



METHOD STATEMENT

Sikafloor® DecoCem CS-44

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TEMPLATE FOR TRANSLATION, ONLY FOR INTERNAL USE.

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1 SCOPE

This method statement with instructions describes the use of Sikafloor® -4400 DecoCem with application techniques.

The current product data sheets and safety datasheets are integral parts of this method statement and must be seen as one package to in all cases.

2 PRODUCTS AND BUILD UP

Sikafloor®- 4400 DecoCem is a colored self levelling compound.

Intended use of the Sikafloor®- 4400 DecoCem is as a decorative cementitious finished residential interior floor.

Part of the build-up is a well-done preparation of the subfloor and application of a clear finish over the Sikafloor®- 4400 DecoCem.

A careful subfloor preparation is needed to have a good bonding of the Sikafloor®- 4400 DecoCem to the floor as well to overcome forming of pinholes in the decorative layer.

A cementitious based product is porous and very prone to staining, for that the Sikafloor®- 4400 DecoCem needs to be protected with a clear finish.

Principle of the Build-ups

Substrate	Concrete, screeds, rapid screeds. Cement or calcium sulphate based
Substrate preparation	1. Sikafloor®-151 + fully broadcasted with QS or 2. Sikafloor®-151 + Sikafloor®-02 Primer
Decorative Cementitious	Sikafloor®-4400 DecoCem
Clear finish	Sikafloor®-419 W (2x) or Sikafloor®-169 + Sikafloor®-304 W Matt

3 PRE WORKS

3.1 EQUIPMENT / TOOLS

- Adjustable pin rake or plain steel trowel with long handle
- Hand trowel, plain
- Mixing drill (for example Festool, spiral whisk type single or double)
- Buckets, water measuring pail or scale.
- Rollers, brushes, spatulas, brooms
- Masking tapes, foam barriers
- Spiked shoes, protection equipment
- Hand cutting machine for joints and crack repairs.



Steel trowel with long handle



Adjustable rake



Mixing drill, hand electric mixer for dry compounds, min. output 500 W



Foam barriers



Spike shoes



M-tec Duomix 2000 has been tested and have successfully placed many square meters of cementitious screeds under various conditions.

3.2 MATERIAL CONSUMPTION CALCULATION

The flooring contractor must estimate the total requirement of the product from the coverage information, as listed below:

Table 1: theoretical consumption

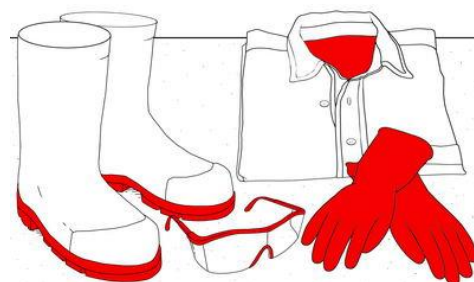
Sikafloor®- 151/161 + QS	2 x 0,35 – 0,55 kg/m ² , the second coating broadcasted with QS 0,3-0,8 mm ~2 kg/m ²
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or Sikafloor®- 151/161	0,35 – 0,55 kg/m ²
or Sikafloor®- 02 Primer	~0,12 kg/m ²
Sikafloor®- 4400 DecoCem	~1,6 kg/m ² / mm: thickness 5 – 10 mm: ~ 8 – 16 kg /m ²
Sikafloor®- 419 W + 5% water	~0,09 kg/m ²
Sikafloor®- 419 W	~0,08 kg/m ²
or Sikafloor- 169	~0,12-0,15 kg/m ²
or Sikafloor®- 304 W Matt	~0,10 kg/m ²

Note: The total consumption of a product is approximately and can vary per jobsite and is without wastage and practical considerations.

3.3 SAFETY MEASURES ON SITE AND LABOUR PROTECTION

In any case wear proper safety equipment (waterproof gloves, eye goggles, safety boots and protective clothes) during applications. Products in the packaging are heavy, so efforts beyond the physical capacity will cause strain. Have the necessary means and labor to place and level before it sets.



Ensure sufficient ventilation during application. To avoid dusting when opening bags, place the mixing station (manual or pump) in an open area, or set up a dust extraction system.

