PRODUCT SHEET

KHOLAO®

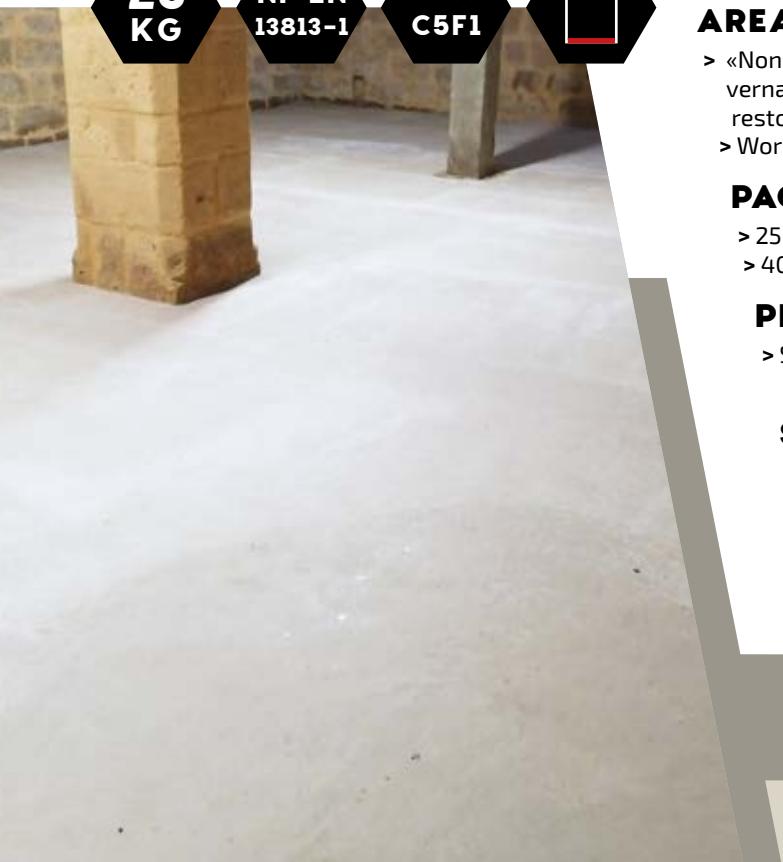
KHOLAO® BÉTON DE CHAUX

READY-TO-USE LIME CONCRETE

THE + BENEFITS

- + IDEAL FOR DIFFICULT ACCESS
- + EXCELLENT HYGROTHERMAL REGULATOR
- + RESPECTS OLD BUILDINGS
- + NO VOC (VOLATILE ORGANIC COMPOUND) EMISSIONS

25 KG | NF EN 13813-1 | Classée C5F1



AREA OF APPLICATION

> «Non-load-bearing» paving for ground floors of heritage and vernacular buildings, cellar and winery floors, troglodytic dwellings, restoration of existing building floors, etc.
> Work can only be carried out indoors.

PACKAGING

> 25 kg bag
> 40 bags per pallet (1T pallet)

PRODUCT COMPOSITION

> Saint-Astier® hydraulic lime, 0/10 mm sand and gravel.

SHELF LIFE AND GUARANTEE

1 year from date of manufacture (see bag edge), protected from moisture and in original packaging. Manufacturer's liability.

ÉMISSIONS DANS L'AIR INTÉRIEUR A+ A+ A B C

EXCELL ZONE VERTE

by SAINT-ASTIER
LIME, LIFELONG EXCELLENCE

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FLOOR / GROUND PREPARATION

> **Clearing :** the purpose of this operation is to clear the ground of vegetation, organic matter, waste rubble, and any cement concrete. It must not destabilize existing masonry, and must be deep enough to accommodate the hardcore layer, paving tiles.

> **Levelling :** after this step, the floor / ground is levelled. It may be necessary to compact the floor / ground to upgrade its bearing capacity.

POSITIONING THE HARDCORE

An air space is created by laying a hardcore of 20/40 mm or 30/60 mm pebbles at least 20 cm thick. This hardcore can be ventilated, making it an important part of this type of paving.

From a thermal point of view, and for the good health of both old and new buildings, managing humidity on the ground floor or in a cellar is essential.

This traditional technique regulates humidity at the base of the masonry, while the addition of a drain ensures that moisture is permanently evacuated to the outside. An effective hardcore protects the construction and contributes to the overall comfort of the home. Place a geotextile over the hardcore before pouring the lime concrete.

> **Thermal insulation tip :** Cork board insulation can be laid under the slab. Drains can be buried under the hardcore in trenches and covered with sand. Electrical and service conducts with a diameter greater than 2.5 cm are buried under the hardcore. Electrical and service conducts smaller than 2.5 cm can be laid on top of the hardcore, or on top of the insulation if required.

If necessary, for good ventilation and/or in the presence of humidity, we recommend installing a ventilation drain (road, gutter, perforated agricultural). This drain should preferably be laid in an S-shaped pattern, with inlets and outlets raised above the finished exterior floor / ground level and closed with grilles. In particularly damp environments, water should be channeled by gravity flow to the outside via a wet drain system.

MIXTURE PRODUCTION

	KHOLAO® BÉTON DE CHAUX
WATER CONTENT OF CONCRETE	1 + 3 litres of water
MECHANICAL MIXING	between 3 and 5 minutes
YIELD	10 litres of concrete per bag

PAVING LAYOUT

The joints should be a third of the thickness of the paving and between 3 and 5 mm wide. Square or rectangular shapes with a surface area of around 25 m^2 and a dimensional ratio of 1 to 1.5 are preferable. Distance between joints must be a maximum of 6 m.

PLACEMENT

KHOLAO® BÉTON DE CHAUX can be laid in the traditional way, concrete can be pour using the traditional method, it will be leveled with a straight edge and a trowel. The minimum thickness is 15 cm. For thicknesses greater than 25 cm, it should be applied in several layers of 10 to 15 cm, with a minimum waiting time of 24 hours and a maximum of 48 hours between each layer. Decoupling strip must be installed at the borders of the concrete.

CONCRETE CURING

The lime concrete used in this way should be kept moist, in a closed room and protected from frost. It should be moistened 1 to 2 times a day for 1 week by moderate spraying. To facilitate the concrete cure, it can temporarily be covered by a plastic sheet, a wet hessian fabric or an equivalent materials in order to keep the concrete suficiently moist to ensure its proper hardening. Curing sheets are to left for at least one week.

FLOOR COVERING

> **Covering :** after a minimum of 4 weeks drying time, a covering can be laid, see the corresponding chapter on «floor coverings» in our Saint-Astier® lime concrete and flooring solutions brochure.

> **Joints :** after a minimum two-month drying period, the flooring is laid directly on the slab.

> **Protection :** if the paving is left rough or bare, it needs to be protected to prevent staining and facilitate maintenance. To this end, three months after lime concrete has been applied, a solution of sodium silicate 38/40 or a natural oil can be applied.

KHOLAO® BÉTON DE CHAUX			
Dry density kg/L	Compressive strength MPa (at 28 days)	Compressive strength MPa (at 90 days)	R for 15 cm (Thermal strength , $m^2.K.W^{-1}$)
1.9 to 2.1	3.5 to 4	5.5 to 6.5	0.10 to 0.12

by SAINT-ASTIER
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