Construction

SikaTop®-122

Two part polymer modified repair mortar

Product Description	SikaTop®-122 is cement based, polymer modified, thixotropic repair mortar. When mixed together, the components react to form a high strength repair and levelling mortar for concrete.
Uses	■ Economical and easy-to-use concrete repair mortar ■ Suitable for water retaining structures, damaged edges and joint areas ■ Repairing of honeycombing and channels
Characteristics / Advantages	■ Versatile high-strength repair and levelling mortar for concrete ■ Rapid strength gain ■ Good water and oil resistance ■ High mechanical strength ■ High resistance to abrasion ■ Non-toxic and good adhesion

Product Data

Form

Appearance /Colour	Part A : bluish white liquid Part B : grey powder
Packaging	Pre-dosed packs (A+B) 7 kg sets. Part A:1.00 kg plastic container Part B:6.00 kg bag

Storage

Storage Conditions/ Shelf-Life	6 months from date of production if stored properly in undamaged original sealed packaging, in dry conditions at temperatures between +5°C and +40°C.

Technical Data

Chemical Base	Portland cement, polymer redispersable powder, selected aggregates and additives.
Density	Part A : 1.00 kg/l at 27 ºC Part B : 1.35 kg/l (bulk density) at 27 ºC Mixed density : ~2.2 kg/l at 27 ºC
Grading	D_{max}: 2.36 mm

Mechanical / Physical Properties

Compressive Strength of Mixed system (According to ASTM C 109)

Curing time	Curng temperature(+30°C)
1 day	≥ 5 N/mm²
7 days	≥ 15 N/mm²
28 days	≥ 25 N/mm²

Flexural Strength of Mixed system (According to ASTM C 293 – 79)

Curing time	Curng temperature(+30°C)
7 days	~1.5N/mm²
28 days	~3.0 N/mm²

Bond Strength (According to ASTM C 882 - 78)

Curing time	Curng temperature(+30°C)
28 days	~1.5 N/mm² (concrete failure)

System Information

Application Details

Consumption

Dependent on the substrate profile and the thickness of the layer applied.
As a guide, ~ 2.2 kg of powder per m^2 per mm thickness.

Productiveness

1 bag yields approximately 13.5 litres of mortar.

Substrate Quality

Concrete:
The concrete shall be free from dust, loose or friable material, surface contamination or other materials which reduce bond or prevent suction or wetting by repair materials.

Steel Reinforcement:
Rust, mill scale, mortar and concrete residues, dust and other loose or friable material which reduces bond or contributes to corrosion shall be removed to a standard equivalent to SA2.5.

Note:
Reference should also be made to EN1504-10:2003 for any specific requirements.

Substrate Preparation	*Concrete:* Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable mechanical or very high pressure water-blasting techniques (up to 110 MPa). Tie wire fragments, nails and other metal debris embedded in the concrete should be removed. The edges around areas of concrete removal should be angle cut at a minimum of 90^{o} to avoid undercutting and a maximum angle of 135^{o} (with the top surface of the adjacent sound concrete), to reduce the possibility of de-bonding. They should then be roughened sufficiently to provide a mechanical key between the original material and SikaTop®-122 repair mortar. Ensure sufficient concrete is removed from around embedded or exposed steel reinforcement to allow application of the anti corrosion coating when required and adequate compaction of the repair material. *Steel reinforcement:* Surfaces should be prepared using abrasive blast cleaning techniques or high pressure water-blasting techniques (up to 60 MPa). Where exposed reinforcement is contaminated with chlorides or other material which may cause corrosion, the reinforcement should also be cleaned by low pressure water-blasting (up to 18 MPa) *Bonding primer:* On a well prepared and roughened substrate a bonding primer is generally not required. When a bonding primer is not required pre-dampen the surface to a saturated surface dry condtion. The surface should not be allowed to dry before application of the concrete repair mortar. The surface should have a darkened matt appearance without glistening and the surface should not have free-standing water. When a bonding primer is necessary, apply SikaTop®-77 modifed cementitious bond coat. Subsequent application of the repair mortar should be applied ‘wet on wet’.

Application Conditions / Limitations

Substrate Temperature	+5°C min. / +40°C max.
Ambient Temperature	+5°C min. / +40°C max.

Application Instructions

Mixing	Part A : Part B = 1:6 (by weight)
Mixing Time	Stir Part A for 1 minute. Start adding Part B to Part A slowly with continuous stirring. Mix thouroughly for atleast 3 minutes.
Mixing Tools	SikaTop®-122 should be mixed with a low speed (< 400 rpm) hand drill mixer. SikaTop®-122 can also be mixed manually by hand in case of small quantities.
Application Method / Tools	Component A and Component B should be mixed in the ratio 1 : 6 by weight. Lumpfree mixing of predosed sets is done by means of mechanical low speed mixer. The surface should be duly cleaned and saturated thoroughly with water. Whilst the substrate is still damp, apply the mortar vigorously onto the surface. For large repairs, use a mixture of A & B (~1: 5 by weight) in slurry consistency as a primer. Afterwards apply the repair mortar by trowel to the required profile.
Cleaning of Tools	Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically.
Potlife	+20°C : ~ 30 minutes

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Notes on Application / Limitations	Minimum working temperature is +8^{O}C; Minimum coat thickness = 3 mm; Maximum coat thickness = 20 mm. Curing should never be done by water jet or ponding method.

Curing Details

Curing Treatment	Protect the fresh mortar from excess evaporation from the surface and early dehydration using the relevant curing method.

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

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