For more details, refer to Individual Safety Data Sheet (available upon request).

CLEANING, RECYCLING AND DISPOSAL

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological, and other safety-related data.

3.4 JOB SITE CONDITIONS

3.4.1 WATER SUPPLY

Verify the availability of water supply (distance and available amount), whether for manual or pump application. The water must be clear and in the quality of potable water. It is prohibited to use contaminated or wastewater! For manual application the required amount is defined in relevant PDS, plus the amount necessary for cleaning of tools.

For pump applications, depending on the machines, the water amount must be uninterrupted.

If uninterrupted supply is unavailable, a water tank must be considered. A raised IBC container or several 200-liter drums can do. If the raising of a tank is not possible, a suitable pump must be available. Some machines are fitted with water pumps.

3.4.2 POWER SUPPLY

Verify the availability and distance of electrical power to drive the handheld mixer or the heavy-duty machine. (See your equipment requirements). If site power is unavailable, organize an adequate portable generator.

3.4.3 MATERIAL STORAGE / ACCESS / TRANSPORTATION

Keep material in original, unopened, and undamaged sealed packaging, in dry conditions and at temperatures between +5°C and +30°C.

Verify the accessibility to the site for delivery of the materials. Check if the transport must be capable of unloading the pallets itself or it will be done by the main contractor or the owner. Organize a flat, dry covered storage area, preferably in or near the application area.

For manual applications, have a cart for transportation of the mixed material to the placing area available and sufficient mixing capacity for a continuous supply to the placing area.

3.4.4 CLIMATE CONDITIONS

Ideal temperatures for the applications are between +12 and +20°C. The following minimum and maximum temperatures must be strictly adhered to start the application of the screeds until and when the final strength has been reached:

Minimum temperatures +10° C for products, ambient air, and substrate.

Maximum temperatures +25° C for the product and substrate.

Maximum temperatures +30° C for ambient air.

Direct exposure of the sun on the freshly laid and curing area has a considerable influence. In principle direct solar irradiation must be avoided, check sun's course and placement of the windows, place blinds when applicable.

A draft of air/wind must be avoided also, close doors and windows.

Heaters or climate conditioners must be out of order during the application and next 3 days. All climate changes must be slow and gradual. Avoid draft and extensive ventilation also during maturing.

4 SUBSTRATE EVALUATION AND TESTING

Suitable substrates are all cement or calcium sulphate-based screeds, concrete, rapid screeds etc. In general, the existing substrate must be sound, structurally stable, clean, dry, and free of all contaminants such as dirt, oil, grease, wax, and rust which could affect adhesion.

All dust, loose and friable material must be completely removed from all substrate types before the application of the primer, preferably by vacuum extraction equipment.

4.1 SURFACE TENSILE STRENGTH / PULL-OFF TEST

Good bond strength between the overlay and the substrate is a key factor in performance of our Sikafloor® - Floor coverings.

Cementitious substrates (concrete/screed) must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²). The Sikafloor® -4400 DecoCem has extreme low shrinkage behavior, and the area of use is residential and commercial interior finishing, therefore we state a minimum tensile strength of the surface should be $\geq 1,0 \text{ N/mm}^2$ by mean and no value should be measured lower than $0,7 \text{ N/mm}^2$.

Please note:

- Sika takes no responsibility about the screed design and quality. The screed quality needs to comply with the demands and loads in specified for this building. This includes also appropriate waterproofing to prevent in case of the use of a calcium sulfate screed from expanding or swelling.
- The laitance needs to be removed by sanding or vacuum blasting followed by proper vacuum cleaning to remove the dust out of the pores.
- For very porous substrates (e.g., calcium sulfate screeds) it is recommended to apply at least two coats of an epoxy primer, e.g., with Sikafloor®-151/161, if circumstances require to achieve a pore-free substrate. Applying an additional scratch coat of Sikafloor®-151/-161, filled with quartz sand, is a suitable measure to fill and close the pores.

- For all other kind of substrates, please contact your local technical service department.



