Product Data Sheet
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Identification no. 746
SikaQuick 2500

Construction

SikaQuick® 2500

Very rapid hardening, repair mortar

Description	SikaQuick 2500 is a 1-component, very 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	■ Very rapid hardening as defined by ASTM C-928. ■ Allows application of an epoxy coating within 4 hours (73°F/50%R.H.). ■ Freeze/thaw resistant. ■ Easy to use, labor-saving material. ■ Contains no added chlorides. ■ Not gypsum-based. ■ High early strength. ■ Fast-setting. ■ Open to foot traffic in 45 minutes; to vehicle traffic in 1 hour (at 73°F). ■ Easily applied to clean, sound substrate. ■ Not a vapor barrier.
Coverage	Approximately 0.43 cu. ft. When extended with 25-30 lbs. of 3/8 in. gravel yield is approximately 0.60-0.63 cu. ft.
Packaging	50-lb. multi-wall bag.

Typical Data *(Material and curing conditions @ 73°F (23°C) and 50% R.H.) (Water/powder = 0.12)*

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 5 - 5.5 pints of liquid per 50 lb. bag.	
Application Life	Approximately 15 minutes after adding powder to the water.	
Compressive Strength, psi	**Mortar - ASTM C-109**	***Concrete - ASTM C-39**
1 hour	**2,500 psi (17.2 MPa)	2,000 psi (10.3 MPa)
2 hours	**4,000 psi (27.6 MPa)	3,000 psi (13.8 MPa)
1 day	**6,500 psi (44.8 MPa)	4,500 psi (24.1 MPa)
7 days	7,500 psi (51.7 MPa)	5,000 psi (31.0 MPa)
28 days	**8,500 psi (58.6 MPa)	5,500 psi (37.9 MPa)
Flexural Strength, psi (ASTM C-78)		
1 day	850 psi (5.9 MPa)	600 psi (4.1 MPa)
7 days	1,000 psi (6.9 MPa)	900 psi (6.2 MPa)
28 days	**1,100 psi (7.6 MPa)	1,000 psi (6.9 MPa)
Splitting Tensile Strength, psi (ASTM C-496)		
1 day	850 psi (5.9 MPa)	
7 days	1,000 psi (6.9 MPa)	
28 days	1,100 psi (7.6 MPa)	
Bond Strength, psi (ASTM C-882) modified		
1 day	**2,000 psi (13.8 MPa)	1,500 psi (10.3 MPa)
7 days	2,900 psi (20.0 MPa)	2,500 psi (17.2 MPa)
28 days	**3,100 psi (21.4 MPa)	2,700 psi (18.6 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**	< 500
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)	14-21	
Final Set, Minutes (ASTM C-266)	20-36	
Abrasion Resistance, Inches of Wear at 1 hr. (ASTM C-779)	**28 days**	0.026

*Material was tested with an addition rate of 25 lbs. of clean, well-graded, saturated surface dry, low-absorption and high-density coarse aggregate. Water was added (approximately 5.5 pints per bag) to achieve a 5 to 7 in. slump.

**Independent certificates available upon request.

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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 ± 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 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 Armatec 110 EpoCem (consult Technical Data Sheet).

Concrete Substrate: Prime the prepared substrate with a scrub coat of SikaQuick 2500 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 5 pints of water added to the mixing vessel. Add 1 bag of SikaQuick 2500 while continuing to mix. Add up to another 1/2 pint of water to achieve desired consistency. Do not overwater.

With Latex R: Pour 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 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 25-30 lbs. of aggregate per bag of SikaQuick 2500. (25-30 lbs. of 3/8 in. aggregate is approximately 2.0 - 2.4 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 15 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.
- 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 2500.

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 launder 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
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEOR Y FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

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