SELF-SMOOTHING FLOOR AXXX

PRODUCT DESCRIPTION

AXXX 'cast soil' is a product made from calcium sulphate (anhydrite), tinted in mass, self-smoothing and self-leveling, extremely smooth, and fast catching. High-performance fluidizer technology allows for excellent smoothing.
- This homogeneous finish with an exceptionally smooth and soft surface offers the user a decorative floor of great hardness and aesthetic.
- Its formula with innovative raw materials gives it both decorative properties by the finesse of its grain, as well as a high mechanical resistance (adapted to heavy traffic). With its excellent smooth finish and formulation, it represents a new generation of 'cast floors with exceptionally low removal surface.
- It is fluid in consistency and can be easily implemented and allows the rapid construction of indoor floors.
- Anhydrite-based 'cast floors' are a quick and ideal solution for building surfaces, whether for renovation or new habitat.
- Applied to a thickness of 3 to 10mm, it allows to work on most supports and on existing tiles.

APPLICATION AREAS

- Interior (except wet room)
- Hydraulic screed (cement, excluding light screed)
- Anhydrite screed
- Tile (consult us for the appropriate preparations and primaries)
- Fiber screed
- Suitable for hot water heating floors and low-temperature electric floor heaters.
- Not suitable for damp rooms (bathroom...) and any use with a risk of humidity.
- Not suitable for cellars and full foot in the crawl spaces if there is a risk of hair uplift.
- Not suitable for radiant floors and cooling floors (condensation risk, dew point).
- Others supports: consult us

NB: As with our other self-smoothing floor, in case of a new heating floor the first heating and testing must be done before the. In all cases the heated floor must be completely stopped at least 48 hours before and can only be restarted at least 48 hours after application.
The AXXX should not come into contact with insulation and heating pipes due to the risk of corrosion. This is especially true for galvanized steel heating pipes.

TOOLS NEEDED

- Measuring glass, 3 buckets with an appropriate size (about 30 liters) or dustbins (flat bottom), finishing trowel, stirrer (mounted on a drill), sieve (size of 6mm stitches), sanding equipment (monobrush and white PAD discs).
- 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 to work rapidly and to link the batches together to ensure the uniformity of application.

SURFACE PREPERATION AND PRIMERS

- The support must be strong, non-crumbly, stable, dry and cohesive: the support must have an internal cohesion at least greater than 1 MPa.
- The surface must be free of dust, clean, sound and free of loose parts and free of any product that could affect the adhesion: oil, grease, paint, plaster, concrete milk and glue traces. Remove them by cleaning and/or scraping and/or sanding.
- Fill the holes with a suitable product.
- Repair localized cracks in the support by a product adapted according to the DTUs in force.
- 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. In any case all the cracks must be fixed before application of seamless floor product

Or a sanded Epoxy Primer, screened in case of cracks (see Primers technical specifications)

- Install peripheral seal strips around the edges of the rooms, at the outs and around the poles, to allow the concrete to expand properly and limit the risk of micro-cracks. The thickness of the peripheral seal strips should be proportional to the thickness of AXXX (e.g. 5 mm AXXX = thickness of the peripheral seal strips equal to 5mm).
- Keep to expansion and contraction joints and existing peripheral joints of screeds and slabs. It is especially important on under floor heating.
- 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 (time before covering, refer to technical specifications).
Specifics depending on surface:

Tile: probe tiles' cohesion, remove loosen tiles and fill in their spaces. Clean your tiles with professional washing powder in order to remove fat remains and ensure best possible adhesion. Then rinse and leave to dry

Hydraulic screed (cement, excluding light screed): wait for at least 28 days (according to D.T.U. – the French Building Code regulations) before covering and measure residual moisture – it must be inferior to 4.5%.

Adjuvant hydraulic screed (cement): generally, allows a faster coating, but refer to technical specification of a manufacturer before coating.

New heating floor system: the first heating and testing tests must be done before application. The heated floor must be completely stopped at least 48 hours before and can only be restarted at least 48 hours after application.

Hot water heating floor: pre-heating requirement (refer Technical Notice of the Manufacturer).

Low-temperature electric heating floor: stop it 48 hours beforehand before the product application.

Room heating: Turn off one day before product application.

Anhydrite Cap (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).

Screed: use a P4S-fiber screed or screed and wait at least 7 days of drying/hardening before covering, probing the residual moisture in the support (a lower humidity of 4.5% is required).