Pull-off test

The below mentioned procedure is based on the European Standard EN 1542. Short description for the evaluation of the bond strength:

- Drill in a depth of 15-20 mm by using a core driller, which is equipped with a diamond-drilling core.
- Apply a thin layer of Sikadur®-31 on the surface and on the dolly and press the dolly firmly onto the surface. Allow the adhesive to cure for min. 24 h
- Carry out the pull-off test in accordance with the manufacturer's instructions. Ensure that the dollies are loaded in direct tension without bending. Pull-off speed: 100 N/s.

Suitable pull-off tester: Pull-of tester F15D EASY M 2015 or Proceq pull-off tester DY-225.

4.2 MOISTURE CONTENT



A suitable device, to carry out the measurement at the jobsite, is the **Calcium Carbide Method**, CM-Method in short, which provides more accurate readings in comparison.

How do you use a Calcium Carbide-Method to measure the moisture content?

A concrete sample from the concrete must be crushed with a hammer into as small pieces as possible.

- The crushed concrete sample, steel balls and one calcium carbide cartridge must be inserted into the steel bottle.
- The bottle is then closed with the manometer cap.
- The bottle must be shaken for a minimum 3 minutes.
- Now starts the determination of water content from the gas pressure developed by the reaction of calcium carbide with the free water of the concrete.
- The gas pressure is measured with the precision manometer.

After approx. 20 minutes, the percentage moisture content of the concrete can be read on the scale of the manometer.

Plastic Sheet Test according to ASTM D 4263

The Plastic Sheet Test use a simple, qualitative approach. That means that no measured values are obtained, but the concrete is simply examined for signs of excessive moisture. The Plastic Sheet Test can sometimes provide useful information. However, it is not recommended as the sole test method; this test should only be done to determine if there is a problem with excessive moisture in the concrete.



How to perform the ASTM D4263 Concrete Moisture Test:

- Firmly tape a piece of plastic foil (46cm x 46 cm) to the surface and fix it with tape.
- 1 location per 50 m² of floor area
- Wait min 16 h
- Examine the substrate and the backside of the plastic for signs of moisture.
If yes, is this an indication that the concrete contains moisture.

The Plastic Sheet Test only provides information on the moisture conditions at the surface of the concrete slab. The Plastic Sheet Test is not designed to provide information about conditions in the first 2-3 cm of the concrete slab.

Consequence: Additional measuring with CM-Equipment might be necessary.

4.3 UNDERFLOOR HEATING

Underfloor heating is one of the modern heating systems of today and is being used more and more in residential buildings, but also increasingly in industry.

Before a concrete substrate or screed equipped with underfloor heating is coated with a resin-based floor coating, the substrate must first be sufficiently dry. In case of exceeded residual moisture, consequential damage in the form of blistering and flaking of the floor covering cannot be ruled out. Important is to consider that the function heating of the substrate must be commissioned separately by the building owner.

According e.g., to EN 1264-4 the functional heating should only be carried out after 21 days for finished cement screeds; 7 days must elapse for finished calcium sulphate screeds and 1 day for mastic asphalt. For all screed materials, the manufacturer's specifications must be followed. The procedure to dry the floor sufficient must be carried out according to the specifications of the manufacturer of the subfloor.

The normally specified maximum substrate moisture of max. 4 % cannot be equated in the case of underfloor heating.

Please note that in all cases the information regarding the maximum substrate moisture must be obtained from the manufacturer of the respective substrate.

The specifications of the manufacturers (measured by calcium carbide method (CM-%)) can, for example, look like this:

- **Concrete substrates or cementitious screeds:**

The maximum permissible moisture content for concrete substrates or screeds equipped with underfloor heating after heating until ready for covering is max. 2 %.

- **Calcium sulphate or Anhydrite screeds:**

The maximum moisture content may even be as low as 0.5 %.

A possible dilation between heated and unheated parts of the floor needs to be considered because of different volume changes.

Finally, a protocol of the ready-for-laying heating of the subfloor must be drawn up and handed over to the floor layer!

5 SUBSTRATE PREPARATION

Concrete substrates must be mechanically prepared to remove cement laitance, existing coatings and achieve a gripping profile that is clean, dry, and free from laitance, dirt, grease, oil, and any other form of surface contamination. Vacuum blasting or similar techniques are ideally suited. High spots must be removed by e.g., grinding. Weak concrete must be removed and surface defects such as blowholes and voids must be completely exposed.

