

SIBECO DESIGN F

Self levelling decorative floor

AT GLANCE

- 100% mineral
- Environmentally friendly
- VOC and APEO-free
- Wide color range
- Homogeneous and natural look
- Indoor and outdoor use
- 3 to 40 mm thickness
- Easy application
- Pumpable
- Fast curing
- Waterproof
- Saltwater resistant
- Washable with high-pressure water
- Conductive
- High abrasion resistance



Manufacturer
SIB, Sociedade Industrial
De Britagem De Pedra, LDA



DESCRIPTION

SIBECO DESIGN F is an advanced, professional grade self-levelling product, produced using selected additives, aggregates and special binders. It is suitable for all areas indoor and outdoor, domestic, commercial, industrial, and heavy traffic areas.

SIBECO DESIGN F does not shrink and has very high abrasion resistance. These characteristics allow this product to be used for the execution of high performance and durable continuous floors.

SIBECO DESIGN F can be fully customized, with a homogeneous and natural finish.

Due to its unique low-thickness resistance ($> 3 \text{ mm}$), it allows for quick application. Through pump application, it is possible to execute up to 250 m^2 per hour.

Its formulation is based on harmless, VOC-free non-hazardous raw materials.

FIELDS OF APPLICATION:

SIBECO DESIGN F can be used in indoor and outdoor spaces: homes, building entrance halls, museums, cinemas, exhibition halls, offices, general stores, food industry, restaurants, car parks, hotels and hospitals, industrial facilities.

TECHNICAL PROPERTIES AND CHARACTERISTICS

Compressive strength (EN 13892-2)	20 MPa (N/mm ²) – 1 day 30 MPa (N/mm ²) – 7 days 40 MPa (N/mm ²) – 28 days*
Flexural strength (EN 13892-2)	4 MPa (N/mm ²) – 1 day 7 MPa (N/mm ²) – 7 days 10 MPa (N/mm ²) – 28 days*
Abrasion resistance (EN 13892-4)	BCA AR 0.5*
Waterproof	Up to 1,0 bars
Application temperature	Min. 5°C (41°F) - max. +35°C (95°F)
Consumption	2 kg/m ² /mm (4,4 lbs/m ² /mm)
Mixing rate	18 – 19% water (3,6 – 3,8 l per 20 kg/44 lbs of SIBECO DESIGN F)
Application thickness	3 – 40 mm
Opening time	The opening time depends on many factors, from wind to support and air temperature. In addition, it also depends on the temperature of the product and the water. We always recommend performing a sample on a small area before application.
Drying time (20°C)	Walkable – 4 hours Light load – 24 hours Full load – 5 days Full load (outdoor) – 7 days

*Technical results may vary depending on site conditions, age of SIBECO DESIGN F and pigments used. In addition, the percentage of water influences the final strength of the material.

Ambient temperature, support and product: 5 to 30°C (41 to 86°F) – Outside of this range, the application, aesthetic or mechanical properties of the product, as well as its adhesion can be altered.

The application of SIBDURO 360 is an essential treatment to maintain the correct level of abrasion resistance.

SUPPORT PREPARATION

Before application, ensure that the surface is stable and has a tensile strength of at least 1.5 MPa.

The support must be dry, free from any trace of pollution. Old supports with low adhesion must be removed. In any case, a test must be carried out to validate the compatibility of the products.

Mechanical preparation of the surface is recommended, using a diamond, milled, sandblasted or sanded mechanical process. Cracks, holes and other deeper defects must be filled and repaired.

The surface must be dry, clean and free of dust and loose particles to be primed with SIBPRIMER A3. Apply a coat of SIBPRIMER A3, adjusting the dilution according to the porosity of the support. Apply an additional layer of primer if necessary. The reapplication of the primer and/or the application of the material must be done between 2 and 6 hours after the first application. Apply SIBECO DESIGN F between 2 and 6 hours after applying the primer. Consult the SIBPRIMER A3 Technical Data Sheet for more information.

Foam, special tapes or other flexible separators should be used to avoid direct contact with the product and walls, columns, tubes or other objects going through the floor.

The edge joint must be prepared with a suitable expansion strip. Thereby attention must be paid to a clean adhesion to avoid material flowing below or behind the expansion strip.

