

CONCRETE LOOK SELF-SMOOTHING FLOOR

SC+®

PRODUCT DESCRIPTION

Concrete Look Self-smoothing Floor MERCADIER SC+ is a self-leveling and self-smoothing product: fusion of special cement, mineral fillers, liquefiers and admixtures.

- Its formula ensures that the final material has at a time decorative properties (thanks to its fine grain) and high mechanical resistance.
- Due to its fluid consistency it is easily applied and offers you a possibility to carry out a fast execution of interior floors.
- Its tight structure creates an effect of smoothed concrete uniformly coloured in its mass. Like all the layered polished concrete coatings it will be more or less nuanced depending on colour and application conditions.
- Applied with a thickness of 4 to 10 mm, it allows working on usual concrete surfaces and tiled floors. Please, contact us for more information on surface preparation and adapted primers.

APPLICATION AREAS

- Indoors
- Concrete screeds
- Anhydrite screeds
- Tiles
- Fiber screeds
- The product can be used on floors with hot water floor heating and on low-tension low-temperature electric underfloor heating.
- Other surfaces: please, contact us.

NECESSARY TOOLS

- Measuring glass, 3 buckets of an appropriate size (about 30 liters) or dustbins (flat bottom), finishing trowel, stirrer (mounted on a drill), sieve (12 mm), sanding material: single-disk polisher and pads for it.
- Gloves: it is recommended to put on gloves since the mixture can damage the skin (see safety/precautions below) like many masonry/decorative products.
- Tools must be cleaned with water immediately after use.
- Ideal application team: 3 people (two of them prepare the mix while the 3rd pours it). This combination allows working rapidly and to link the batches together to ensure the uniformity of application.

SURFACE PREPARATION AND PRIMERS

- The surface has to be resistant, non-friable, stable, dry and cohesive (1 MPa cohesion is necessary)
- The surface must be free of dust, clean, sound and free of loose parts. It is essential to clean the surface from any traces of oil, grease, laitance etc.
- Scrape off paint, plaster, concrete laitance and glue traces.
- Fill the holes and cracks with a product suitable for your substrate.
- If your surface is cracked or uneven, we recommend you to lay:

A fiber patching screed (P4S, please, contact us) to level the surface. This will facilitate implementation and contribute to a more aesthetic render.

Or a screened sanded Epoxy Primer (see Primers technical specifications)

- Expansion joints, movement joints and existing peripheral joints must be preserved. Place foam tape onto these joints.
- It is imperative to put foam strips to create peripheral expansion joints, especially on external angles and columns that protrude. It will ensure regular expansion of concrete and help avoid cracking.
- If your area contains wainscot paneling, protect the wood with a plastic masking tape to avoid its swelling during application (take off the tape after drying).
- Apply an adapted primer on all the surfaces (refer to primers overview and technical specifications).
- Specifics depending on surface:
 - a) Tiles: probe tiles' cohesion, remove loosen tiles and fill in their spaces. Clean with caustic soda in order to remove fat remains and ensure best possible adhesion. Then rinse and leave to dry.
 - b) Anhydrite screed: wait at least for 8 weeks before recovering then probe residual moisture – it must be below 0.5%. According to the technical specification of a manufacturer (calcium carbide test). Even though SC+ is adapted for this type of surface its preparation must be especially meticulous and conform to screed manufacturer's instructions to lower the risk of later detachment of concrete coating from the surface that was unfortunately often noticed on this type of substrate.
 - c) Hydraulic screed (cement...): wait for at least 28 days (according to D.T.U. – the French Building Code regulations) before covering over and measure residual moisture – it must be inferior to 4.5%.
 - d) Adjuvant hydraulic screed (cement...): generally allows a faster coating, but refer to technical specification of a manufacturer before coating.
 - e) New floor heating systems: carry out a preliminary heating (refer to technical specification of a manufacturer).
 - f) Floor heating system (new or old): heating must be turned off 48 hours before product application.
 - g) Room heating: turn off one day before product application
 - h) Anhydrite screed (based on calcium sulfate): wait at least for 8 weeks (according to D.T.U. – the French Building Code regulations) before covering over and measure residual moisture – it must be inferior to 0.5% according to technical specifications of screed manufacturers (use calcium carbide test).
- In case the product is applied on surface with underfoot heating and/or with the thickness superior to 6mm, create peripheral joints with a special tape for peripheral joints.
- i) Roughening : use a fiber reinforcement P4S and then wait at least 7 days of drying/hardening ; before recovery, probing residual moisture: less than 4.5%
- j) Sanded Epoxy Primer: apply the SC+ in 5/6mm of thickness.

