

Product Data Sheet

Edition 10.2.2009

Identification No. 742

SikaQuick 1000

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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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. Onsite testing is recommended for verification. Please consult coatings manufacturer for recommendations. ■ Freeze/thaw resistant. ■ Easy to use, labor-saving material. ■ Contains no added chlorides. ■ 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.
Coverage	Approximately 0.42 cu. ft. When extended with 25 lbs. of 3/8 in. gravel yield is approximately 0.58 cu. ft.
Packaging	50 lb. multi-wall bag.

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.
Compressive 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 (48.2 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	1750 psi (12.0 MPa)
7 days	2000 psi (13.8 MPa)
28 days	2500 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 4.6×10^6
Chloride Permeability, Coulombs (ASTM C-1202)	28 days < 1000
Freeze/Thaw Resistance, % (ASTM C-666)	28 days 98%
Scaling Resistance, lb./ft² (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.



How to Use

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 $\pm 1/8$ 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.

Priming

For priming of reinforcing steel use Sika Armatex 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 Sika Latex R into the mixing container. Slowly add powder, mix and adjust as above.

With diluted Latex R: Sika Latex R may be diluted up to 5:1 (water: Sika Latex 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-289), clean, well graded, saturated surface dry, have low absorption and high density, and comply with ASTM C-33 size number 8 per Table 2.

Note: Variances in aggregate may result in different strengths. The addition rate is 25 lbs. of aggregate per bag of SikaQuick 1000. (25 lbs. of 3/8 in. aggregate is approximately 2.0 gallons by loose volume of aggregate).

Do not exceed a slump of 7 in. 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

As per ACI recommendations for portland cement concrete, curing is required. Moist cure with wet burlap and polyethylene, a fine mist of water or a curing compound meeting ASTM C-309. Moist cure 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 Armatex 110 EpoCem as a bonding agent with SikaQuick 1000.

Caution Irritant

Skin/Eye/Respiratory Irritant: Avoid breathing dust. Dust may cause respiratory tract irritation. May cause delayed lung injury (silicosis).

Warning: This product contains crystalline silica, which in the state of California, is known to cause cancer.

First Aid

Eyes: Rinse thoroughly with water a minimum of 15 minutes. Consult a physician. **Skin:** Wash thoroughly with soap and water. Remove contaminated clothing. **Inhalation:** Remove person to fresh air. Consult a physician. **Ingestion:** Dilute with water. Consult a physician. In all cases, if symptoms persist contact a physician.

Handling and Storage

Avoid contact. Wear suitable personal protective equipment (chemical resistant goggles/gloves/clothing). Remove contaminated clothing and laundry before reuse. Use in the presence of adequate ventilation. In the absence of adequate ventilation, wear a properly fitted NIOSH respirator. Uncured material can be removed with water. Cured material can only be removed mechanically. Store in a cool, dry area. Keep bag tightly closed.

Clean Up

In case of spill, wear protective equipment (chemical resistant gloves/goggles/clothing). Ventilate area. In the absence of adequate ventilation, use a properly fitted NIOSH respirator. Confine spill. Vacuum or scoop into an appropriate container. Dispose of in accordance with current applicable local, state and federal regulations. In case of emergency, call CHEMTREC at 1-800-424-9300. 703-527-3887 (outside USA & Canada).

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

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sikacorp.com or by calling 800-933-7452.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Material Safety Data Sheet which are available online at www.sikaconstruction.com or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.

LIMITED WARRANTY: Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKASHALLNOTBELIABLEUNDERANYLEGALTHEORYFORSPECIALORCONSEQUENTIALDAMAGES. SIKASHALLNOTBERESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

Visit our website at www.sikaconstruction.com

1-800-933-SIKA NATIONWIDE

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537



Sika and SikaQuick are registered trademarks.
Made in USA. Printed in Canada.

