BUILDING TRUST

PRODUCT DATA SHEET

SikaLevel®-25 N

High Performance, self-levelling and fast drying, cementitious screed for interior use applicable in 3 – 25 mm.

PRODUCT DESCRIPTION

SikaLevel®-25 N is a polymer-modified, pumpable, self-levelling, cementitious, industrial-grade screed for internal use.

USES

- SikaLevel®-25 N is a versatile and durable sub-floor cementitious screed which can be applied manually or by pump to achieve rapid, flat, economic substrate levelling before the application of the final floor finish
- Typical uses are in warehouses, factories, manufacturing facilities, hospitals, commercial buildings, residential and domestic properties, etc.
- SikaLevel®-25 N is usable as a screed for industrial service conditions when sealed with epoxy or polyurethane-based coatings suitable for heavy-traffic and forklift pallet trucks with impact load.

CHARACTERISTICS / ADVANTAGES

- Self smoothing and highly fluid
- Pumpable or manual application
- Rapid drying
- 3 hours walk on time (at ~ 20°C)
- Excellent underlay for resin floors
- Low odour
- Protein free
- Casein and Formaldehyde free
- Very low emissions: EC1 Plus
- Quartz sand free

APPROVALS / STANDARDS

- Conforms to the requirements of EN 13813: CT-C40-F8-AR0,5
- Reaction to fire: Class $A1_{(fl)}$

PRODUCT INFORMATION

Chemical Base	Polymer modified hybrid binder	
Packaging	25 kg bags	
Appearance / Colour	Light-grey powder	
Shelf Life	9 months from date of production	
Storage Conditions	Store in original, unopened and undamaged packaging in dry conditions at temperatures between +5°C and +30°C.	
Density	Wet	~ 2.13 kg/l
	Dry	~ 1.32 kg/l

TECHNICAL INFORMATION

Abrasion Resistance	Class 0,5		(EN 13892-4)
Compressive Strength	> 20 N/mm²	after 24 hours / +20°C	(EN 13892-2)
	> 40 N/mm²	after 28 days / +20°C	
Flexural Strength	> 8.0 N/mm²	after 28 days / +20°C	(EN 13892-2)
Tensile Strength	> 1.5 N/mm²	after 28 days / +20°C	(EN 13892-8)

APPLICATION INFORMATION

Mixing Ratio

4.8 to 5 litres of water for 25 kg of SikaLevel®-25 N

Consumption

~ 1.7 kg/m²/mm
This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level or wastage etc.

Layer Thickness

3 mm minimum / 25 mm maximum

Ambient Air Temperature

+8°C min / +30°C max
Protect from direct sunlight, hot or strong winds and extremes of temperature to avoid cracking or crazing.

Relative Air Humidity

~ 80 % max

Dew Point

Beware of condensation!
The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation, blooming or laitance on the floor finish.

Substrate Temperature

+8°C min / +30°C max
Protect from direct sunlight, hot or strong winds and extremes of temperature to avoid cracking or crazing.

Substrate Moisture Content

Test method: Sika-Tramex meter or CM measurement.
No rising moisture according to ASTM D 4263 (Polyethene sheet test).
< 4% CM if priming with Sikafloor®-150 Plus or Sikafloor®-151
Please consult the product data sheet for the primer used for further information.

Substrate Pre-Treatment

Normal intended use of the floor
The one-part acrylic primer Sikafloor®-01 Primer is recommended for a pore-free surface with very good surface adhesion. Refer to the relevant PDS for the recommended application details, etc.
High loads intended use of the floor
Priming with epoxy resins like Sikafloor®-155WN, Sikafloor®-150 -151 or Sikafloor®-151 fully broadcasted with quartz sand 0.3–0.8 mm.

Pot Life

Temperature	Time
+10 °C	~ 30 minutes
+20 °C	~ 25 minutes
+30 °C	~ 15 minutes

The temperature will affect the pot life.
Application at temperatures above +20°C will have reduced pot life and working time. Temperatures below +20°C will increase the pot life and working time.

Waiting Time / Overcoating

Ambient temperature	+10°C	+20°C
Over-coatable with resin products	~ 3 days	~ 1 day
Foot traffic	~ 12 hours	~ 3 hours
Lightly serviceable	~ 2 days	~ 1 day
Fully serviceable	~ 8 days	~ 6 days

Times are approximate be affected by changing substrate and ambient conditions, particularly temperature and relative humidity.
Make sure the moisture content has achieved the required value for the application of the coating product.

SYSTEM INFORMATION

System Structure

Priming	See substrate pre-treatment
Levelling	Apply to the required thickness of 3–20 mm
Sealer	Sikafloor®-304W, -305W and -2540W
Coatings	All kinds of Sikafloor® EP and PU coatings
Adhesives	Sikabond® Flooring Adhesives or suitable product from SikaCeram® product range

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.