Repair of the substrate, filling of blowholes/cavities and levelling of the surface must be carried out with suitable products from the Sikafloor® and Sikadur® range. The concrete or screed substrate must be primed or trowelled to obtain a level surface.

The chosen method of surface preparation depends on the surface condition, environmental conditions and chosen flooring system. The method may be selected based on trial surfaces, which must then be approved by the client.



Suitable preparation techniques for the subfloor include Abrasive blast cleaning, grinding, abrading, electric floor scrubbers.

Professional equipment is required to achieve a functioning floor, such as: Scarifier, Grinder, (Bush-Hammer Equipment), Vacuum Shot Blaster, Vacuum Cleaner and equivalent.

Considerations older existing floors:

- Resilient floor coverings must be removed.
- Water soluble adhesive residue must be completely removed.

- Water resistant adhesive residue, epoxy and water-based polyurethane coatings must be securely bonded, otherwise they may be mechanically removed as thoroughly as possible leaving only well bonded residue.
- Ceramic tiles, natural stones, terrazzo, must be securely bonded to the substrate. Abrade surfaces to remove glaze or gloss finish. Replace any tiles or stones that are loose before abrading. Level these floors first with a self-levelling underlayment or filled epoxy scratch coat to avoid reflecting of grouts joints into the decorative layer.
- Repair of holes and voids, static cracks in the floor with suitable products from the Sika® portfolio.

5.1 SCARIFICATION

Scarifying concrete tiles



Scarifying is a well-known method, used over years to level a floor, to prepare a concrete floor for further treatment, or to remove old resin-based coating, to achieve a profiled open textured surface.

A concrete scarifier is equipped with a rotating, cutting tool that rotates at a very high speed and tears the surface apart. Scarifying creates a lot of dust. Therefore, a sufficiently dimensioned vacuum cleaner must be connected to the scarifier.

On the other hand, scarifying can cause small cracks to appear in the surface. The upper layer of the concrete as well as the aggregates of the concrete can thus be loosened. It is therefore essential that after scarifying the prepared concrete surface is additionally shot-blasted or bush-hammered.

5.2 GRINDING



Surface grinders with diamond grinding tools are used to remove high spots on a concrete surface such as removing coatings, mastics, urethane, epoxy, paint, and other surface contaminants. Grinding with diamond tools creates a lot of dust; therefore, capable dust collection method must be used. **Please note:** Do not use grinding pads out of hard aggregates such as aluminium oxide (corundum). These pads only polishing the concrete surface and are not suitable to generate a certain roughness.

5.3 VACUUM SHOT BLASTING



Vacuum Shot Blasting is the industry standard for surface preparation of concrete.

Vacuum Shot Blasting means that a machine projects many abrasives towards the surface of the concrete and this way roughens the surface. A wheel in the machine uses centrifugal force to propel the abrasive against the concrete.

The abrasives are then drawn back into the machine to be used again. The dust will be separated using a dust collector.

Vacuum shot blasting



Shot blasting

Appearance of medium to heavy shot blasted surface (CSP 5 – 6).

Weak concrete must be removed, whether manually or mechanically and surface defects such as blow holes and voids fully exposed.

5.4 VACUUM CLEANING OF THE PREPARED SURFACE

Dust, loose and friable materials must be completely removed from all surfaces before applying the product, preferably with a broom and a powerful industrial vacuum cleaner.



5.5 JOINTS AND CRACKS REPAIRING



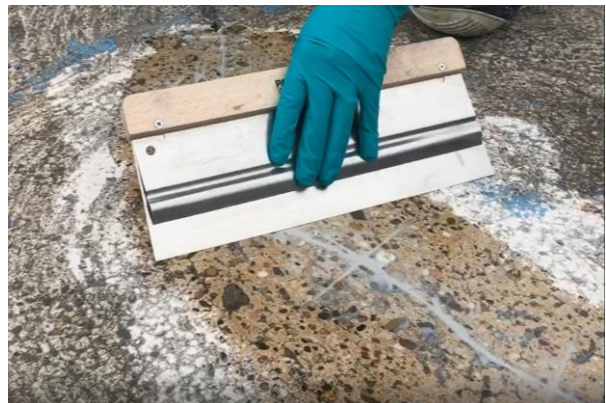
Surface defects like cracks, must be repaired properly, before priming to avoid the risk of screed material flowing into them and producing air bubbles, or reflective cracks in the surface of the substrate subject to movement.

