

SikaTop® 121 PLUS

Two-component, polymer-modified, cementitious leveling/pore sealing mortar plus FerroGard 901 penetrating corrosion inhibitor

Description	SikaTop 121 <i>PLUS</i> is a two component, polymer-modified, leveling and pore sealing mortar with the additional benefit of FerroGard 901, penetrating corrosion inhibitor. SikaTop 121 <i>PLUS</i> provides a smooth substrate, free of irregularities and bug holes for following protective coatings.
Where to Use	<ul style="list-style-type: none"> ■ 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.
Advantages	<ul style="list-style-type: none"> ■ 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. ■ Adds effective cover over rebars. ■ 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, non-toxic.
Yield	0.4 cu. ft./unit
Coverage	One unit covers approximately 65 sq. ft. (6 m ²) of smooth surface at 1/12 inch (2 mm) thickness.
Packaging	Component 'A' - 1 gal. plastic jug; 4/carton. Component 'B' - 46.5 lb. multi-wall bag.

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	One year in original, unopened packaging.
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using. Protect Component 'A' from freezing; if frozen, discard.
Color	Concrete gray when mixed.
Mixing Ratio	Plant-proportioned kit. Mix entire unit.
Application	Approximately 45 min. after adding Component 'B' to Component 'A'.
Time	Application time is dependent on temperature and relative humidity.
Finishing Time	45 to 60 min. after combining components; depends on temperature, relative humidity, and type of finish desired.
Flexural Strength (ASTM C-293)	28 days 2,000 psi (13.8 MPa)
Splitting Tensile strength (ASTM C-496)	28 days 750 psi (5.2 MPa)
Bond Strength* (ASTM C-882 modified)	28 days 2,000 psi (13.8 MPa)
Bond Strength Pull-Out Test (ACI 503R-30 modified)	28 days 350 psi (2.4 MPa) substrate failure
Compressive Strength (ASTM C-109)	
1 day	1,250 psi (8.6 MPa)
7 days	5,000 psi (34.5 MPa)
28 days	6,000 psi (41.4 MPa)
Permeability (AASHTO T-277)	28 days Approximately 500 Coulombs
Corrosion Testing for FerroGard 901	
Cracked Beam Corrosion Tests:	
	Reduced corrosion rates 63% versus control specimens. ASTM G109 modified after 400 days.

* Mortar scrubbed into substrate.

How to Use

Substrate	Concrete, mortar, and masonry products.
Surface Preparation	Remove all deteriorated concrete, dirt, oil, grease and all bond-inhibiting materials from the surface. Surface should be open-pore and textured (CSP-4). 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 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.
Application & Finish	SikaTop 121 <i>PLUS</i> 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 <i>PLUS</i> during finishing and avoid the use of additional water.
Curing	As per ACI recommendations for portland cement concrete, curing is required. Protect the freshly applied mortar against direct sunlight, wind, frost and rain. 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 overcoated.
Limitations	<ul style="list-style-type: none"> ■ Application thickness: Minimum 1/12 inch (2 mm); Maximum 1/6 inch (4 mm) ■ Minimum ambient and surface temperatures, 45°F (7°C) and rising at time of application. ■ 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	<p>Component 'A' - 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.</p> <p>Component 'B' - 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, NIOSH approved respirator is required. Remove contaminated clothing.</p>
First Aid	Eyes: Hold eyelids apart and flush thoroughly with water for 15 minutes. Skin: Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. Inhalation: Remove person to fresh air. Ingestion: Do not induce vomiting. In all cases, contact a physician immediately if symptoms persist.
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.

KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY

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