Construction

Product Data Sheet
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Identification no. 552
SikaRepair 222

SikaRepair® 222

One-component, early strength gaining, cementitious patching material

Description	SikaRepair 222 is a one-component, early strength gaining, cementitious, patching material for horizontal repair of concrete.
Where to Use	■ On grade, above and below grade on concrete and mortar. ■ As a repair material for spalled horizontal concrete surfaces, walkways, ramps, steps, etc.
Advantages	■ Easy-to-use; just add water. ■ Not a vapor barrier. ■ Suitable for exterior and interior applications. ■ Not flammable, non-toxic. ■ Easily applied to clean, sound substrate. ■ High early strengths.
Yield	Approximately 0.42 cu. ft. Approximately 0.62 cu. ft. (222+32 lbs. of 3/8" pea gravel).
Packaging	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 ⅞ gallon of liquid per 50 lb. bag
Application Time	Approximately 30 minutes
Finishing Time	50-120 minutes

Note: All times start after adding Component 'B' to Component 'A' and are highly affected by temperature, relative humidity, substrate temperature, wind, sun, and other jobsite conditions.

		With undiluted Latex R
Compressive Strength (ASTM C109)		
1 day	1,800 psi (12.4 MPa)	2,300 psi (15.9 MPa)
7 days	4,000 psi (27.6 MPa)	4,500 psi (31.0 MPa)
28 days	5,000 psi (34.5 MPa)	5,500 psi
Flexural Strength (ASTM C293)		
28 days	750 psi (5.2 MPa)	1,200 psi (8.2 MPa)
Splitting Tensile Strength (ASTM C496)		
28 days	450 psi (3.1 MPa)	700 psi (4.8 MPa)
Bond Strength *(ASTM C882 modified)		
28 days	2,000 psi (13.8 MPa)	2,000 psi (13.8 MPa)

* Mortar scrubbed into substrate.

How to Use

Surface Preparation
Remove all deteriorated concrete, dirt, oil grease and all bond inhibiting materials from surface. Preparation work should be done by high pressure water blast, scabbler, or other appropriate mechanical means to obtain an exposed aggregate surface with a minimum surface profile of ±1/8 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 SikaRepair 222 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 3/4 gallon of water to mixing vessel. Slowly add 1 bag of SikaRepair 222 while continuing to mix. Mechanically mix with a low-speed drill (400-600 rpm) and Sika paddle or in an appropriate size mortar mixer. Add an additional 1/8 gallon of water if needed.
With Latex R: Pour 3/4 gallon of Sika Latex R into the mixing container. Slowly add powder, mix and adjust as above.

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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 3/4 gallon of the mixture into the mixing container. Slowly add powder, mix and adjust as above.
SikaRepair 222 Concrete: For applications greater than 1 inch depth, add a 3/8 inch coarse aggregate. Aggregate must be non-reactive (reference ASTMC1260, C227 and C289), clean, well-graded, saturated surface dry (SSD), have low absorption and high density, and comply with ASTM C33 size number 8 per Table 2. Addition rate must not exceed 32 lbs. of aggregate/bag of SikaRepair 222 (32 lbs. of 3/8 in. aggregate is approximately 2.5 to 3.0 gal. by loose volume of aggregate).
Water may be varied to achieve the desired consistency. Do not overwater.

Application and Finish

The prepared 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. Allow mortar to set to desired stiffness, then finish. Mixing, placing and finishing should not exceed 45 minutes maximum.

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 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.

Limitations

- **Application thickness: (with water and diluted Latex R)**

	Min.	*Max. inches one lift*
Neat	1/4 inch (6 mm)	1 inch (25 mm)
Extended	1 inch (25 mm)	4 inches (100 mm)

- **Application thickness: (with undiluted Latex R)**

	Min.	*Max. inches one lift*
Neat	1/8 in (3 mm)	1 inch (25 mm)
Extended	1 inch (25 mm)	4 inches (100 mm)

- Minimum ambient and surface temperatures 45°F (7°C) and rising at time of application.
- Addition of coarse aggregates may result in variations of the physical properties of the mortar.
- Use only potable water.
- Not intended for use as an overlay material.
- 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

Sika Latex R - Irritant: May cause skin/eye/respiratory irritation. Avoid breathing vapors. Use with adequate ventilation. Avoid skin and eye contact. Safety goggles and rubber gloves are recommended.

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. 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, properly fitted 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 immediately 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, 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.

Visit our website at www.sikaconstruction.com **1-800-933-SIKA NATIONWIDE**

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