Primers Overview

In any case and irrespective of the substrate (excluding anhydrite screeds) use of the system «Sanded Epoxy Primer» is the best surface preparation that limits risks of micro cracking.

Nevertheless, other preparations can be carried out.

Patching compounds, cement screeds, cement or other porous surfaces or in some other cases	<ul style="list-style-type: none">• - Porous Substrate Fixer (for very porous substrates)• - Sanded Epoxy Resin Primer (essential for damaged substrates) or• - Multi-Substrate Sanded Primer, respecting the consumption indicated for poured concrete.
Tiles and interior cement tiles, some old non-porous screeds, old terracotta (after grease removal).	<ul style="list-style-type: none">• Sanded Epoxy Primer or• Textured All-surface Primer
Anhydrite screeds	<ul style="list-style-type: none">• All-surface Primer: the surface must be laitance and dust-free. Screed moisture must be inferior to 0.5% (use calcium carbide test). Apply the 1st layer diluted at 20%. Then place the 2nd layer non-diluted.

MIX PREPARATION

- Vigorously shake the bottle with the colouring concentrate to obtain a homogenous colour.
- Decant the liquid into a bucket and complete with water to obtain the mix of 5.2 litres (water + colouring concentrate) for a complete kit of 20 kg (or stick to the weights indicated in the table at the end of this technical specification).

Caution: the foam appearing while stirring the colouring concentrate in water can give a misleading impression that the level of the liquid is good. Check the real level having moved the foam aside.

! CAUTION:

1) Excessive amount of water added to the mix might lead to serious differences between the batches (i.e. differences in colour etc.) as well as to cracking and other mechanical problems;

2) Lack of water in the mix will make it less smooth and will not let the product spread properly.

- Make sure that you have used all the pigment by rinsing several times the bottle of the colouring concentrate and pouring this liquid into the bucket with pigment.
- Stir again to obtain the liquid with a homogenous colour.
- Gradually add powder to the homogeneously coloured liquid constantly stirring it with the help of a stirrer. The mix must be fluid and homogenous (without lumps). This operation must not last for more than 3 minutes.
- Then the mix must be sieved to remove all the lumps.
- Leave the mix for 2 minutes to let the bubbles disappear.
- This process must be repeated for every batch. In their turn, batches must be poured continuously until you accomplish your building process.

APPLICATION

- Floor temperature: 15 to 25°C.
- Minimal possible floor temperature is 10°C.
- Self-smoothing time: 20 to 25 minutes once the mix is made.
- Ideal application conditions: 15 to 25°C.
- Relative air humidity: not more than 65%.
- Define the desired thickness and the surface to cover by a batch (refer to the table in the appendix).
- In order to ensure homogenous application and avoid visible differences between the batches, they must be applied fast one after another. Besides, when a batch is mixed and was left aside for several minutes, stir it for 15 seconds right before the application (it can be done manually) in order to re-homogenise the coloured water and the sand.
- Carefully pour the mix onto the surface.
- Using a finishing trowel, help the product get into the right places (i.e. angles) and adjust the thickness according to the table in the appendix.
- Pay particular attention to junctions with walls.
- A fresher batch must slightly come over the previous one in order to level out the surface.
- Crush or remove the lumps with the edge of a finishing trowel.
- If the colour of the product is not homogenous while it is applied, use a finishing trowel to homogenise it before it sets.

- For a more uniform rendering in terms of colours and nuances it is possible to use a spiked roller adapted to the thickness of your coating. In this case:

1) It is recommended to work in a group of 4: two persons prepare mixes, one person works a finishing trowel and the last one works a spiked roller. Two people pouring and leveling the batches must wear spiked shoes.

