BUILDING TRUST

PRODUCT DATA SHEET

SikaTop®-121 Plus

TWO-COMPONENT, POLYMER-MODIFIED, CEMENTITIOUS LEVELING/PORE SEALING MORTAR PLUS FERROGARD 901 PENETRATING CORROSION INHIBITOR

PRODUCT DESCRIPTION

SikaTop®-121 Plus is a two component, polymer-modified, leveling and pore sealing mortar with the additional benefit of FerroGard® 901, penetrating corrosion inhibitor. SikaTop®-121 Plus provides a smooth substrate, free of irregularities and bug holes for following protective coatings.

USES

- As a leveling/pore sealing mortar prior to protective coatings.
- On horizontal, vertical and overhead surfaces, interior and exterior.
- On grade, above and below grade, on concrete and mortar substrates.
- Block filler.
- Minor repair for gouges and broken edges.

CHARACTERISTICS / ADVANTAGES

- Excellent adhesion to concrete and mortar substrates
- High flexural and compressive strengths
- Increased density - improved carbon dioxide resistance (carbonation) without adversely affecting water vapor transmission (not a vapor barrier)
- Increased freeze/thaw durability and resistance to deicing salts
- Enhanced with FerroGard® 901, a penetrating corrosion inhibitor - reduces corrosion even in the adjacent concrete
- Compatible with coefficient of thermal expansion of concrete - Passes ASTM C-884 modified
- Can be applied over Sika® FerroGard® 903, corrosion inhibiting impregnation
- Not flammable

PRODUCT INFORMATION

Packaging	**Component A** 1 gal (3.78 L) jug 4/carton	**Component B** 46.5 lb (21.1 kg) bag
Appearance / Color	Concrete gray when mixed	
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 Component A from freezing. If frozen, discard. Protect Component B from moisture. If damp, discard.	

TECHNICAL INFORMATION

Compressive Strength	1 day	1,250 psi (8.6 MPa)	(ASTM C-109)
	7 days	5,000 psi (34.5 MPa)	73 °F (23 °C)
	28 days	6,000 psi (41.4 MPa)	50 % R.H.
Flexural Strength	28 days	2,000 psi (13.8 MPa)	(ASTM C-293) 73 °F (23 °C) 50 % R.H.
Splitting Tensile Strength	28 days	750 psi (5.2 MPa)	(ASTM C-496) 73 °F (23 °C) 50 % R.H.
Tensile Strength	28 days	2,000 psi (13.8 MPa)	(ASTM C-882 modified)*
	* Mortar scrubbed into substrate at 73 °F (23 °C) and 50 % R.H.		
Pull-Out Resistance	28 days	350 psi (2.4 MPa) substrate failure	(ASTM C-1583)
Rapid Chloride Permeability	28 days	~ 500 C	(ASTM C-1202 AASHTO T-277)
Corrosion Test	Cracked Beam Corrosion Tests for Sika FerroGard®-901		
	400 days	Reduced corrosion rates 63 % versus control specimens	(ASTM G-109 modified)

APPLICATION INFORMATION

Mixing Ratio	Plant-proportioned kit. Mix entire unit.	
Coverage	0.4 ft^3 (0.01 m^3) or 65 ft^2 at 1/12" (6 m^2 at 2 mm) per bag (Coverage figures do not include allowance for surface profile and porosity or material waste)	
Layer Thickness	**Min.**	**Max.**
	1/12" (2 mm)	1/6" (4 mm)
Product Temperature	65–75 °F (18–24 °C)	
Ambient Air Temperature	> 45 °F (7 °C)	
Substrate Temperature	> 45 °F (7 °C)	
Application Time	~ 45 minutes As the temperature and relative humidity will affect the pot life, application temperature: Above 73 °F (23 °C) will reduce the pot life and workability Below 73 °F (23 °C) will extend the pot life and workability	
Finishing Time	45 to 60 minutes after combining components* * Depends on temperature, relative humidity, and type of finish desired.	

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- Concrete, mortar, and masonry products must be clean and sound.
- Remove all deteriorated concrete, dirt, oil, grease, and other bond-inhibiting materials from the area to be repaired.
- Surface should be open-pore and textured (CSP-4).
- 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 SikaTop®-121 Plus 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

- Pour approximately 4/5 of Component A into mixing container.
- Add Component B while continuing to mix.
- Mechanically mix with a low-speed drill (400–600 rpm) and paddle or appropriate-size mortar mixer.
- Mix to uniform consistency, maximum 3 minutes.
- Add remaining Component A to mix if a more loose consistency is desired.
- Manual mixing can be tolerated only for less than a full unit.
- Refer to ACI 306 & 305 Guidelines when there is a need to place this product in cold & hot temperatures.

APPLICATION

- SikaTop®-121 Plus can be applied by trowel, notched trowel, stiff bristle, or low pressure hopper gun.
- Work the material well into the prepared substrate, filling all pores and voids.
- As soon as the mortar layer starts to set, a uniform surface texture can be obtained by rubbing the surface with a fine sponge or a plastic trowel.
- Do not overwork SikaTop®-121 Plus during finishing and avoid the use of additional water.

CURING TREATMENT

- As per ACI recommendations for Portland cement concrete, curing is required.
- Protect freshly applied mortar from direct sunlight, wind, rain and frost.
- To prevent from freezing, cover with insulating material.
- Curing compounds adversely affect the adhesion of protective coatings. Therefore, do not use a water based curing compound, if the leveling mortar is going to be over coated.

LIMITATIONS

- 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.

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.

LOCAL RESTRICTIONS

See Legal Disclaimer.

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.

LEGAL DISCLAIMER

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