

Product Data Sheet
Edition 6.2003
Identification no. 742-50N
SikaSet Roadway Patch 2000

SikaSet® Roadway Patch 2000

Very rapid hardening,
highway-patching mortar

Description	SikaSet Roadway Patch 2000 is a 1-component, very 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"> ■ Very rapid hardening as defined by ASTM C-928. ■ Allow 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 1.5 hours; to vehicle traffic in 2 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 = 0.12)

Shelf Life	1 year in original, unopened bag.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Color	Concrete gray	
Mixing Ratio	Approximately 5-5.5 pints of water per bag.	
Application Life	Approximately 15 minutes after adding powder to the water.	
Compressive Strength, psi	Mortar: ASTM C-109	*Concrete: ASTM C-39
2 hours	2,750 psi (18.9 MPa)	2,000 psi (13.8 MPa)
1 day	5,500 psi (37.9 MPa)	3,500 psi (24.1 MPa)
7 days	6,500 psi (44.8 MPa)	4,500 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	1,200 psi (8.3 MPa)	
28 days	1,100 psi (7.6 MPa)	
Bond Strength, psi (ASTM D-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. 5 to 5.5 pints of water was used, resulting in a 7 in. slump.



Coverage	Approximately 0.43 cu. ft. When extended with 25 lbs. of 3/8 in. gravel yield is approximately 0.60 cu. ft.
Packaging	50 lb. multi-wall bag.
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 required. 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 SikaSet Roadway Patch 2000 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. Start with 5 pints of water added to the mixing vessel. Add 1 bag of SikaSet Roadway Patch 2000 while continuing to mix. Add up to another 1/2 pint of water to achieve desired consistency. Do not over-water. 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 SikaSet Roadway Patch 2000. (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 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	<ul style="list-style-type: none"> ■ 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 SikaSet Roadway Patch 2000.
Caution	Irritant; Suspect Carcinogen - Contains portland cement and sand (crystalline silica). Skin and eye irritant. Avoid contact. Dust may cause respiratory tract irritation. Avoid breathing dust. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. If PELs are exceeded, an appropriate NIOSH approved respirator is required. Remove contaminated clothing.
First Aid	In case of skin contact, wash thoroughly with soap and water. For eye contact, flush with plenty of water for at least 15 minutes, and contact a physician. For respiratory problems, remove person to fresh air.
Clean Up	In case of spillage, ventilate area of spill, confine spill, scoop or vacuum into appropriate container. Dispose of in accordance with current, applicable, local, state, and federal regulations. Keep container tightly closed and in an upright position to prevent spillage and leakage. Mixed Components: Uncured material can be removed with water. Cured material can only be removed mechanically. Warning: This product contains a chemical known to the State of California to cause cancer.

KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
KEEP OUT OF REACH OF CHILDREN
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 THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

Visit our website at www.sikausa.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
Corregidora, Queretaro
C.P. 76920 A.P. 136
Phone: 52 42 25 0122
Fax: 52 42 25 0537