2) Apply the coating as indicated above and gradually pass the spiked roller on a product yet fresh and liquid (otherwise the roller might leave traces).

3) A pass of a finishing trowel is necessary (simply skimming the surface) to eliminate all the traces of the spiked roller.

- Avoid exposure to wind and sun at the moment of application and during the drying period. If indoors, close the shutters and fasten the windowpanes, avoid air currents.

- Avoid draughts under the doors: place some tissue to avoid multiple cracking at this area.

- If the appearance of the first layer is not satisfactory, it is possible to place the seconde one (15 mm maximum for the total thickness of two layers). In this case, leave it to dry for 3 days previously applying a primer keeping to the technical specification of the product.

FINAL DRYING/SANDING

- Time frames are indicated for the room temperature at 20°C, thus they may vary depending on it.

- Waiting time before it is allowed to step on the surface (preferably in socks): one day (may vary depending on the temperature and moisture).

- 72 hours after application (20°C), polish the coating with a single-disk polisher (ideally with a PAD; however, you can also sand with a sanding paper – grain 150/180 – in this case the appearance of the coating will be visually more textured) to obtain even smoother and more closed surface.

- The product must be protected from the frost, wind and sun during its setting and hardening. Do not use any plastic film or plastic overwrap since it will not let the product dry in normal conditions.

- Gradually restart the heating (floor or room heating) the earliest 48 hours after application since temperature difference between the air and the surface might lead to cracking (of thickness inferior to that of a hair). It must be done before the use of sealers.

- The coating will reach its highest resistant capacity after 28 days.

FINITION / PROTECTION ET TRAITEMENT

- It is obligatory to treat the surface with one of our finishing products.

- The treatment is chosen according to the use of the place (refer to sealers overview, contact us) and contributes to the lifespan of the product.

- The treatment must be done at least 5 days old (time frames indicated for 20°C). It is imperative to check before the residual moisture content (< 1%), the ground temperature and the ambient temperature (see treatment technical specifications)

- Protect the SC+ with a treatment system according to the project :

Impregnator + Mono Aqua Varnish: Room floors

Impregnator + Bi Aqua Varnish for Floors: Floors with high traffic.

- Impregnator + Solvent-based Protection : bathrooms (floor only)
Impregnator + Bicomponent Solvent-based Varnish: Countertops
- Maximum hardness of a concrete look seamless floor is reached 28 days after the sealer sets.
 - Regular maintenance is necessary. Its frequency is varied depending on how the area is used and also on a selected sealer. To preserve the product and its sealer, it is recommended:
 - To place the felt pads under the legs of the furniture, chairs etc.
 - Not to leave any coloured water spots or grease stains (wipe them out as soon as possible).
 - To clean surfaces with a shampoo MERCADIER.

COVERAGE & PACKAGING & STORAGE

- Coverage: 1.4 kg / m² / mm
- Format: a kit includes:
 - A bucket of powder;
 - A jerrican of colouring concentrate.
- The full kit consists of 20 kg of powder and a dose of colouring concentrate.
- On tiles, especially if the seams are well marked, the product must be poured with a thickness of at least 7 to 9 mm (depending on the thickness and depth of the seams) to prevent their reappearance at drying. Otherwise use the Sanded Epoxy Primer.
- The product can be kept for 1 year in its original unopened packaging in a place protected from moisture.

Surface to be covered with 1 kit (20 kg of powder + 5.2 l of liquide) depending on thickness:

Thickness (mm)	4	5	6	7	10
Surface to cover (m ²)	3.5	2.8	2.3	2	1.4

MECHANICAL PROPERTIES

The SC+ will reach its maximum resistance capacity after 28 days.

- Adhesion test consists in verifying the tear strength of the product relative to its support. Traction is performed 35 days after application of the product.
- Flexion resistance test/compression determines the weight limit before fracture of the material in flexion and in crushing.

Examples of mechanical resistance of SC+

TEST	RESISTANCE in MPa
Compression	30Mpa
Traction / Flexion	6Mpa

These values are orders of magnitude during laboratory tests. They can vary considerably depending on application conditions.