Primers overview

Screed, hydraulic screed or other porous supports or in some cases "damaged" supports	• Epoxy Primer (imperative in case of damaged support) or • Fiber screed MERCADIER • Textured All-Surface Primer respecting the consumption indicated for a smoothing floor
Tile and tiles of cement inside or in some cases old not porous screed, old terracotta (after degreasing)	• Textured All-Surface Primer or • Epoxy Primer
Anhydrite screed (the reception of the screed and its finish must be done by the building professional beforehand: be careful with flouring in particular)	• Textured All-Surface Primer: The support must be devoid of milk and free of dust. The humidity of the screed should be less than 0.5% (test of the carbide bomb or measure with a humidimeter). Apply a first layer diluted to 20% and then pass a second undiluted layer (respect the recommended coverage)

MIX PREPARATION

- Vigorously shake the bottle with the colouring concentrate to obtain a homogenous colour (it is normal to have little differences between the levels of colouring concentrate in jerricans – most important is to keep the constant pigment quantity)
- Then transfer to the waste bucket and supplement with water at room temperature to obtain a mixture of total liquid (water + colouring concentrate) equal to the weight shown in the table at the end of the technical data sheet.

WARNING:

An additional water addition to the proportions shown above could result in larger waste fittings (color differences) as well as cracks and other technical problems.

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

- Make sure you have removed all the pigment by rinsing your colouring concentrate several times in the waste water.
- Mix the whole thing again to obtain a homogeneous liquid (colouring concentrate + waste water).
- Pour the powder gradually into the coloured homogeneous liquid while mixing with the whisk (about 300-500 rpm). Do not hesitate to scrape the edges and bottom of the bucket (using a Maryse spatula) in which the mixture is made in order to obtain a fluid and homogeneous mixture (without lumps). This operation should not last more than 3 minutes.
- The product thus mixed must be passed through the sieve (size of the 6mm) in order to eliminate any residual lumps.
- Let the mixture rest for 3-5 minutes to let the bubbles disappear (the bubbles are generated by mechanical action when mixing).
- This process is to be repeated for each kit, it will be necessary from this point to flow the product in a loop until the end of the work

APPLICATION

- Ideal application temperature: 15 to 25°C
- Minimum floor temperature for application: 10°C
- Open time: 15 to 20 minutes after mixing (for a temperature of 20°C, an ambient humidity of 65% and a layer thickness of 5mm)
- Relative humidity of ambient air: less than 65%
- Specify application thickness and therefore the surface to be covered by 'wasted' (see table # Coverage)
- In order to achieve the most homogeneous rendering possible and avoid the connections between wasted, the work must follow quickly. Also, once the product is mixed and rested, stir the mixture for 15 seconds just before application (this must be done manually using a large stainless-steel spatula for example) in order to regenerate the mixture.
- Poor gently the mixture onto the floor.
- The freshest waste (more fluid consistency) will slightly overflow on the previous one in order to even out the surface.

- With the help of the finishing trowel, help the product to set up and allow it to go into the corners...).
- Specially care for the fitting with the bottom of the walls.
- If the colour of the product does not look homogeneous when applying, use finishing trowel to homogenize it before taking the product.

- Avoid exposure to wind and sun when applying and drying. Close shutters or obscure windows and avoid drafts. Block drafts under doors to avoid the risk of earthenware at these locations.

FINAL DRYING / SANDING

The product must be protected from frost, wind and sun while it is being taken and hardened. Do not use tarpaulins, cartons, carpets, which would prevent the product from drying in good conditions.
- The deadlines are indicated for an ambient temperature of 20 degrees and may vary depending on the application conditions.
- Waiting time before it is allowed to step on the surface (preferably in socks): the next day
- As soon as the surface of the coating has hardened sufficiently (check the residual humidity with a humidimeter), and at least 48 hours after application (depending on the conditions of humidity, temperature and thickness applied), polish the coating with a monobrush (only with a white PAD) to obtain an even softer and more closed surface. A very fine microperspot develops, it must be sucked in with a vacuum cleaner.
- Heating (ground or ambient heating) no earlier than 48 hours after application and gradually, as a temperature difference between the support and the ambient air can create slight micro-cracks (less than the thickness of a hair). This must be done before the protections are applied.
- Self-smoothing AXXX will reach its maximum mechanical resistance capacity after 28 days.