For simultaneous work on various substrates with changing absorbencies, the surface has to be pre-leveled to maintain a uniform coloring of the mortar. In this case, use epoxy primer broadcasted with quartz sand to block substrate absorbency differences.

SIBECO DESIGN F is applied in very thin coats (> 3 mm), so a well-prepared and levelled surface is ideal for proper application.

NOTE: turn off heated floors (when turning back on do it gradually), watch out for wind, block sources of natural light (may cause fast drying), close access to all people and animals (cats, dogs, etc...).

MIXING

Mix the material with a mechanical electrical mixer ("HIPO MIX" type). First, fill with the required amount of water, then add the powdered material while mixing.

The material must be intensively mixed for 3 to 6 minutes, until a homogeneous mixture without lumps is obtained. Let it rest for 1 minute and then mix again for another minute. At the beginning of the mixing process, the mortar is slightly creamy. Do not add water at this stage as the material will become more liquid.

During application, and whenever the mixture remains in the container for a long time, remix a little before reapplying.

Before pouring the mix on the floor, we recommend to sieve it through a 2,5 to 3 mm mesh to eliminate the risk of lumps.

A test sample must be made before application to adjust the correct amount of water to be used in the mixture and to test workability and drying time. Wind, temperature, air and substrate humidity influence the workability of the product and its drying time. There may also be slight variations in the mixing ratio, depending on the color and pigments used.

RETARDER

All fast-setting products have a relatively short open time for application. Typically, it will vary between 15 to 35 minutes. However, as at the time of product production, SIB never knows in what climatic conditions the product will be applied, SIB RETARDER (retarder product) is supplied separately.

We advise that a test be carried out exactly before the application on site, to check the correct % of water in the mixture, and the open time of the product.

High temperatures, low humidity and wind are factors that influence the product's open time.

If the open time is too short, the retarder can be added directly to the water or mixture. 20 gr of SIB RETARDER per bag of SIBECO DESIGN F, increase the open time in around 15 min. Is not recommended to add more than 60 gr per bag of SIBECO DESIGN F.

APPLICATION

After mixing, pour SIBECO DESIGN F onto the prepared surface and spread using a pin trowel or gauge rake in the desired thickness.

Let the material sit for 1 minutes after mixing to release air bubbles prior to application, which minimizes air bubble formation in the material and helps provide a better finish.

Roll over the fresh surface with a metal spiked roller. The spikes should be long enough not to move the material and not to create a curl.

The layer thickness must be at least 3 mm. For an anti-slip finish, the application thickness is 3 to 5 mm. For a polished finish, the application thickness is 3 to 40 mm.

The floor must be protected from drying too quickly (no drafts or direct sunlight) within the first 24 hours. Do not cover the finished surface with plastic or not breathable materials. Outdoor, during high temperatures, prefer an early morning or late evening application. Do not apply during windy days, too high temperatures and in direct sun light. The setting time may vary according to external temperatures, the sun, the wind.

If the base does not have joints, SIBECO DESIGN F can be applied without retraction joints. Joints in existing floors must be respected in the new application or special precautions must be taken. If joints are cut into the floor, they must be filled to prevent water from infiltrating the product, which could cause efflorescence or discoloration of the joints.

If it is necessary to apply a second coat again, prepare the surface again and reapply a coat of SIBPRIMER A3 to prevent SIBECO DESIGN F from quickly setting.

POLISHING

SIBECO DESIGN F can be grinded and polished after 24 to 72 hours under normal conditions.

Polishing any coating requires a high degree of experience and skill. SIBECO DESIGN F is polished with diamond tools (3 to 4 fast steps). Consult the technical department to know the polishing protocol.

ANTI-SLIP FINISH

SIBECO DESIGN F can be seeded with aggregates to create non-slip surfaces. Consult the technical department for more information.

SIBECO DESIGN F can also be applied on ramps, with the addition of a specific additive. Consult the technical department for more information.

SIBDURO 360

SIBDURO 360 is mandatory to obtain higher abrasion and chemical resistance. If polishing is not carried out, apply SIBDURO 360 when SIBECO is completely dry (6 hours after application or later).

Apply 80 to 100 ml/m² of SIBDURO 360 to increase abrasion resistance.