Perimeter joints

Also check the floor perimeter and fill in all holes, cracks, joints to avoid screed licking through it.



Cracks must be opened and cut crosswise approx. every 15 cm. Then the crack is primed with an EP-resin. Crack Stitching: The corrugated steel bars are then inserted wet-in-wet into the primers.



The crack and the transverse joints with the wave connectors are then filled with an epoxy putty; with e.g., Sikafloor®-150/-151 + 4-8% Extender T.



Random movement (structural) cracks. Drill holes next to the crack and insert the anchor. Fix cracks with steel anchor / metallic profile, and then grout the anchors / profiles.



Joints treatment. To prevent the reflection of cold joints to the surface of the screed, these must be sealed and prepared as indicated above.

Alternatively, like in this example, a scratch coat of Sikafloor®-150 / -151 plus quartz sand was used to fill in the joints and cracks prior to laying the screed material. For very fine cracks mix the epoxy just with filler or sand size 0.1-0.3 mm. For thick cracks use the filler size 0.3 - 0.8 mm.



Open and clean the existing joints in between the concrete slab and vacuum any remains. All dust, loose and friable material must be completely removed from all surfaces before application of the product.

Mark the lines where the joints should be cut later.

The next steps are the same as repairing of shrinkage cracks (see above).



It is not recommended to lay the screed over the joints without filling. Otherwise, the material will flow while fresh under the slab and leave a cracked screed.

5.6 SUBSTRATE PRIMING

Before receiving the decorative levelling compound, the substrate needs to be primed to accomplish a substrate free of pores and to avoid visual disturbances because of unequal absorptivity of the substrate.

Two primer solution have been tested and described in this method statement.

Sikafloor®-151/-161 +	0,35 – 0,55 kg/m ² + (*)
Quartz-sand broadcasted	Quartz-sand 0,3-0,8 mm ~2 kg/m ²
Sikafloor®-151/-161 +	0,35 – 0,55 kg/m ² +
Sikafloor®-02 Primer	~0,12 kg/m ²

(*) The consumption should be variable depends on the porosity of the substrate.

5.6.1 SIKAFLOOR-151 BROADCASTED

Make sure that continuous, pore free coat covers the substrate. If necessary, apply two priming coats.

Sikafloor®-151 is a 2-component product and needs to be mixed in the right mixing ratio and equipment please refer to the product datasheet.

Application by brush, roller, or squeegee. Preferred application is by using a squeegee and then back rolling crosswise. Apply by brush, roller or squeegee and work well into the substrate. Always apply in two layers. The first layer is not broadcasted.

Broadcast the fresh second layer of primer with dried quartz sand (0.3 - 0.8 mm) at a maximum of 2.0 kg/m².

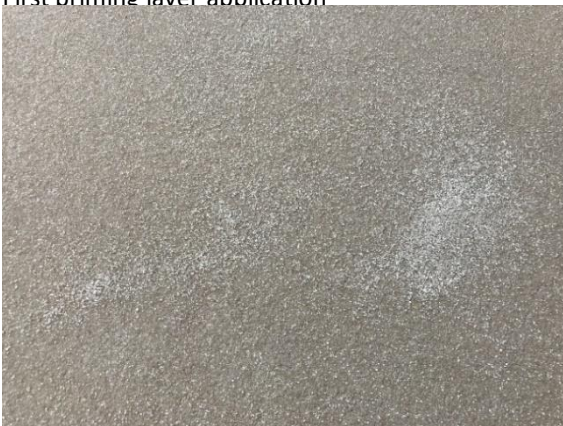
A rough sand surface must be achieved without bold areas. The Sikafloor®-4400 DecoCem can be applied after curing, next day (~20 °C - 12 hours).



