortar and 6 in. extended with aggregate.
- Do not feather edge.
- Do not exceed 7 in. slump when extended.
- Use only potable water.
- Variations in aggregates may produce differences in strengths from the typical values stated in Sika’s Technical Data.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® Hi-Mod 32.
- Do not use Sika® Armatec® 110 EpoCem as a bonding agent with SikaQuick® 1000.