

Sika® Level-125

Durable, cementitious, self-leveling underlayment for use at 1/25 to 2 inches* (1 to 50 mm) thickness

Construction

Description	Sika® Level-125 is a one-component, durable and versatile cementitious underlayment for interior concrete and cementitious substrates. It can be applied manually or by pump to produce a self smoothing, rapid-setting, flat and economical substrate prior to the application of a final floor finish. Typical application thickness is 1/25 to 2 inches* (1 to 50 mm).														
Where to Use	Interior floor leveling and smoothing applications where floor coverings are to follow, such as: Institutional - schools, colleges, hospitals, clinics, libraries, galleries, museums Commercial - offices, corridors, hallways, canteens, cafeterias, stores, hotels, restaurants Residential - domestic properties, condominiums and high rise construction														
Advantages	<ul style="list-style-type: none"> ■ Easy and quick to install ■ Zero VOC content and low odor ■ Highly fluid and self-leveling ■ Manual or pumpable application ■ Feather-edging acceptable in pedestrian areas ■ Levels new and renovates old floors ■ Very rapid drying, can be walked on after 2-3 hours at 73°F (23°C) ■ Suitable for overcoating with non-moisture sensitive tile after 2-3 hours ■ Floor coverings (carpet, vinyl, PVC, rubber, engineered wood flooring) can be installed after 1-3 days ■ Excellent underlay for tiles, sheet products and wood floor bonding systems 														
Coverage	<p>Approximately 0.438 cu. ft. per 50 lb. (22.7 kg) bag</p> <p>Approximate coverage at typical thicknesses per 50 lb. bag</p> <table border="0"> <tr> <td>40 mils (1 mm)</td> <td>131.4 ft²</td> </tr> <tr> <td>1/8 in (3.2 mm)</td> <td>42.0 ft²</td> </tr> <tr> <td>3/16 in (5 mm)</td> <td>28.0 ft²</td> </tr> <tr> <td>3/8 in (10 mm)</td> <td>14.0 ft²</td> </tr> <tr> <td>5/8 in (16 mm)</td> <td>8.4 ft²</td> </tr> <tr> <td>1 in (25 mm)</td> <td>5.3 ft²</td> </tr> <tr> <td>2 in (50 mm)</td> <td>2.65 ft²</td> </tr> </table> <p>(Coverage figures do not include allowance for surface profile and porosity or material waste.)</p>	40 mils (1 mm)	131.4 ft ²	1/8 in (3.2 mm)	42.0 ft ²	3/16 in (5 mm)	28.0 ft ²	3/8 in (10 mm)	14.0 ft ²	5/8 in (16 mm)	8.4 ft ²	1 in (25 mm)	5.3 ft ²	2 in (50 mm)	2.65 ft ²
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Packaging	50 lb. (22.7 kg.) 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	1 year in original, unopened packaging		
Storage Conditions	Store dry at 41°-77°F (5°-25°C). Condition material to 65°-75°F (18°-24°C) before using.		
Density {wet mix} (ASTM C-185)	133 lbs./cu.ft		
Mixing Ratio	1 gallon of water per 50 lb (22.7 kg) bag		
Working Time	25 min. at 5 mm (3/16 in) thickness		
Flowability (EN12706)	5 in. at 25 min.		
Setting Times (ASTM C-266)	Initial Set - 45-90 min.; Final Set - 70-100 min.		
Compressive Strength (ASTM C-109), psi			
	50°F (10°C)	73°F (23°C)	86°F (30°C)
24 hour	1,000	1,250	1390
3 day	1,375	1,500	1,665
7 day	1,625	2,500	2,600
28 day	2,875	4,000	3,125



PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://USA.SIKA.COM/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800.933.7452 NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

Flexural Strength 28 days (ASTM C-580)	>1,150 psi (7.9 MPa)
Overlying Ceramic tiles, natural stone, and floor coverings (carpet, vinyl, PVC, rubber, engineered wood plank) can be installed after 1-3 days depending upon thickness of underlayment and drying conditions.	
Final Drying Time	Foot Traffic - 8 hours
Pull-Out Strength (ACI 503) 3/16 in. (5 mm) thickness with Sika® Level-01 Primer	> 290 psi (2.0 MPa)
Length Change 28 days (ASTM C-157 modified)	<0.04%
VOC (EPA method 24)	0 g/L