LIMITATIONS

- Freshly applied SikaLevel®-25 N must be protected from damp, condensation and water for at least 24 hours.
- Do not exceed the recommended water dosage.
- Temperatures below +20°C extend the drying times.
- SikaLevel®-25 N does not fulfill high aesthetic demands and must be overcoated for high industrial loads.
- Do not use SikaLevel®-25 N in areas where it can be exposed to dampness, such as underground floors without an effective damp proof membrane, or outdoors without suitable watertight overcoating and underside membrane.
- Make sure the primer is fully blinded with aggregate and no “bald patches” remain.
- Not suitable for slopes or inclines > 0.5%.
- Protect from direct sunlight, hot or strong winds and extremes of temperature to avoid cracking or crazing.
- When overcoating with Sikafloor® resins, additional mechanical preparation may be required to remove any laitance which may have formed during application.
- When overcoating SikaLevel®-25 N ensure the moisture content has achieved the required value for the coating product, as times will vary with application thickness and ambient humidity. (Refer to the topcoat product data sheet)

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

- The concrete substrate must be sound and of sufficient compressive strength (> 25 N/mm2), with a minimum pull-off strength of 1.5 N/mm2.
- The surface must be clean, dry, and free of all contaminants, such as dirt, oils, grease, coatings, and surface treatments.
- If in doubt, apply a test area first. Weak concrete must be removed, and surface defects such as blow holes and voids must be fully exposed.
- Cement laitance, paints or other surface treatment agents must be removed entirely.
- Suitable methods for surface preparation are high-pressure water jetting or abrasive blast cleaning. Other pretreatments such as scarifying, milling, etc. must necessarily be followed by another post with a Jet/blast method to eliminate the remaining structural faults, to remove cement laitance and achieve an open and sound textured surface.
- An appropriate roughness of the substrate is a prerequisite for a good bond between the substrate and levelling screed. The mean surface roughness should be as large as possible, at least 1mm.
- Repairs to the substrate, filling of blowholes/voids must be carried out using appropriate products from the SikaTop®, Sika® MonoTop®, Sikafloor®, SikaDur® and Sikagard® range of materials.
- All dust, loose material, and friable material must be completely removed from all surfaces before the product is applied, preferably by brush and/or vacuum.
- Dewpoint: Beware of condensation! The substrate and uncured floor must be at least 3 °C above the dew point to reduce the risk of condensation, blooming or laitance on the floor finish.
- A suitable one part acrylic primer such as Sikafloor® - 01 Primer.
- Alternative: If the substrate is strong and has a sufficiently rough texture, SikaLevel®-25 N can be applied directly onto it. Dampen the substrate until it achieves an SSD (Saturated Substrate Dry) condition to avoid bubbles.
- High mechanical forces on the floor, a floor placed on soil or poor, weak substrates, must be primed with Sikafloor®-150 or Sikafloor®-151, fully broadcast with quartz sand 0.3 – 0.8 mm. Remarks: Quartz sand must not be applied in excess, and grains must not be fully sealed with the resin.
- Do not apply to substrates with rising moisture. If rising moisture can occur, an effective damp-proof membrane must be applied and in compliance with the relevant national standard.

SUBSTRATE PREPARATION

- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface. Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed. All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.
- If to be sealed with an impervious material, ensure that an effective damp proof membrane is in place before installation of SikaLevel®-25 N.
- Repairs to the substrate, filling of blowholes/voids must be carried out using appropriate products from the Sika Patch®, Sika Level®, Sikafloor® or Sikadur® range of materials.
- Prime the substrate using the appropriate primer, and if broadcasting quartz sand, ensure full blinding of the wet primer, without any bald spots. Remove any excess or loose sand from the surface when cured.
- Use primer according requirements - see system structure.
- For all the ancillary products, please refer to their relevant PDS.

MIXING

Add the dry powder (25 kg SikaLevel®-25 N) into a mixing container with clean water.
The water amount must be between 4.8 - 5.0 L per 25 kg of material.
Mix thoroughly for a minimum of 3 minutes with a low-speed electric stirrer (300 - 400 rpm).

APPLICATION METHOD / TOOLS

Pump

Use a conventional floor screed dual stage mixer and pump and control the water dosage to achieve the following flow, measuring the final average diameter on a flat, clean, dry flow table.

Sika Standard (Sika Flow-Ring-Set) Internal diameter 60 mm Height 120 mm	ASTM C 230 EN 1015-3 Top internal diam. 70 mm Botton internal diam. 100 mm Height 60 mm
Standard type flow = ~ 355 mm (5.0 L per 25 kg) after 10 minutes	Standard type flow = 360 mm ± 10 mm (5.0 L per 25 kg) after 10 minutes

After placing onto the primed surface apply by trowel or pin screed rake to the required thickness. Thoroughly spike roll in two directions to remove any entrapped air.

Manual

Pour the mixed material onto the primed surface and apply by trowel or pin screed rake to the required thickness. Thoroughly spike roll in two directions to remove any entrapped air.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from coun-

try to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

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 in accordance with Sika's recommendations. 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 written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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.

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