



LAYING PROCEDURES for all tile size - version 2022.1

Veniston is not liable for defects which are not linked to the manufacture of the tile. The following instructions are offered as “useful” guidelines, but it doesn’t make Veniston liable for the laying. The installation should be done in accordance and with approval of adhesive supplier. Basing on our experiences, we report below the basic suggestions for the laying of the tile.

FLOORINGS

Substrate

All substrates on which Veniston tile will be laid have to be dry, stable, solid, sound, properly level and free of any loosing particles, dust, grease, oils, waxes, paints, release agents or any other factor that could avoid the adhesion. They must be suitable to support all the foreseen loads and stresses.

Concrete

Concrete has to be properly cured (at least 15 weeks of curing time). Floor slab deflections must be less than 1/360th of total span. Concrete substrate has to be free of any cement bleeding and surface treatment that could avoid the adhesion (curing agents, old adhesives, resins, etc).

Cementitious screeds

Cementitious screeds must have suitable mechanical resistances and have a thickness not lower than 4 cm. Screeds must be carried out by the use of a mortar made of aggregates (size between 0 to 8 mm) and 300 Kg of Portland 325 cement per aggregates m³. Higher thicknesses require higher diameter aggregates (up to 1/4th of the thickness of the screed). Control joints must be carried out every 16-20 m² or every 6 linear meters, taking into consideration the geometric shape of the screed and the structural joints already present on the substrate. We suggest to reinforce the screed with a galvanized steel mesh, diameter of 3 mm and 50x50 mm. This mesh allows a better distribution of the loads and reduce the risks of cracks formation in correspondence to eventual differing levels when work is resumed.

Joints have to be carried out by mechanically cutting the screeds straight down for 1/3 depth of the screed, paying attention to not cut the galvanized steel mesh or by inserting plastic profiles.

Expansion joints must be foreseen in correspondence of walls, pillars, steps, etc. and be at least 5 mm width.

In high temperature or high ventilation conditions, it is advisable to wet the screed surface with water and/or protect it in the first hours from weather agents that could cause the formation of several cracks due to hygrometric or plastic shrinkage.

The screed has to be properly cured before laying the tiles (the curing time is about one week for each cm of thickness in good season). Before starting the laying, the screed must have a residual humidity lower or equal to 2,5%, to avoid the possible formation of efflorescences and stains on the flooring surface.

Anhydrite screeds must be perfectly dry (max. 0.5% of residual humidity) and in case of heating screeds, the residual humidity has to be maximum 0,3%. Moreover, before starting the laying and before the application of any leveling compound, such as **NIVORAPID** or **ULTRAPLAN** produced by MAPEI, it is necessary to apply a layer of **ECOPRIM T**.

FAST DRYING SCREEDS

- Positioning on the perimeter of the surface and all around corners, pillars, etc. a compressible material (i.e. expanded polystyrene) of 1 cm thickness.
- Laying of polyethylene sheets with a proper thickness (min. 300 micron) positioned onto the substrate and against the perimeter walls and pillars and around every element that cross the surface. The contiguous polyethylene sheets have to be overlapped for about 20 cm and fixed by the use of an adhesive tape. In order to carry out a suitable vapour barrier, it is advisable to lay two sheets one above the other; the latter has to be laid perpendicularly to the former. We draw to your attention that it is very important to pay a particular attention during the a.m. operation, avoiding that the sheets could be damaged during the following operations. Eventual damages of these layers could provoke the rising of the damp in the above realized layers, compromising the durability of the flooring.
- In order to carry out screeds with a short drying and curing time, we suggest the use of **TOPCEM**, special hydraulic and normal setting binder for screeds, fast drying (4 days) and controlled shrinkage, with aggregates from 0 to 8 mm and with a recommended usage of 220-240 kg/m³ and water, turning the mix until a “damp earth” consistency is obtained. It allows to carry out screed with a residual humidity of 2% after 4 days of curing time and with compression resistances higher-equal to 30MPa after 28 days of curing time.
- **TOPCEM** could be easily pumped by the use of the normal pumps used for the transport of mortar with a semi-dry consistency.
- We suggest to reinforce the screed with a galvanized steel mesh, diameter of 3 mm and 50x50 mm. This mesh allows a better distribution of the loads and reduce the risks of cracks formation in correspondence to eventual differing levels when work is resumed.
- The day after the realization of the screed, expansion joints must be carried out every 7x7 m, cutting the screed straight down for 1/3 depth of the screed thickness and paying attention to not cut the galvanized steel mesh. Eventual structural joints must be respected during the application of the levelling compound and in the final flooring.

- As an alternative to the use of **TOPCEM**, it is possible to carry out the screed by the use of **TOPCEM PRONTO**, ready to use mortar, with normal setting and controlled shrinkage, classified as CT-C30-F6-A1fl according to EN 13813.

WARNINGS

During the laying, it is important to pay attention to respect the expansion joints of the flooring coincide with the ones present in the screed. If they're not coinciding, it is necessary to monolithically seal the joint present in the substrate by the use of **EPORIP**, creating a new one that should be respected during the tiles laying.

In case of the screeds present several cracks due to an excessive hydrometric shrinkage or in case that, for architectural reasons it is not possible to respect the joints, it is possible to proceed to the laying by the creation of a anti-fracture membrane by the use of **MAPETEX SYSTEM**, laid with **KERAQUICK** mixed with **LATEX PLUS**.

LAYING SUGGESTIONS

- Opening the pallets, take just the quantity of slabs that will be laid. If the work is suspended before the use of all the tile, it is necessary to cover the residual tiles by the use of its polyethylene protective hood.
- We suggest the use of an adhesive according to the classification of the norm EN 12002 in class S2.
- Some example of adhesive in class S2 are: (Mapei Elatorapid or Keraquick + Latex plus); (Ardex X77 + E90).
- The grouting of the joints, not lower than 3 mm width, might be carried out by the use of **ULTRACOLOR PLUS** produced by MAPEI (or equivalent). Especially if the chosen colour of the grout is different to the one of the tile, it might be necessary to grout the whole surface of the flooring, to avoid the formation of stains caused by the different absorption of the grout in the micro-porosity of the tiles. We recommend to follow the specifications of the adhesive and grout producers.

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