How to Use

Surface Preparation

All concrete and cement substrates must be primed using Sika® Level-01 Primer in accordance with the Product Data Sheet. The substrate must be dry, clean and stable before priming and applying the underlayment materials. Remove all existing treatments such as coatings, sealers, wax, latex compounds, impregnations and curing agents, together with all contaminants i.e. dirt, dust, laitance, grease, oils, and foreign matter, which will interfere with the penetration of Sika® Level-01 Primer and the adhesion of Sika® Level-125.

Prepare concrete and cement substrates by mechanical means, such as shotblasting, sandblasting, waterjetting, scarifying, or other approved methods, to achieve an open-textured, fine-gripping surface (ICRI - CSP 3 minimum). Weak concrete should be removed and surface defects such as blowholes and spalls fully exposed and repaired with a suitable Sika mortar prior to priming and leveling. All cracks and holes should be similarly filled to prevent seepage of the primer through to lower areas. Consult Sika Technical Sales for recommendations.

All loose friable material, including preparation residue, must be completely removed using a vacuum before application of the Sika® Level-01 Primer. The compressive strength of the concrete substrate should be at least >2900 psi (20 MPa) at 28 days with a minimum direct tensile strength pull off strength of >145 psi (1.0 MPa) at the time Sika® Level-01 Primer is applied. Moisture vapor emission rates of the substrate should comply and meet the requirements of the proposed floor covering. Please consult the manufacturer of the final floor finish for advice.

Careful consideration should be given to the selection of the method of mechanical surface preparation and the timing of application of primer and underlayment. Immediately following mechanical preparation on some excessively porous substrates, outgassing will increase for a short period of time (approx. 48 hours) until an equilibrium in slab vapor pressure and the ambient environment is reached. Before overall installation begins, Sika recommends the application of several small test patches to determine primer application requirements and acceptability of final product performance. In general, a one-coat application of Sika® Level-01 Primer should be sufficient; however, allowance should be made for double priming on excessively porous substrates where multiple coats are required. Do not apply excessive primer.

Wooden/Plywood Subfloors

Where installing Sika® Level-125 underlayment over wooden subfloors, ensure that the subfloor consists of at least two layers of exterior grade plywood, a minimum of 1.25 in. (3.2 cm) in thickness and meets, as a minimum, the deflection parameters of L/360 (live and dead loads taken into consideration). The wood/plywood must then be suitably secured, bonded and prepared to a contaminant free and sound condition. Refer to the manufacturer of the final floor covering with regard to the deflection requirements of the floor finish system.

Mixing

Pour 1 gallon of cool, potable water into a suitably sized and clean mixing container, using a calibrated measuring jug, or similar, to ensure strict control of the water content (avoid over-watering). Cool water 70°F (21°C) serves to maximize the working time; if available water is not at this temperature, then consideration should be given to cooling the water. Add Sika® Level-125 to the water, while slowly stirring, adding the complete contents of the 50 lb. sack. Once all the powder has been added, continue mixing until a lump-free and uniform consistency is achieved. This should typically take no more than 5 minutes. If mixing in a barrel or similar container, employ the water to powder ratio as stated above and use a low speed electric mixer (at about 600 rpm) and egg beater style mixing paddle to blend water and powder for a minimum of 3 minutes, until a uniform mix has been produced. Do not over-mix or allow the paddle to rise above the level of material as this will introduce and entrap air into the mix, potentially shortening the working life or causing pin-holing in the underlayment. Let the mixed material stand until the majority of air bubbles have dispersed. When pump-mixing, employ the 1 gallon to 50 lb. water to powder ratio within a continuous mixer and pump, or a batch mixer and pump, ensuring that the mechanical mixers and pumps are in sound working order. Pre-clean and test the equipment, checking that the mixing and pumping elements are fully functional and that meshes are in place to prevent foreign matter from entering the hopper or being dispensed onto the floor.