ASTUCES

- In order to facilitate application you can prepare all the water mixes (colouring concentrate + water) before the beginning of your building process and pouring of the first batch.
- To evaluate the desired thickness, think backwards. It is difficult to estimate the thickness of the product already poured, but it is easy to outlier the surface to be covered with one batch (refer to the table in the appendix). In such a way you make sure to pour the product of a necessary thickness.
- Use a drill to stir (with a stirrer): reverse speed is generally lower, that is more adapted, since it reduces air flux and bubbling.

RELATED PRODUCTS

Primers: Sanded Epoxy Primer or All-surface Primer

- Sealers:

* Impregnator Sealer + Mono Aqua Varnish: Room floors

* Primer before Varnish + Bi Aqua Varnish for Floors: Floors with high traffic.

* Impregnator Sealer + Solvent-based Protection: bathrooms

(Recommended exclusively for floors in bathrooms)

* Impregnator + Bicomponent Solvent-based Varnish: Countertops

RECOMMENDATION AND WARNING

- Refer to the latest version of this technical specification(see website). Our distributors and Technical support are at your disposal for any clarification.
- Decorative coating such as layered polished concrete is the material with a 'continuous aspect', seamless and almost without fractionation. Having certain flexibility, it accepts a slight surface deformation, but up to a certain extent. Thus, this decorative material is sensitive for surface movements (similarly to paint or any other decorative coating). If the surface suffers from substantial differential movements, decorative coating might become cracked despite any precaution measures taken while laying the product.
- Performance and durability guarantees for the decorative coating may be given only in case a complete system of MERCADIER products is used (primer, product itself, sealer) and strictly according to instructions for application and maintenance of the system. Thus, the manufacturer will not be liable for poor product's performance if an application did not conform to our instructions and if the integral system was not used.
- All the information, tips and advice relative to final illustration of MERCADIER products are given in good faith. They are based on knowledge and experience that MERCADIER has acquired so far regarding its products that were appropriately stored and handled, and applied in normal conditions. In practice, the differences between materials, surfaces and specific application conditions are such that provided information, written recommendations or given advice do not imply any warranty of merchantability other than the legal warranty against hidden defects.
- Colours and aspects in our color charts are indicative, and cannot be considered as contractual. The same is applied for boards and panels displayed at retail outlets. It is preferable to use identical samples as much as possible. These products lead to results with subtle differences that can also arise depending on application conditions (applicator's gestures, temperature etc).

SAFETY / PRECAUTIONS

Classification according to Regulation (EC) No. 1272/2008: The product is not classified according to the CLP Regulation.



In accordance with the new French regulations that establish limit value for the VOC (Volatile Organic Compound) present in constructions materials, this product MERCADIER respects the environment. This regulation states that construction and decoration products must be provided with a label indicating the level of volatile organic compound emission in a simple and readable way. We have the pleasure to confirm that this product is A+ (the lowest possible VOC emission value).

The information contained in this data sheet is the expression of our knowledge and test results, and may under no circumstances be considered as providing a guarantee, nor as engaging our responsibility in the event of faulty application.

General grid of available colors and precise weighing to prepare the mixing water: water + coloring dose (kg of tinted liquid for a 20kg bucket of powder) and in the case of the pump application system

NB: for a test dose of 2.5kg of SC+ powder, the quantity of tinted liquid in the above table (water + colorant dose) is to be divided by 8.

	Water + Dose of colorant (in kg of tinted liquid for a 20kg bucket of powder)	Pump system case Water + Dose of colorant (in kg of tinted liquid for a 20kg bucket of powder)
Ariel	5,31	4,60
Berlioz	5,23	4,70
Borie	5,34	4,70
Longani	5,24	4,70
Marcassin	5,31	4,60
Moai	5,23	4,70
Oliver	5,30	4,60
Perissa	5,24	4,60
Samovar	5,30	4,60
Sardelle	5,27	4,70
Sfumato	5,21	4,80
Shadow	5,24	4,60
Sphinx	5,34	4,70
Toto	5,22	4,70
Toumane	5,28	4,70