First priming layer application



Broadcasting of the second layer of primer



Final surface Sikafloor®-151 broadcasted. No bold spots.

5.6.2 SIKAFLOOR-151 + SIKAFLOOR-02 PRIMER

First layer of primer with Sikafloor®-151, see 4.1.1 for details, broadcasting with quartz sand is in this case not needed. After curing, next day (~20 °C - 12 hours, colder temperatures need longer curing), the Sikafloor®-02 Primer can be applied.

The Sikafloor®-02 Primer is a 1 component primer and only needs to be stirred before using.



Application Sikafloor®-02 Primer over Sikafloor®-151

Apply Sikafloor®-02 Primer onto the Sikafloor®-151 pore free coat covers the substrate. Avoid the formation of puddles.

The Sikafloor®-4400 DecoCem can be applied after curing, ~2 hours after application.



Why not use Sikafloor®-151 as stand alone primer is illustrated in the picture on the left.

EP means in this case the epoxy Sikafloor®-151. Clearly easy to notice the area in the middle with no bonding of the Sikafloor®-4400 DecoCem to the Epoxy at all after demolishing. The other 2 build-ups as described above cannot be separated and thus have an excellent bonding.

5.7 CONNECTIONS AND JOINTS

How to deal with joints from the substrate?

Any expansion joints (or joints where movement is expected) must be respected and reflected on the surface of the decorative layer. It is always advisable to reflect any existing joints in the same width, direction and location on the surface of the finish layer. This is not only to prevent unsightly cracking but also to seal the joint and prevent premature failure of the finished layer due to settling of the slab. The technology for repairing cracks depends on the crack characteristic.

How to deal with decorative cementitious layer going to different size areas, e.g., door openings?

Although the Sikafloor®-4400 DecoCem has an extreme low shrinkage behavior it is recommended to introduce joints going from room to room, f.e. at door openings. A clear stop at door opening can be accomplished by for example aluminum perimeter strip or door threshold.

How to deal with walls and connections?

Contact with vertical structures must be avoided by putting in a perimeter isolating strip. The strip must be continuous throughout all floor layers. The minimal thickness 5 mm is recommended.

6 APPLICATION OF SIKAFLOOR®-4400 DECOCEM

6.1 MIXING AND POURING

This chapter will describe the application of Sikafloor®-4400 DecoCem.

Requirement: Use an electric single with helical disc-shaped mixing paddle (<600 rpm).

Mixing sequence:

- Pour clean water into a clean mixing container.
- Mix the water slowly while gradually adding the right amount of powder.
- Mix continuously for at least 2 minutes to achieve a uniform mix.
- To allow entrained air to escape and mature the mix, do not mix for ~2 minutes.
- Mix for a further ~10 seconds.

Mixing ratio: 4,1 – 4,3 l of water / 20 kg of dry compound. Keep the mixing ratio at a constant level to avoid color deviations.

Mixing procedure should go in a continuous process, with minimized waiting times applying the product to the wet edge of the previous mix placed on the floor. Below a picture to illustrate the mixing sequence in an ongoing procedure for 4 batches with one mixing station.

Notice that after the first batch every 2 min and 10 seconds a product is ready to be transported and applied on the floor.

	2 min mix	2 min rest	10 sec mix	2 min mix + rest	10 sec mix	2 min mix + rest	10 sec mix	2 min mix + rest	10 sec mix
B1	1		3						
B2		2		5					
B3				4		7			
B4					6		8		
			00:04:10		00:06:20		00:08:30		00:10:40
			B1		B2		B3		B4

With this sequence and 1 mixing station a production of 26 batches per hour is possible. 26 batches means per 20 kg powder means a output of 520 kg (~0,5 t/h).

Table below an impression of the time in minutes needed for application of the Sikafloor® -4400 DecoCem.

thickness	consumption	M2			
mm	kg/m ²	25	50	100	200
5	9	26	52	104	208
10	18	52	104	208	415
15	27	78	156	312	623
~time in minutes in relation to thickness of the decocem and size of the area					

Pour the mixed product onto the substrate. Spread the product evenly using a trowel, screed rake or pin-rake to the required thickness and smooth with smoothing trowel, surface blade. Wet-in-wet application with applying the

product to the wet edge of the previous mix placed on the floor. The use of a spike roller is not recommended because it can leave spike marks.

