



PRODUCT DATA SHEET

SikaQuick[®]-1000 FS

one-component, rapid hardening, early strength gaining, cementitious, patching material for concrete

PRODUCT DESCRIPTION

SikaQuick[®]-1000 FS is a one-component, rapid hardening, early strength gaining, cementitious, patching material for concrete.

USES

- 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.
- Patching material for horizontal repairs of concrete and mortar.

CHARACTERISTICS / ADVANTAGES

- High fluidity
- Fast setting and high early strength
- Epoxy coatings can be applied as early as 6 hours. On-site testing is recommended for verification.
- Freeze/thaw resistant
- Easy to use
- Open to foot traffic in 4 hours; to vehicle traffic in 6 hours (at 73 °F)
- Easily applied to clean, sound substrate

PRODUCT INFORMATION

Packaging	50 lb (22.7 kg) bag
Appearance / Color	Gray powder
Shelf Life	12 months from date of production if stored properly in original, un opened and undamaged sealed packaging
Storage Conditions	Store dry at 40–95 °F (4–35 °C). Protect from moisture. If damp, discard material

TECHNICAL INFORMATION

Compressive Strength	1 hour	1,000 psi (6.9 MPa)	(ASTM C-109) 73 °F (23 °C) 50% R.H.
	56 days	8,000 psi (55.2 MPa)	
Flexural Strength	1 day	700 psi (4.8 MPa)	(ASTM C-293) 73 °F (23 °C) 50% R.H.
	28 days	1,000 psi (6.9 MPa)	
Splitting tensile strength	1 day	300 psi (2.1 MPa)	(ASTM C-496) 73 °F (23 °C) 50% R.H.
	28 days	500 psi (3.4 MPa)	
Tensile Adhesion Strength	1 day	1,750 psi (12.1 MPa)	(ASTM C-882 modified*)
	28 days	2,500 psi (17.2 MPa)	
* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.			
Shrinkage	1 day	< 0.04%	(ASTM C-157 Modified per ASTM C-928)
	28 days	< 0.08%	
Freeze-Thaw Stability	28 days	98 %	(ASTM C-666)
Rapid Chloride Permeability	28 days	< 1,000 C	(ASTM C-1202 AASHTO T-277)

APPLICATION INFORMATION

Mixing Ratio	4.5-5 pts (2.1–2.4 L) of water per bag		
Fresh mortar density	133 lb/ft ³		
Coverage	Neat	0.42 ft ³	
	Extended with 25 lbs. of 3/8" gravel yield	0.58 ft ³	
(Coverage figures do not include allowance for surface profile and porosity or material waste)			
Layer Thickness		Min.	Max.
	Neat	1/4" (1.5 mm)	1" (25 mm)
	Extended	1" (25 mm)	6" (152 mm)
	<ul style="list-style-type: none"> ▪ Do not feather edge. ▪ Do not exceed 7" slump when extended. 		
Product Temperature	65–75 °F (18–24 °C)		
Ambient Air Temperature	> 40 °F (4 °C)		
Substrate Temperature	> 40 °F (4 °C)		
Pot Life	~ 15 minutes		
	As the temperature will affect the pot life, application temperature: <ul style="list-style-type: none"> ▪ Above 73 °F (23 °C) will reduce the pot life and workability ▪ Below 73 °F (23 °C) will extend the pot life and workability 		
Set Time	35–45 min	(ASTM C-266)	
Final set time	40–50 min	(ASTM C-266)	

APPLICATION INSTRUCTIONS

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" (6.4 mm) deep.
- Preparation work should be done by high pressure water blast, scabblor or other appropriate mechanical means to obtain an exposed aggregate surface profile of $\pm 1/8$ " (3.2 mm) (CSP-6).
- 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.
- Substrate should be Saturated Surface Dry (SSD) with clean water prior to application. No standing water should remain during application.

PRIMING

- **Reinforcing steel:** Steel reinforcement should be thoroughly prepared by mechanical cleaning to remove all traces of rust. Where corrosion has occurred due to the presence of chlorides, the steel should be high pressure washed with clean water after mechanical cleaning. For priming of reinforcing steel use Sika® Armatec® 110 EpoCem (consult PDS).
- **Concrete Substrate:** A scrub coat of SikaQuick®-1000 FS can be applied prior to placement of the mortar. The repair mortar has to be applied into the wet scrub coat before it dries.

MIXING

- **With water:** Pour 4.5 pints (2.1 L) of clean potable water (approx 70 °F) into a suitably sized and clean mixing container, using a calibrated measuring jug, or similar, to ensure strict control of the water content (do not over-water). Add 1 bag while continuing to mix with a low-speed drill (400-600 rpm) and mixing paddle or in an appropriate mortar mixer. Once all the powder has been added, mix for approximately 3 minutes, until a lump-free and uniform consistency is achieved. Add up to another 1/2 pints (0.3 L) of water to achieve desired consistency. Do not over-water.
- **With SikaLatex® R:** Pour 4.5 up to 5 pints (2.1 - 2.4 L) of SikaLatex® R into the mixing container. Slowly add powder, mix and adjust as above.
- **With diluted SikaLatex® R:** SikaLatex® R may be diluted up to 5:1 (water: SikaLatex® R) for projects requiring minimal polymer modification. Pour 4.5 up to 5 pints (2.1 - 2.4 L) of the mixture into the mixing container. Slowly add powder, mix and adjust as above.

EXTENSION WITH AGGREGATES

- For applications greater than 1" (25 mm) in depth, add 3/8" (9.5 mm) coarse aggregate.
- The aggregate must be non-reactive (reference ASTM C-1260, C-227 and C-289), clean, well graded, Saturated Surface Dry (SSD), have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2.
- Variances in aggregate may result in different strengths.
- The addition rate is 25 lb. (11.4 kg) of aggregate per bag. It is approximately 2.0 gallons (7.6 L) by loose volume of aggregate.
- Do not exceed a slump of 7" (178 mm). This may cause excessive bleeding and retardation and will reduce the strength and performance of the material.

APPLICATION

- The prepared mortar must be scrubbed into substrate.
- Be sure to fill all pores and voids.
- Force material against edge of repair, working toward center.
- After filling repair, screed off excess.
- Allow concrete to set to desired stiffness, then finish.
- If a smoother finish is desired, a magnesium float should be used.
- Mixing, placing, and finishing should not exceed 30 minutes maximum.
- To control setting times, cold water should be used in hot weather and hot water used in cold weather.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Moist cure with wet burlap and polyethylene, a fine mist of water or Sika® Antisol®-250 W*.
- Curing compounds adversely affect the adhesion of following lifts of mortar, leveling mortar or protective coatings.
- Moist curing should commence immediately after finishing.
- Protect freshly applied mortar from direct sunlight, wind, rain and frost.

* Pretesting of curing compound is recommended.

LIMITATIONS

- Not a vapor barrier.
- Use only potable water.
- 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.

- Bonding agents like Sika® Armatec® 110 EpoCem and others, which cure at a slower rate than SikaQuick®-1000 FS, should not be used. If bonding agents are used, follow cure times for the bonding agents used as a guide prior to putting SikaQuick®-1000 FS in service. Assure suitability with the manufacturer of the bonding agent.
- Refer to Sika® Antisol®-250 W product data sheet for use.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

0 g/l (EPA method 24)

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates (“SIKA”), the user must always read and follow the warnings and instructions on the product’s most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA’s Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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