

ARMOCRETE®

Ready-mixed and ready-for-use cementitious compound no shrink mortars for patching, restoring of concrete

DESCRIPTION

ARMOCRETE is a non-shrink, fibre-reinforced product not containing expansible metallic substances or chloride, characterized by high mechanical resistance in short or long seasoning periods and suitable for restoration work in concrete (typeV) structures, for anchoring purposes (e.g. metal supports, bars etc.) and application on the horizontal plane (types H and HF).

USES

ARMOCRETE is a thixotropic, fibre-reinforced mortar, suitable for patching and/or restoration work in structures in concrete such as beams, pillars, slabs, sills and panels. This product is also suitable for sealing the folds/faults between brickwork and/or stone in ruined masonry and for the creation of reinforced slabs in static consolidation work in seriously weakened masonry.

The ARMOCRETE H version is a fluid mortar suitable for patching in ruined flooring, for injection for the purpose of restoring and consolidating heavily damaged masonry and anchoring etc.

ARMOCRETE HF is a fibre-reinforced mortar strengthened by steel fibres for use in the creation of flooring with special, high-level mechanical characteristics and low thickness.

ADVANTAGES

With its particular formulation and with optimum grading aggregates, the product is characterized by its durability, impermeability and high degree of anti-carbonation and chemical and mechanical resistance.

ARMOCRETE is free from shrinkage and bleeding. It can be applied in various thicknesses between 10 and 50 mm with the appropriate techniques. It is characterized by excellent anchoring to cementitious supports and reinforcement bars (concrete thickness).

The HF type is normally used for thicknesses up to 25 mm.

For greater thicknesses the user is advised to contact the Maxfor technical department.

TECHNICAL DATA

TEST	ARMOCRETE V	ARMOCRETE H	ARMOCRETE HF
Sp. gr. of powder (g/cm ³)	1.75 - 1.80	1.70 - 1.75	1.85 - 1.90
Sp. gr. of mix (g/cm ³)	2.25 - 2.30	2.20 - 2.25	2.25 - 2.30
Controlled expansion (%)	0.20 - 0.30	0.35 - 0.40	0.20 - 0.30
Workability at 20°C (min)	35 - 45	35 - 45	45 - 60
Setting time at 20°C (start min)	90 - 100	90 - 100	90 - 100
Resistance to stress	1d=27 3d=35	1d=40 3d=55	1d=40 3d=51
UNI 6131 (MPa)	7d=44 28d=60	7d=70 28d=85	7d=75 28d=91
Resistance to flexural stress	1d=5.1 3d=6.3	1d=7 3d=8.5	1d=7.8 3d=8.9
UNI 6133 (MPa)	7d=7.9 28d=11.0	7d=9.5 28d=12.0	7d=10 28d=12.3
Resistance to pull-out (MPa)	28d=19.8	28d=29	28d=29
Min temp for use (°C)	≥ 5	≥ 5	≥ 5
Water/ARMOCRETE ratio (% in weight)	15 - 16	15 - 17	15 - 17

INSTRUCTIONS FOR USE

ARMOCRETE - ARMOCRETE V

The surface to be covered must be thoroughly cleaned and any dust, loose material, grease or oil must be removed before applying.

Thoroughly clean with brushes any exposed reinforcement or support bars and wet the surfaces which are to come into contact with the product until totally soaked. In order to obtain saturation of support porosity (by suction) start this operation a few hours before application of the product.

Any excess water, at surface level or in cavities, must be removed, using compressed air and/or a sponge, immediately before application. Exposed reinforcement bars and structural metal must be treated with ARMOSTEEL.

Mix together in a cement mixer the required quantity of water and product and keep stirring for 3 to 5 minutes.

The amount of water used can vary according to the temperature and humidity of working environment. Apply with a trowel when doing patching work or with a sprayer in the case of restoration of large surfaces.

When applied, keep the product protected and humid for the subsequent 24 hours to avoid rapid dehydration of the mortar.

ARMOCRETE H

Preparation of the supporting surface must be carried out as in the previous case. For restoration work of concrete flooring a coat of ARMOFIX R bonding resin must be previously applied in a quantity of 300-500 g/sq.m. After mixing, apply ARMOCRETE H and smooth over after a few hours.

For anchoring of tie-bars and plates etc., pour the product into the prepared holes or apertures.

ARMOCRETE HF

For the restoration of large areas of existing flooring that has become ruined or weakened it is necessary to scarify the surface to a depth of 1-2 cm or go over the area with a mechanical shot-peening machine. Remove the dust and saturate with water. Apply ARMOFIX R bonding resin, using approximately 500 g/sq.m. While still fresh, spread ARMOCRETE HF over the resin-covered surface to the required thickness (10-25 mm). Depending on the temperature, start smoothing and floating operations after a few hours. Keep the surface protected with a sheet of polythene during the following 24 hours. Make allowances for the joints existing in the flooring or if these are lacking, create new joints for areas of 4 x 4 metres and with a depth of one fifth of thickness of the concrete. The joints must be sealed with elastoplastic material such as PAVIGUM 2 or PVC profile.

YIELD

The average consumption of ARMOCRETE is 19-20 Kg/m²/cm of thickness of applied product.

COLOUR

Cement grey.

PACKING

30 Kg bags.

CAUTION

Avoid creating high-thickness vertical layers. If the weight of product becomes excessive, tearing and cracks may appear. Care must be taken when mortar is applied on windy or very hot days.

To avoid very rapid evaporation of the water it is necessary to keep surfaces humid and protected.

Do not apply ARMOCRETE when the temperature falls below 5°C or is likely to fall to such levels in the following 24 hours.

STORAGE

Shelf-life of 12 months when stored in the original sealed packaging in dry place.