Application steps in pictures



1. mixing



2. pouring



3. pin-leveler spreading



4. smoothing with surface blade

6.2 SURFACE FINISHING – VARIETY OF COLOUR EFFECTS

Sikafloor®-4400 DecoCem can be applied without de-aeration by spike rolling and can have variety of hues and tones on the surface.

When processing this way, we will achieve uniform appearance and significantly eliminate color disunity in the fresh screed.

You can achieve a unique modern final look of the floor with the surface structure likewise concrete or natural stone named “marble” or “cloudy” effect.

Please remember every color has a different intensity. We recommend preparing a testing area before large application.



How to create “marble” effect

- Spread the DecoCem with the trowel. The layer thickness must be 8 mm minimally.
- Never use spike roller, only plain steel trowel!
- Use small plain steel hand trowel with rounded corners.
- With the corner of the hand trowel perform circular moves on the left and on the right side (as car wipers).
- Start to process with it immediately after DecoCem application when the product has the highest degree of workability.

6.3 TOP COATS

Build-up 1:

Primer: Sikafloor®-419 W + 10% water	100-120 gram/m ²
Seal coat: Sikafloor®-419W	70 - 80 gram/m ²
Optional 2. Seal coat: Sikafloor®-419W	70 - 80 gram/m ² (only for high wear areas)

Application

Sikafloor®-419W can be applied by roller or by airless sprayer. After the material has been poured, it must be spread in the direction of poured with a roller and with the same roller cross the direction of pouring, without overlap the current corridor and vice versa.

The second layer is applied when the surface is completely dry. Waiting time approx. 6 hours (20°C). If needed the third layer can be applied by the same way as the second one.

Build-up 2:

Primer: Sikafloor®-169	120 - 150 gram/m ²
Sealer: Sikafloor®-304 W	100 - 120 gram/m ²

Application

Sikafloor®-169 is applied in thin coat by roller. When completely dry and hard (next day), the surface must be slightly sanded before the application of Sikafloor®-304 W.

For all coating systems please refer to product and systems datasheet to follow all application instructions.

7 OTHER INFORMATION

All given times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

All given consumptions are theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

Reference must be made to the individual Product Data Sheets of all products.

7.1 CLEANING AND MAINTENANCE

This part of method statement describes the most typical cleaning procedure for commercial buildings and apartments. There are also existing the Method Statement CLEANING & MAINTENANCE OF Sikafloor® SYSTEMS WITH CLEANING AGENTS FROM DIVERSEY®.“ You can find there step by step procedure for the cleaning and maintenance of the Sikafloor® product range, including recommendation what are used for a specific top coat used for cementitious decorative systems.

The way the floor is used also determines the hygienic requirements, which can be very different as well as various cleaning methods.

The size of the surface area is normally the deciding factor in whether cleaning is performed manually or by machine.

The cleaning methods applied are influenced by

- the size of the area to be cleaned;
- the condition of the floor;
- types of contamination;
- the level of contamination;
- the accessibility of the area to be cleaned;
- the hygiene requirements.

7.2 CLEANING AGENTS AND EQUIPMENT

The choice of cleaner and cleaning method depends primarily on the nature of the contamination. Essentially, all alkaline cleaning agents are suitable regardless of whether they are sodium or potassium hydroxide based.

Surfactants and hypochlorite additives do not normally have any negative effect on Sikafloor® Systems.

However, subsequent rinsing with clear water is essential.

Cleaning agents containing high concentration of ammonia or nitric acid can lead to turbidity or discoloration in the floor, but without attacking it. Caution must also be exercised with all organic solvents, when applied neatly or in high concentration. Aromatic and homogenized hydrocarbons must not be used.

Combination scrub-and-pick-up machines are increasingly being used in the wet cleaning of large areas.

For the apartments and private housed wet wiping with a bucket, mop and press or wet scrubbing with a disk machine and water suction device is still the most common.

