

MONNELI ULTRACEM

Non Shrinking Binder for Rapidly Drying Screed

Product Description

A special bonding powder, that when mixed with sand and water, it creates a non shrink mortar that dries in a short period of time. The mix would allow to get a dry screed flooring with thickness from 10 to 70 mm in 24 hours with humidity content less than 2% in weight. In addition to the fast curing property, ULTRACEM will provide a high mechanical strength to the screed. These characteristic allow to fix any type of flooring, such as ceramic, stone, marble, PVC and wood, only after 24 hours of applying the screed.

Uses

ULTRACEM is used for the following:

- Forming screed, either float or adherent, on old or new substrates, where a rapid drying of flooring is required to fix wood, ceramic, marble, moquette, PVC floors
- Cast screed which permits pedestrian traffic after 3 to 4 hours from the time of casting and perfectly dry after 24 hours
- Construction of screed floors in places where it is necessary to put the flooring into service in the same day (public places, supermarkets, hospitals, etc.)

Instructions for Use

Surface Preparation

ULTRACEM can be applied on any type of support if not subject to rising humidity. If substrate is subjected to rising humidity, it is essential to fix polyethylene sheets, tarred paper or any other vapour barrier product. In case of adherent screed with thickness from 10 to 35 mm, the substrate must be clean and dry, free from inconsistent parts and grease substances.

Float self-loadbearing screed (thickness from 35 to 70 mm)

The mixed obtained with ULTRACEM should be handled

as a normal concrete mix. All precautions and practices that are applied on normal cement screed casting should be followed. Pour the mix on the substrate floor covered with polythene sheets.

In case that water pipelines or cooling / heating coils exist within the screed, it is recommended to reinforce the mix by adding fiber.

In order to separate the screed from the walls, fix polystyrene sheets (1 cm wide) along the whole perimeter of walls and around columns. In case that casting can not be completed and should be interrupted for more than one hour, it is necessary to fix steel dowels between the old and the new screed.

Mixing

Pour ULTRACEM, graded aggregate from (1- 8 mm) and water into a blender or mixer, then mix quickly for 3 minutes. Once the mixture becomes homogeneous and consistent, cast it immediately and trowel within 30 to 40 minutes from the beginning of the preparation.

Quantity of water in the mix should be adjusted according to water content in the sand (if wet sand is used). The right water content is essential to allow a complete hydration of the binder and to achieve the right workability in order to get a smooth surface without cracks after troweling.

The ULTRACEM mixture can be also casted using an automatic pressure pump. In such case the dosage and the setting time should be adjusted (contact technical department).

Mix Dosage

ULTRACEM	350 – 450 kg
Graded sand from 1 to 8 mm	1 m ³
Water	100 – 140 kg Depending on water control in the sand

Carried over or adherent screed with thickness from 10 to 35 mm

For the preparation of mixture the same steps described for float self-load bearing screed must be followed, with a difference that an anchorage mortar must be applied on the floor substrates before applying ULTRACEM mixture.

Dosage of the anchorage mortar

- LATEX RIPRESA : 1 part in weight
- Water : 1 part in weight
- ULTRACEM : 2 parts in weight

After mixing, apply with a brush the anchorage mortar on the substrate and cast fresh on fresh the ULTRACEM screed, in order to guarantee a perfect adhesion.

Recommendations

- Do not mix excessive quantity of water as it will extend the time of drying and will, when dries, create uneven surface with cracks
- Do not add water to ULTRACEM material once the mix starts to set
- Do not wet the top of applied screed for the purpose of smoothing it with the trowel
- For ULTRACEM screed with thickness from 40 to 50 mm, it is advisable to use graded aggregate with 70% of 0 to 4 mm and 30% of 4 to 8 mm
- It is advisable to use carbide hydrometer to determine humidity content of ULTRACEM screed. Other types of hydrometers do not give reliable readings

Packaging

ULTRACEM is available in multi layer bags of 25 kg.

Storage

Keep the product in covered and dry place. In these conditions, the shelf life would be 12 months.

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Technical Data

Properties	Results
Appearance	Grey powder
Density at 25°C	1.4 kg/L
Compressive strength at 28 days (BS EN 13892)	41 N/mm ²
ULTRACEM: Sand ratio in volume	1 : 3 to 1 : 4
Pot life at 25°C	30 minutes
Final hardening	24 hours
Temperature of application	from +5°C to +35°C
Harmfulness EEC 88/379	No

All values are subject to 5-10 % tolerance

Consumption

The consumption varies according to the screed thickness and to the ULTRACEM sand ratio. The dosage can vary from 3.5 to 4.5 kg/m² per cm of thickness.

Health & Safety

ULTRACEM can be harmful to skin as it contains cement powders which may releases alkalis when mixed with water. During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary. In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly. If ingested, obtain medical attention immediately. Do not induce vomiting.