Application

Prior to placing the underlayment, ensure that all sources of premature drying or direct sunlight are blocked off to avoid accelerated curing and reduced physical properties. The stated ambient and substrate application temperatures are to be achieved before installation and should be maintained for a period of at least 3 days thereafter. Should colder conditions prevail, make allowances for the use of indirect and vented heaters to achieve and maintain the application temperatures required. Where temperatures exceed 86°F (30°C), refer to and follow ACI hot weather application and protection guidelines. Before laying the material, organize labor to operate most effectively, ensuring that installers can maintain a continuous flow of material and avoid creating cold joints. The dimensions of the pour, in terms of width, should also be set accordingly. Sika® Level-125 must not be applied in such a way that expansion and control joints in the substrate are bridged; such joints must be detailed through the underlayment. Provide for expansion and control joints where specified, including at the perimeter of rooms, columns, and pedestals. Should such joints not exist in the substrate, they should still be provided for in the underlayment. Joints, of at least 1/4 in (6 mm.) can be formed using foam tape at the time of laying or can be cut into Sika® Level-125 within 24 hours of



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application. Pour or pump the mixed material onto the primed surface quickly and without delay, in a ribbon pattern, ensuring that a wet edge is maintained; spread by trowel or pin screed/gauge rake to the required thickness achieving the necessary coverage over high points. Nominal maximum thickness is 1" per lift. Localized areas with depths up to 2" per lift are possible. For large scale areas that require deeper applications, the following recommendations can be used to minimize material cost:

1. The material can be extended by adding up to 30% of 20/30 grade sand during mixing to achieve up to 2.5" in one lift. A reduction in flow, approximately 15%, can be expected. The final layer should be neat to allow for a smooth finished floor. When adding aggregate, expect coverage to increase by approximately .16 cu.ft. per 25 lbs of aggregate.

2. Pre-washed 3/8" pea-gravel can be pre-placed into the area being leveled allowing for up to 2.5" in one lift. Applicator must be aware that the aggregate can cause voids in the underlayment if not filled correctly. When adding aggregate, expect coverage to increase by approximately .16 cu.ft. per 25 lbs of aggregate.

Multiple lifts can also be applied to achieve greater depths, making sure to prime with Sika® Level-01 Primer in between lifts. If necessary, further detailed recommendations can be obtained by calling Sika Corporation's Technical Service Department. Over large areas, application by conventional piston, rotor-stator or underlayment type pumps is more appropriate. Thoroughly spike roll in two directions (90°) to remove installation marks and any entrapped air, but avoid overworking.

Tooling & Finishing

Sika® Level-125 must be allowed to air cure. Do not wet cure or use curing and sealing compounds.

Limitations

- For interior use only. Not suitable for slopes or inclines >0.5%
- Do not apply Sika® Level-125 over gypsum-based floors or, similarly, dimensionally unstable substrates.
- Always prime the prepared substrate with Sika® Level Primer-01 primer
- Protect Sika® Level-125 from excessive heat and moving air by turning off radiant heating and forced air ventilation for 24 hours before installation and while the underlayment is curing.
- Do not exceed the recommended water dosage and use clean potable water.
- Temperature variations will affect working time, with low temperatures extending drying times.
- Protect newly applied Sika® Level-125 from condensation and water for at least 24 hours.
- Prevent contaminants, dust and dirt from coming into contact with the underlayment until completely cured and finished
- When overcoating with Sika Primer MB, mechanical preparation may be required to remove all surface laitance and material which could interfere with adhesion.
- If subsequent layers of Sika® Level-125 are installed on existing, cured Sika® Level-125, mechanical preparation and re-priming is required.
- As the thickness of the underlayment will influence the time at which it can be overcoated or overlaid with stones, tiles, or coverings, the manufacturer of such materials must be consulted for guidance regarding substrate moisture content and other characteristics.
- Sika® Level-125 does not provide an aesthetic finish and is intended to receive a covering.
- Avoid walking on the underlayment for at least 2 hours. Do not expose to rolling, dynamic loads for three days at 73°F/50% R.H.

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

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <http://usa.sika.com/> or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

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