7.2.1 THE MOST COMMON POLLUTION

DUST, DIRT PARTICLES

Sikafloor®4400 DecoCem with the relevant seal coat releases no dust on the surface. However, the dust from the environment easily adheres to its surface. For removal of the dust and current impurities it is important to keep in mind that cleaning of cementitious flooring base requires the selection of suitable cleaning agents and detergents. Usual machine cleaning combined with the use of chemical agents represents in its final effect a certain chemical loading toward which all cementitious substrates are not completely resistant. The degree of floor maturing up to ca. 28 days also plays an important role due to higher sensitivity of fresh laid floors.

Sikafloor®4400 DecoCem should be generally cleaned by hand tools or cleaning machines with vacuum and disc, or cylindrical brushes equipped with silicon or polypropylene bristles of medium stiffness. It is necessary to avoid using machines with very hard brushes, as they can leave circular marks on the topping.

Cleaning agents must be free of organic solvents or highly concentrated alkali as mentioned above.

Generally, it is not suitable to clean floors with acidic chemicals as hydrochloric or acetic acid, even when diluted.

SPILLAGES

Spillages of any liquid should be wiped up or absorbed and removed as soon as possible. Not only is this a responsible action as far as Health and Safety is concerned, but it will also help you to keep your floor in good condition. Once the spillage is removed the area should be cleaned as usual with your standard floor cleaner. If a sacrificial coat has been previously applied the floor should be inspected to see if this remains. If not, it should be reapplied as soon as possible.

COFFEE, TEA, RED VINE

It is necessary to wipe out spills and drops immediately. Use a general cleaning agent and clean water. After wet (chemical) cleaning the surface should be always carefully washed down by clean water. During the cleaning procedure it is safe to temporarily separate the respective part of wet floor till it completely dries up. Don't use any hard brushes or cleaning tools with abrasive layers.

This type of floor should not be polished or glazed.

7.2.2 IMPROVEMENT OF FLOOR APPEARANCE AFTER COMPLETION OF THE PROJECT

When construction continues after floor finishing, further contamination of the surface usually occurs. There may be an even case that after finishing of construction or final cleaning the floor appearance is not acceptable for various reasons.

The situation can be improved using the following method:

- Cleaning the floor thoroughly (degreasing)
- Use very fine sandpaper to increase adhesion to the surface.
- Additional application of next layer of Sikafloor® -419 W or polyurethane coating Sikafloor® -304 W.

8 LIMITATIONS

- These products may only be used by experienced professionals.
- This flooring system is not recommended for permanently wet rooms or areas and outdoor application.
- Don't underestimate the number of workers and mixing capacity according to application area and layer thickness. If in doubt apply a testing area first.
- For more information about substrate evaluation and preparation please refer to the latest method statement "EVALUATION AND PREPARATION OF SURFACES FOR FLOORING SYSTEMS"
- Freshly applied Sikafloor®-4400 DecoCem must be protected from damp, condensation, and water for at least 24 hours.

- Do not apply Sikafloor®-4400 DecoCem with higher amount of water than described.
- Apply Sikafloor®-4400 DecoCem to tack free primer coatings only.
- Avoid high ventilation during application and drying, otherwise drying cracks can occur.
- Cover large glass areas during application to avoid direct sun on the fresh applied screed or coating.
- Every change of the temperature or humidity must be slow and gradual.
- Please take care that the material will be mixed and stirred properly for two minutes and shortly mixed after next two minutes as described in the paragraph Mixing Sequence. Incorrect mixing can lead to color differences.
- If heating is required do not use gas, oil, paraffin, or other fossil fuel heaters, these produce large quantities of both CO₂ and H₂O water vapor, which may adversely affect the finish. For heating use only electric powered warm air blower systems.
- The floor heating and any local heaters must be off during screed application and next 3 days to avoid uneven of fast drying.
- For exact color matching, ensure Sikafloor®-4400 DecoCem from the same production batch. Please control batch numbers.
- It is extremely important to apply the topcoat on clean surface only.
- The topcoat is changing slightly the original DecoCem color. You can steer the color by using different coatings. Best way to explaining the color adjustment possibilities is on site sampling.

9 LEGAL NOTE

The information, and 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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