



PRODUCT DATA SHEET

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CSC Master Format™ 03 53 19 (03 54 16)

CONCRETE OVERLAYMENT

Sikafloor® Level-50^{CA}

DEEP SECTION, CEMENTITIOUS, SELF-LEVELLING, SUB-FLOOR SCREED

Description	Sikafloor® Level-50 ^{CA} is a one component, polymer modified, versatile and durable cementitious screed for interior concrete floors which can be applied manually or by pump to achieve rapid, flat, economic substrate levelling prior to the application of the final floor finish. Typical application thickness 20 - 50 mm (3/4 - 2 in).
Where to Use	<ul style="list-style-type: none"> ▪ Factories. ▪ Commercial buildings. ▪ Cellars. ▪ Corridors. ▪ Warehouses. ▪ Hospitals. ▪ Domestic. ▪ Fast track construction. ▪ Levelling pre-cast concrete slabs.
Advantages	<ul style="list-style-type: none"> ▪ Self-smoothing and highly fluid. ▪ Levels and renovates old floors. ▪ Rapid drying. ▪ 6 hours walk on time [23 °C (73 °F)]. ▪ Excellent underlay for tiles or sheet systems. ▪ Excellent underlay for resin flooring. ▪ Low odour.

Technical Data

Packaging	25 kg (55 lb) bag		
Colour	Concrete Grey		
Yield	Approx. 13 L (0.45 ft ³)		
	Approximate thickness per 25 kg (55 lb) bag		
	20 mm (3/4 in)	0.64 m ² (6.9 ft ²)	
	38 mm (1 1/2 in)	0.34 m ² (3.6 ft ²)	
	50 mm (2 in)	0.26 m ² (2.8 ft ²)	
	(The above does not allow for surface porosity, profile or wastage).		
Shelf Life	1 year in unopened packaging. Store dry between 5 and 25 °C (41 and 77 °F) ensuring that product is not exposed to rain, condensation or high humidity.		
Mix Ratio	3.3 L (0.87 US gal.) water per 25 kg (55 lb) bag		
Properties at 23 °C (73 °F) and 50% R.H.			
Density ASTM C185 (wet mix)	2.20 kg/L (137 lb/ft ³)		
Application Temperature (substrate and ambient)	10 °C (50 °F) min., 25 °C (77 °F) max.		
Application Thickness	20 mm (3/4 in) min. 50 mm (2 in) max.		
Compressive Strength ASTM C109, MPa (psi)	10 °C (50 °F)	23 °C (73 °F)	30 °C (86 °F)
24 hrs	6 (870)	16 (2320)	15 (2175)
3 days	12 (1740)	27 (3916)	27 (3916)
7 days	13 (1885)	30 (4351)	30 (4351)
14 days	17 (2465)	32 (4641)	34 (4931)
28 days	27 (3916)	40 (5801)	40 (5801)
Setting Time ASTM C266			
Initial set	1 hr 40 min		
Final set	2 hrs 30 min		
Flowability ASTM C230 (modified)	0 min	300 mm (11.8 in)	
	15 min	200 mm (9.45 in)	
Working Time 40 mm (1.5 in) thickness	25 - 28 min		

Overcoating	Water-based materials	12 hrs
	Solvent-free materials	36 - 48 hrs
	Solvent-based materials	48 hrs
Final Drying time	Foot traffic	4 - 6 hrs
	Lightly serviceable	1 day
	Fully serviceable	2 days
Volume Change ASTM C531		
28 days	+0.028 %	
Pull-Out Strength (on concrete) CSA-A23.2-6B		
Thickness 20 to 50 mm (3/4 to 2 in)	2.2 MPa (319 psi) (substrate failure)	
<i>Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.</i>		

HOW TO USE

Surface Preparation & Priming

All concrete and cement substrates must be primed using Sika® Level-01 Primer^{CA} in accordance with the Product Data Sheet.

The substrate must be dry, clean and stable before priming and applying the self-levelling screed 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^{CA} and the adhesion of Sikafloor® Level-50^{CA}.

Prepare concrete and cement substrates by mechanical means, such as shotblasting, sandblasting, water-jetting, scarifying, or other appropriate methods, to achieve an open-textured, fine-gripping surface (ICRI - CSP 4 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 levelling. All cracks and holes should be similarly filled to prevent seepage of the primer through to lower areas. Consult Sika Canada 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^{CA}. The compressive strength of the concrete substrate should be at least 25 MPa (> 3625 psi) at 28 days with a minimum tensile strength of 1.5 MPa (> 218 psi) at the time Sika® Level-01 Primer^{CA} is applied. Moisture Vapour 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 Canada 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 the Sika® Level-01 Primer^{CA} should be sufficient; however, allowance should be made for double priming on excessively porous substrates. Where multiple coats are required, do not apply excessive material.

Mixing

Add 3.3 L (0.87 US gal.) of potable water to a suitably sized mixing container and while mixing slowly add the powder (25 kg/55 lb). Once all the powder has been added, continue mixing with a low speed electric mixer (300 - 400 rpm) for a minimum of three (3) minutes until a uniform mix has been achieved. Let material stand until the majority of air bubbles have dispersed.

Application

Pour the mixed material onto the pre-primed surface and spread by trowel or pin screed rake to the required thickness. Since it is not possible to effectively spike roll material at depths in excess of 15 mm (19/32 in), some air bubbles may be left at the surface. This in no way detracts from the performance of the product.

Curing

Sikafloor® Level-50^{CA} must be allowed to air cure. Do not wet cure or use curing and sealing compounds.

Clean Up

Use water. Hardened material may have to be mechanically removed.

Limitations

- Important: protect stored material from exposure to rain, condensation and high humidity as moisture may penetrate packaging, causing lumps.
- For best results, condition product to 18 to 29 °C (65 to 84 °F) prior to mixing and installation. Lower temperatures may result in slower strength development and longer cure times.
- Protect newly applied Sikafloor® Level 50^{CA} from condensation and water for at least 24 hours.
- Protect Sikafloor® from excess heat and moving air while curing.
- Turn off radiant heating and forced air ventilation systems for 24 hours.
- Do not exceed the recommended water dosage.
- Low temperatures extend drying times.
- Temperature variations will affect working time.
- Sikafloor® Level-50^{CA} does not provide an aesthetic finish.
- Not suitable for slopes or inclines > 0.5 %.
- For interior use only.
- When overcoating with Sikafloor® resins or any subsequent layers of Sikafloor® Level-50^{CA}, mechanical preparation is required to remove any surface laitance that could interfere with the bond.
- When overcoating Sikafloor® Level 50^{CA}, ensure the moisture content meets the requirements of the coating product.

**Health and Safety
Information**

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

The Information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelflife. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

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