

SIBECO HARDCRETE

Microcement

AT GLANCE

Environmentally friendly

100% mineral

VOC and APEO-free

Decorative microcement

Wide colour range

Low thickness

Indoor and outdoor use

Floors and walls

Easy application

High abrasion resistance

Water resistance

Salt water resistance



Manufacturer
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DESCRIPTION

SIBECO HARDCRETE is a cementitious microcement for floors and walls, that can be applied over several supports, like cementitious, wood, stucco, etc... SIBECO HARDCRETE is composed by chemical additives and special cements, mixed with selected aggregates. It is distinguished by its minerality, easy and fast application and high abrasion resistance compared to other microcements.

SIBECO HARDCRETE offers several texture possibilities (sanded, polished, waxed, varnished, structured or smooth) with variations of tones and colors.

SIBECO HARDCRETE has a low carbon footprint and environmental impact. The use of SIBECO HARDCRETE requires little or no demolition and the consumption of materials is limited.

FIELDS OF APPLICATION:

SIBECO HARDCRETE can be used for vertical and horizontal surfaces on residential and commercial areas, both indoor and outdoor: homes, building entrance halls, offices, small shops or restaurants, hotels, decorative walls, washbasins and bathtubs, desks and other furniture, etc.

It can be applied on cementitious screeds, concrete slabs, anhydrite screeds, wooden panels (CTBX, CTHB, OSB under certain conditions), heated floors (water or electric), tiles. Consult the technical department for more information.

The various applications make SIBECO HARDCRETE a very versatile product.

TECHNICAL PROPERTIES AND CHARACTERISTICS

Composition	Special cements, binders and fine aggregates
Compressive strength (EN 13892-2)	30 MPa *
Flexural strength (EN 13892-2)	10 Mpa *
Abrasion resistance (EN 13892-4)	AR 0,5 *
Reaction to fire (EN 13501-1)	A1fl
NOTE: Finishing with SIBDURO 360 is an essential treatment to maintain abrasion resistance	
Application temperature	Min. +5°C (41°F) - max. +30°C (86°F)
Number of layers	1 or 2
Application thickness	1 - 4 mm (max 2 mm per layer)
Consumption	1,8 kg/m ² /mm (4 lbs/m ² /mm)
Mixing rate	23 - 25% of water (4,6 - 5 l per 20 kg (44,1 lbs) of SIBECO HARDCRETE)
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.

Light traffic	Indoor)	Outdoor
24 hours	4 days	7 days

*Technical results may vary depending on site conditions, age of SIBECO HARDCRETE and pigments used. In addition, the percentage of water (liquid) 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.

SUPPORT PREPARATION

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

For wall application:

Before application, the support must be leveled, stable and dense and must be dry or slightly damp, clean and free of oils, dust and loose particles.

Apply a coat of SIBPRIMER A3, adjusting the dilution according to the porosity of the substrate. 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 HARDCRETE between 2 and 6 hours after applying the primer. Consult the SIBPRIMER A3 Technical Data Sheet for more information.

For application on floors:

Concrete, tiled or other floors must be clean, free of dust and oil. The base must be stable and free of loose particles. The base must have a minimum adhesion strength of 1,5 MPa. SIBECO HARDCRETE has a high resistance to humidity, but if the base is wet, the appearance can change.

The support must have a certain porosity. It is recommended to mechanically prepare the surface with sandpaper before application. Deep cracks, holes and other defects must be repaired. The surface must be free of vibrations and cracks. Repair cracks before application of SIBECO HARDCRETE.

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 HARDCRETE between 2 and 6 hours after applying the primer. Consult the SIBPRIMER A3 Technical Data Sheet for more information.

SIBECO HARDCRETE is applied in very thin coats, so a well-prepared surface is ideal for proper application.

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

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 percentage 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/bucket of SIBECO HARDCRETE, increase the open time in around 15 min. Is not recommended to add more than 60 gr per bag/bucket of SIBECO HARDCRETE.

APPLICATION

Prepare an area for mixing.

Add the water to the mixer, then add the powder little by little. Do a trial mix to adjust the mix ratio. The mixing ratio is between 23 and 25% water (l) to powder (kg) – 4,6 to 5 l of water for every 20 kg (44,1 lbs) of SIBECO HARDCRETE. The final mix rate should be adjusted based on workability, which can be influenced by temperature and other conditions. Mix for 2 to 3 minutes, until the mixture is smooth, free of lumps and all pigments are well mixed. Once mixed, let it rest for 1 minute and then mix again for 30 seconds before application.

Make a sample first. Several factors can influence the workability, fluidity and drying time of the product. Do not mix more product than you can apply within a time frame. The mixing rate must be maintained throughout the application.

For standing application, pour the material over the base and spread evenly with a notched trowel (between 3,5 and 4,8 mm). With the help of a second person, go over it immediately with a smooth trowel and level the product on the floor.

SIBECO HARDCRETE can also be applied directly to floors or walls with a trowel. It is possible to apply a second coats to create effects or smooth the surface.

When applying several coats, it is advisable to do so before the first one is completely dry, to prevent the material from drying out too quickly. If it is dry, the surface can be sprayed with water to help application and to prevent the newly applied layer from drying out too quickly.

SIBECO HARDCRETE may crack if applied in thick coats. Avoid applications in thickness (maximum 2 mm per coat) to avoid retraction (cracking).

SIBDURO 360

SIBDURO 360 is mandatory to obtain higher abrasion and chemical resistance. If polishing is not carried out, apply SIBDURO 360 when SIBECO HARDCRETE 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.

FINISHING

SIBECO HARDCRETE can be sanded 12 hours after application of SIBDURO 360.

Polishing and sanding any coating requires a high degree of experience and skill. SIBECO HARDCRETE is polished with diamond tools or sandpaper. Consult the technical department to know the polishing protocol.

SEALING

SIBECO HARDCRETE 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 HARDCRETE is available in 20 kg (44,1 lbs) buckets.

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:

The application must be protected from fast drying (due to wind or intense heat from the sun) for at least 24 hours.

Protect the product from fast drying (due to air drafts or direct sun light) for 24 hours.

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.

Wait between 5 to 7 days until the product is fully dry, before starting to clean the floor with water.

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

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

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.