

Product Data Sheet

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 SikaRepair 223

SikaRepair® 223

One component, early strength gaining, cementitious patching material

Description	SikaRepair 223 is a one-component, early strength gaining, cementitious, patching material for vertical and overhead repair of concrete.
Where to Use	<ul style="list-style-type: none"> ■ On grade, above, and below grade on concrete and mortar. ■ As a repair material for vertical and overhead concrete surfaces.
Advantages	<ul style="list-style-type: none"> ■ Easy-to-use. ■ Suitable for exterior and interior applications. ■ Easily applied to clean, sound substrate. ■ High early strengths. ■ Increased abrasion resistance. ■ Increased freeze/thaw resistance. ■ Not a vapor barrier. ■ Not flammable.
Coverage	Approximately 0.41 cu. ft.
Packaging	SikaRepair 223 - 50 lb. multi-wall bag. SikaLatex R - 1 gal. plastic jug; 4/carton, 5 gal. pails

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

Shelf Life	One year in original, unopened bags.	
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.	
Color	Concrete gray	
Mixing Ratio	¾ gallon to 1 gallon of liquid per 50 lb. bag	
Application Time	Approximately 15 min. after adding powder to Latex or Latex R. Application time is dependent on temperature and relative humidity.	
Finishing Time	20 to 60 min after combining powder and liquid: depends on temperature, relative humidity, and type of finish desired.	
Flexural Strength (ASTM C-293)		with undiluted Latex R
28 days	850 psi (5.9 MPa)	1,200 psi (8.2 MPa)
Splitting Tensile Strength (ASTM C-496)		
28 days	550 psi (3.8 MPa)	700 psi (4.8 MPa)
Bond Strength * (ASTM C-882 modified)		
28 days	1,800 psi (12.4 MPa)	2,000 psi (13.8 MPa)
Compressive Strength (ASTM C-109)		
1 day	3,000 psi (20.7 MPa)	3,300 psi (22.8 MPa)
7 days	6,000 psi (41.4 MPa)	6,200 psi (42.8 MPa)
28 days	7,000 psi (48.3 MPa)	7,500 psi (51.7 MPa)

*Mortar scrubbed into substrate

How to Use

Surface Preparation Remove all deteriorated concrete, dirt, oil, grease, and all bond-inhibiting materials from surface. Be sure repair area is not less than ¼ inch in depth. Preparation work should be done by scabbler or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of ±½ inch (CSP-6). Saturate surface with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.

Priming For priming of reinforcing steel use Sika Armatec 110 EpoCem (consult Technical Data Sheet).

Concrete Substrate: Prime the prepared substrate with a brush or sprayed applied coat of Sika Armatec 110 EpoCem (consult Technical Data Sheet). Alternately, a scrub coat of Sika Repair 223 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:** Wet down all tools and mixer to be used. Add approximately ¾ gallon of water to mixing vessel. Slowly add 1 bag of SikaRepair 223 while continuing to mix. Mechanically mix with a low-speed drill (400-600 rpm) and SikaTop Gel paddle. ¼ gallon of water may be added to achieve desired consistency. Do not overwater. Maintain a mix temperature of 65°-75°F for maximum performance by using hot or cold water as needed.



With Latex R: Pour ¼ gallon of SikaLatex R into the mixing container. Slowly add powder while continuing to mix mechanically as above. Add remaining SikaLatex R (up to ¼ gallon) to adjust the desired consistency.

note: SikaLatex R must be protected from freezing. If frozen, discard.

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 ¼ gallon of the mixture into the mixing container. Slowly add powder and mix as above. Add remaining diluted SikaLatex R (up to ¼ gallon) to adjust the desired consistency.

Application & Finish	<p>At the time of application, surfaces should be saturated surface dry (SSD) with no standing water. Mortar must be scrubbed into the substrate, filling all pores and voids. Force material against edge of repair, working toward center. After filling repair, consolidate, then screed. Material may be applied in multiple lifts. The thickness of each lift not to be less than ½ inch minimum.</p> <p>Where multiple lifts are required score top surface of each lift to produce a roughened surface for next lift. Allow preceding lift to reach final set, 30 minutes minimum before applying fresh material. Saturate surface of the lift with clean water. Scrub fresh mortar into preceding lift. Allow mortar to set to desired stiffness, then finish with wood or sponge float for a smooth surface, or texture as required.</p> <p>For repairs greater than 1 inch in depth, the use of SikaRepair 222 extended with coarse aggregate, and appropriate formwork is also recommended.</p> <p>Important: Maximum bond is achieved with application of a scrub coat on properly prepared, saturated surface dry (SSD) substrate.</p>
Curing	<p>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 water based compatible curing compound. 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.</p>
Limitations	<ul style="list-style-type: none"> ■ Application thickness: (with water and diluted Latex R) Minimum ¼ inch (6 mm). Maximum in one lift 1.5 inch (38 mm). ■ Application thickness: (with undiluted Latex R) Minimum ⅛ inch (3 mm). Maximum in one lift 1.5 inch (38 mm). ■ Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application. ■ Use only potable water. ■ Do not use solvent-based curing compound. ■ 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.
Caution Irritant	<p>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. May cause delayed lung injury (silicosis). IARC lists crystalline silica as having sufficient evidence of carcinogenicity in laboratory animals and limited evidence of carcinogenicity in humans. NTP also lists crystalline silica as a suspect carcinogen. Use of safety goggles and chemical resistant gloves is recommended. If PELs are exceeded, an appropriate, NIOSH approved respirator is required. Remove contaminated clothing.</p>
First Aid	<p>In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes, and contact a physician. For respiratory problems, remove person to fresh air.</p>
Clean Up	<p>In case of spillage, scoop or vacuum into appropriate container, and 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.</p>

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

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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



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