Uniformly moisten the floor with water applied with a microfiber mop, before applying SIBDURO 360. Do not allow puddles to form. SIBDURO 360 must be sprayed on substrates without being diluted. Apply with the roller or microfiber mop on the surface. Apply at least 2 coats to ensure that the entire floor is saturated and impregnated, without the formation of puddles. High concentrations of SIBDURO 360 can stain the floor and cause efflorescence. Each application must fully penetrate the surface. The application must be repeated until the surface is saturated. Excess must be avoided and, if it occurs, it must be cleaned. The surface must be protected from rain and moisture for 24 hours after application. Consult the technical data sheet for more information.

SEALING

SIBECO DESIGN F must be sealed depending on usage. Consult the technical department for more information on the appropriate sealing system for each situation.

PRODUCTION, PACKAGING, STORAGE AND EXPIRY DATE:

SIBECO DESIGN F is available in 20kg (44,1 lbs) bags.

The product can be stored in its original packaging for 12 months in a dry place at a controlled temperature (not below 0°C/32°F). Recommended storage is between 10 and 25°C (50°F and 77°F).

COMPLEMENTARY INFORMATION:

Support preparation is essential for a good result. The flatter and more level the support, the better the end result.

If there are non-homogeneous surfaces, with differences in absorption, it is recommended to apply a coat of epoxy primer with sand to obtain a more uniform application.

Note that this product is a mineral product. The colors of floors made with SIBECO DESIGN F are not always uniform, a typical characteristic of this type of product. In addition to the inherent nature of this type of product, differences in tones and brands can also be caused by the way the product is applied, differences in temperature and substrate. To ensure a uniform appearance, it must be applied continuously without interruption. Attention to slight color differences due to the use of different production batches. Ensure that the application can be carried out with the same production batch.

Product colors are not fully compatible with the RAL code and therefore should only be considered as estimated ratings. The final color of the product must be validated by physical sample before starting the application. Always perform a test sample to see if the requested color matches the color supplied. SIB is not responsible for manufacturing errors after application.

Before using SIB products, consult applicable data sheets, protocols, product labels and safety data sheets. On request from your consultant.

Wash tools with clean water and dry them before and immediately after use.

It is the user's responsibility to read the instructions and warnings for any SIB product before using it. The valid updated data sheet can be found at www.sibland.company.

WARNING:

Use suitable PPE: impermeable gloves, boots and protective goggles.

Use material only in well-ventilated areas. Exposure to cement dust may irritate eyes, nose, throat and the upper respiratory system/lungs. Silica exposure by inhalation may result in the development of lung injuries and pulmonary diseases, including silicosis and lung cancer. Seek medical treatment if you experience difficulty breathing while using this product. The use of a NIOSH/MSHA-approved respirator (P, N- or R-95) is recommended to minimize inhalation of cement dust. Skin contact with dry material or wet mixtures may result in bodily injury ranging from moderate irritation and thickening/ cracking of skin to severe skin damage from chemical burns. If irritation or burning occurs, seek medical treatment. Protect eyes with goggles or safety glasses with side shields. Cover skin with protective clothing. Use chemical resistant gloves and waterproof boots. In case of skin contact with cement dust, immediately wash off dust with soap and water to avoid skin damage. In case of skin contact with wet concrete, wash exposed skin areas with cold running water as soon as possible. In case of eye contact with cement dust, flush immediately and repeatedly with clean water, and consult a physician. If wet concrete splashes into eyes, rinse eyes with clean water for at least 15 minutes and go to the hospital for further treatment.

See the complete Product Safety Data Sheet.

LIMITED WARRANTY:

SIB - Sociedade Industrial De Britagem De Pedra, LDA warrants its materials to be of good quality and, at its option, will replace or refund the purchase price of any material proven to be defective within one (1) year from date of purchase. The above remedies shall be the limit of SIB's responsibility. Except for the foregoing, all warranties expressed or implied, including merchantability and fitness for a particular purpose, are excluded. SIB shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials. In order to obtain all the results and technical properties of the products, all SIB specifications and instructions on transport, storage, use, application and maintenance must be fully complied with, otherwise, SIB does not guarantee the technical results and properties of the products.

The warranty does not cover scratches, which are normal for this product. The guarantee is associated with correct maintenance procedures. This warranty does not apply and SIB is not responsible for small surface marks and color variations. Due to the raw materials used in the manufacture of the products, small surface marks and/or color variations may occur. These are not considered product defects as they are inherent to the manufacturing process.