MULTICRETE

Construction

SikaRepair® 223

One-Component, Early Strength-Gaining, Cementitious Patching Mortar

Description

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

Where to Use

- Use on grade, above, and below grade on concrete and mortar.
- Use to repair vertical and overhead surfaces, walkways, ramps.

Advantages

- Easy to use; just add water.
- High early strength.
- Not a vapour barrier.
- Formulated with inert, non-reactive aggregates to eliminate potential Alkali-Aggregate Reactivity (AAR).
- SikaRepair® 223 performance may be enhanced with the addition of Sika® Latex R.
- Ministère des Transports du Québec acceptance.

Technical Data

Packaging	17 kg (37.5 lb) multi-wall bag	
Colour	Concrete Grey	
Yield	Approx. 9.5 L (0.335 ft³)	
Shelf Life	12 months in original, unopened packaging. Store dry. For best results, condition product at 18 to 29°C (65 to 84°F) before using. Protect Sika® Latex R from freezing. If frozen, discard.	
Mix Ratio (by weight)	**Water/Powder**	**Sika® Latex R/Powder**
	1:6	1:5.2
Application Time	15 - 25 min	15 - 25 min
Finishing Time	30 - 50 min	30 - 50 min
Properties at 23°C (73°F) and 50% R.H.		
Density ASTM C 185	2075 kg/m³ (130 lb/ft³)	2050 kg/m³ (128 lb/ft³)
Compressive Strength ASTM C 109, MPa (psi)		
24 hrs	15 (2175)	20 (2900)
14 days	30 (4350)	40 (5800)
28 days	40 (5800)	45 (6526)
Modulus of Elasticity ASTM C 469, GPa (psi)		
7 days	23 (3.3 x 10⁶)	18 (2.6 x 10⁶)
Tensile Splitting Strength ASTM C 496, MPa (psi)		
21 days	4 (580)	5 (725)
Bond Strength CAN A23.2-6B, MPa (psi)		
35 MPa (5075 psi) air entrained concrete substrate		
7 days	1.5 (217)	2.5 (362)

How to Use

Surface Preparation

Remove all deteriorated concrete, dirt, oil, grease, other bond inhibiting materials from surface. Preparation work should be done by chipping, high-pressure waterblasting or other appropriate mechanical means. Obtain substrate aggregate fracture with a minimum surface profile of ± 3 mm (1/8 in) (CSP 6-9). Dampen surface to be repaired with clean water. Substrate should be saturated surface dry (SSD) with no standing water during application.

Mixing

Mix mechanically using a heavy duty, low-speed drill (300 - 450 rpm) with a mixing paddle (ex.: Mud Mixer Type). Pour approx. 2.5 L (0.66 US gal.) of potable water into the mixing container. Add SikaRepair® 223 slowly while continuing to mix. Mix to a uniform consistency for a maximum of 3 minutes. Add additional water if a more fluid consistency is desired. Do not overwater. Excessive water/cement ratios may cause severe bleeding and retardation and will reduce the strength and performance of the mortar. For enhanced performance, SikaRepair® 223 may be used with Sika® Latex R instead of water. Use up to 1 jug of Sika® Latex R per 17 kg (37.5 lb) bag of SikaRepair® 223 depending on consistency desired.

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Application	At time of application, surfaces should be damp (saturated surface dry) with no glistening water. Mortar must be scrubbed into substrate, filling all pores and voids. Force material against edge of repair, working toward center. Allow mortar to set to desired stiffness, cut then finish with wood or sponge float or texture as required. If repair requires several lifts, each lift must be applied as soon as the previous lift will support it and all surfaces but the last must be left rough.
Curing	As per ACI 308 recommendations for cement concrete, curing is required. To achieve performance consistent with Technical Data, curing must be provided by recognized curing methods, such as wet burlap covered with white polyethylene film or approved water-based curing compound, such as Sika® Florseal® WB 18 & 25. Curing must commence immediately after placing and finishing. Moist-curing must be maintained for the first 24 hours only. Protect freshly applied mortar from direct sunlight, wind, rain and frost.
Clean Up	Clean all tools and equipment after use with water. Once hardened, the product can only be removed manually or mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.
Limitations	■ Minimum application thickness: 3 mm (1/8 in). ■ Maximum lift thickness: 38 mm (1 1/2 in). Maximum total applied thickness should not exceed 76 mm (3 in) without additional reinforcing support. ■ Minimum ambient and surface temperature: 7°C (44°F) and rising at time of application. ■ Do not overwater. ■ Use only potable water.
Caution	Contains cement and silica sand which may in certain cases, cause skin and eye irritation. Avoid breathing dust. Use only with adequate ventilation. In confined areas, use of a NIOSH/MSHA approved respirator is recommended. Consult product label for additional information.
First Aid	In case of skin contact, wash with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. Contact a physician. For respiratory problems, transport victim to fresh air. Remove contaminated clothing and wash before re-use. For more information, consult Sika Material Safety Data Sheet. KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY