BUILDING TRUST

PRODUCT DATA SHEET

SikaRepair®-223

One component, early strength gaining, cementitious patching material

PRODUCT DESCRIPTION

SikaRepair®-223 is a one-component, early strength gaining, cementitious, patching material for vertical and overhead repair of concrete.

USES

- On grade, above, and below grade on concrete and mortar
- As a repair material for vertical and overhead concrete surfaces

CHARACTERISTICS / ADVANTAGES

- 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 flammable

PRODUCT INFORMATION

Packaging	SikaRepair®-223	50 lb. (22.7 kg) bag
	SikaLatex® (R)	1 gal (3.8 L) jug, 4/carton
		5 gal (19 L) pail
Appearance / Color	Gray powder	
Shelf Life	12 months from date of production if stored properly in original, unopened 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 (ASTM C-109) 73 °F (23 °C) 50 % R.H.

	Water	SikaLatex® R
1 day	> 3,500 psi (24.1 MPa)	> 4,000 psi (27.6 MPa)
7 days	6,000 psi (41.4 MPa)	6,200 psi (42.7 MPa)
28 days	> 7,500 psi (51.7 MPa)	> 8,000 psi (55.2 MPa)

Flexural Strength (ASTM C-293) 73 °F (23 °C) 50 % R.H.

	Water	SikaLatex® R
28 days	850 psi (5.9 MPa)	1,200 psi (8.2 MPa)

Splitting tensile strength (ASTM C-496) 73 °F (23 °C) 50 % R.H.

	Water	SikaLatex® R
28 days	550 psi (5.8 MPa)	700 psi (4.8 MPa)

Slant Shear Strength (ASTM C-882 modified)*

	Water	SikaLatex® R
28 days	1,800 psi (12.4 MPa)	2,000 psi (13.8 MPa)

* Mortar scrubbed into substrate (73 °F (23 °C) and 50 % R.H.)

APPLICATION INFORMATION

Mixing Ratio
3/4 - 1 gal. (2.8 - 3.8 L) of liquid

Coverage
0.41 ft³ (0.01 m³) per bag
(Coverage figures do not include allowance for surface profile and porosity or material waste)

Layer Thickness

	Min.	Max.
Water and diluted SikaLatex® R	1/4" (6 mm)	1-1/2" (38 mm)
Undiluted SikaLatex® R	1/8" (3 mm)	1-1/2" (38 mm)

Product Temperature
65–75 °F (18–24 °C)

Ambient Air Temperature
> 45 °F (7 °C)

Substrate Temperature
> 45 °F (7 °C)

Pot Life
~ 15 minutes
As the temperature will affect the pot life, application temperature:
- Above 73 °F (23 °C) will reduce the pot life
- Below 73 °F (23 °C) will extend the pot life

Finishing time
~20 to 60 minutes

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.

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)

LIMITATIONS

- 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
- Not a vapor barrier
- Refer to Sika® Antisol®-250 W product data sheet for use.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Substrate 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" (6.3 mm) deep.
- Preparation work should be done by high pressure water blast, scabbler, or other appropriate mechanical means. Obtain an exposed aggregate surface with a minimum surface profile of ± 1/8" (3 mm) (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.
- 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: Prime the prepared substrate with a brush or sprayed applied coat of Sika® Armatec® 110 EpoCem (consult PDS). Alternately, a scrub coat of SikaRepair®-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**: Start with 3/4 gal. (2.8 L) of water added to the mixing vessel. Add 1 bag of SikaRepair®-223 while continuing to mix with a low-speed drill (400-600 rpm) and mixing paddle or in an appropriate mortar mixer. Add up to another 1/4 gal (1 L) of water to achieve desired consistency. Do not over-water.

- **With SikaLatex® R**: Pour 3/4 gal. (2.8 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 3/4 gal. (2.8 L) of the mixture into the mixing container. Slowly add powder, mix and adjust as above.

APPLICATION

- At the time of application, surfaces should be 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 must be 1/4" (6 mm) minimum. 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. SSD 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.

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.

OTHER RESTRICTIONS

See Legal Disclaimer.

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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