FINISH PROTECTION AND TREATMENT

- A treatment of the surface with one of our finishing products will have to be carried out.
- The treatment chosen varies according to the use made of the premises (see sealears overview, contact us) and contributes to the longevity of the realization.
- Finishing treatment should be done after checking the residual humidity level in the self-smoothing floor. It is imperative to check beforehand the residual humidity (less than 1%) using a humidimeter, floor temperature and ambient temperature (see Technical Data Sheet)

- Protect the AXXX with a system suitable for your achievement:
    Impregnator + Mono Aqua Varnish: Room floors
    Impregnator + Bi Aqua Varnish for Floors: Floors with high traffic

Regarding the application of the impregnator, the technical application is different from others self-smoothing floor. Refer to the Technical Data Sheets of the impregnator + varnish system

- Commissioning: wait at least 1 week for normal traffic after drying the protection system. During the first 10 days take a few precautions:

  Do not cover, do not have carpets, do not move heavy furniture, dry cleaning (vacuum or broom).

- Regular maintenance is required. Its frequency will vary depending on the use made of the place and the selected finish. In order to preserve the product and its finish, it is advisable to:

  Attach felt pads under the feet of furniture, chairs etc. ...

  Don't let the stains of coloured water, fat... stagnate, wipe them off as quickly as possible

  Clean surfaces with Mercadier Cleaning Shampoo

COVERAGE & PACKAGING & STORAGE

- Coverage: 1.7kg /m^2 / mm
- On 3mm smooth support / On tile from 5 to 7mm depending on the depth and width of the joints.
- Formats: the kit includes:

  A 25kg bucket of powder

  A jerrican of colouring concentrate

- The products can be stored for 6 months in their original, undeered packaging, free from humidity and heat.

Surface to cover with one kit depending on thickness:

Thickness (mm)	3	4	5	6	7	8	9	10
Surface to cover (m^2)	4.9	3.7	2.9	2.5	2.1	1.8	1.6	1.5

MECHANICAL PROPERTIES

The AXXX will reach its maximum mechanical resistance capacity after 28 days.

- Flexion/compression resistance test: determines the limit weight before the material breaks in bending and crushing

Mechanical resistances of the AXXX

TEST	RESISTANCE in MPa
Compression	C40
Flexion	F10

These values are orders of magnitude of laboratory testing. They can be significantly altered by the conditions of application.
For example, compression resistance to our self-smoothing floors can be categorized according to an index that represents a performance index (compression resistance):

- SC + = index 100
- RBX = index 102
- AXXX = index 159

The measurements were carried out on realsites. These tests are therefore not standardized and do notwind in any way to act as a guarantee.

TIPS

- 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 MERCADIER

- Textured All-Surface Primer
- Epoxy primer + Silica
- Protection systems (impregnator and varnish)

RECOMMENDATIONS AND WARNINGS

- See the most recent version of this technical specification (contact distributors). Our distributors and our 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 guarantee 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

Regulation Classification (EC) 1272/2008: The product is not classified under the CLP regulation.

In accordance with the new French regulations that impose limits on the rate of VOC (Volatile Organic Compound), present in the products of construction this product Mercadier respects the environment. These regulations require that construction and decoration products must be labelled with a simple and legible label indicating their level of emissions of volatile pollutants (VOCs).
Information on the level of emissions of volatile substances into indoor air, at risk of inhalation toxicity, on a class scale ranging from A (very low emissions) to C (high emissions).

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 colours and precise weighs to prepare the waste water: water + colouring concentrate (kg of tinted liquid for a bucket of 25kg of powder)

NB: For a more fluid product and better tension/opening time, a flexible addition of 200g (0.200 kg) of water is possible per heat between 21 and 25°C.
NB: for a test dose of 2.5kg of AXXX powder, the quantity of tinted liquid in the above table (water + tinting dose) should be divided by 10.

	Water + Dose of colorant (in kg of tinted liquid for a 25kg bucket of powder)	**Pump system case** Water + Dose of colorant (in kg of tinted liquid for a 25kg bucket of powder)
ASWAN	5,30	4,50
COFETE	5,21	4,40
CORDILLERA	4,99	4,40
CRASPEDIA	4,89	4,40
DONKEY	5,04	4,40
FROCK	4,88	4,40
GAZOU	4,95	4,40
GIVRE	5,27	4,50
GRIBI	4,84	4,40
HIVER	4,89	4,40
MARNE	5,50	4,50
MILNA	5,43	4,50
MOON	5,19	4,40
NONZA	4,98	4,30
OPERA	4,90	4,40
QAMSAR	5,64	4,60
SABOR	5,46	4,50
SO BRITISH	5,09	4,40
TAHINI	5,11	4,40
ZEROUZI	5,11	4,50