

NATURAL INNOVATIVE MATERIALS



Revision No.v6

Revision Date: 02/2021

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### TECHNICAL DATA SHEET

## **LAVAPLASTER** DECORATIVE CEMENT BASED COATING

### PROPERTIES

Ready to use decorative, colored, cement-based coating in the form of ultra-fine powder. It contains quartz sand and Danish Aalborg cement with very low alkali content, reinforced with fibers, and natural pozzolanic materials. It is fully waterproof and it can be applied in thickness of maximum 3-4 mm giving very high aesthetics. It gives absolutely smooth surface without cracks and capillaries and provides excellent adhesion and high mechanical strength, even in coatings for underfloor heating systems.

### FIELDS OF APPLICATION

Can be applied indoors, on walls, floors, stairs, benches, bathtubs, plywood, drywall and cement boards.

### APPLICATION

### Surface preparation

- For flooring applications, the floor surface should be the classic smooth cement mortar for tiles (river sand or sea sand with cement). The substrate for benches and stairs should be a smooth cement mortar. Application on walls requires a substrate of a thin layer marble paster.
- The substrate should be statically sufficient and free of dust, oils, loose materials, etc. It should also be sanded first.
- The substrate for benches and stairs should be smooth and made by of sand and cement mortar.
- The substrate for walls should be the last, thin layer of marble plaster.
- The substrate should be statically sufficient and free of dust, oils, loose materials, etc. and it should also first be sanded.

**Step 1:** On glossy-non-absorbent surfaces apply quartz primer **LavaContact** in order to maximize the adhesion of the following layers.

**Consumption:** 250 gr/m<sup>2</sup>

**Surface preparation**: Surfaces must be dry, free of oil, dirt and loose materials.

**Application:** Stir the material well in the container and then apply a layer with a roller.

**Step 2:** Leveling and reinforcement of the surface. Appy the resin reinforced quartz putty **Betofix** which is suitable for smoothing surfaces before the final application of the cement coating.

Consumption (total): 2.5-3 kg/m<sup>2</sup>

**Surface preparation:** To ensure good adhesion of the material, the surfaces must be stable, free from dust, oil and loose materials.

**Application:** (2-3 hours after application of **LavaContact**): In a mortar mixer, gradually empty **Betofix** powder into clean water, in a ratio that serves the use and the application conditions. Mix with a mortar drill, until a homogeneous, gel-free mass without lumps is achieved. Next, apply a layer of material to the surface using a flat spatula and then embody into the fresh mortar the antialkaline **LavaPlaster Mesh**. After the first layer dries (4-6 hours later), apply a second one again with a straight spatula, until the grid is completely covered.

# **Step 3:** Apply **LavaPlaster / LavaPlaster Fino** cement coating in 2 layers.

**Total consumption:** 1.5 kg/m<sup>2</sup> & 1.25 kg/m<sup>2</sup> respectively. **Surface preparation:** The next day, after the material is well dried, sand the substrate where is required with sandpaper No. 80, in order to create a completely smooth-flattened surface, suitable for the application of the final layer of cement mortar **LavaPlaster**. The surface must be well wiped of dust that created after sanding the substrate.

**Application:** Add to each LavaPlaster container clean water in a ratio of ~ 4-5lt of water per pail of 15kg depending on the application conditions and the working consistency we want to achieve. Stir with a mortar drill, until a uniform mixture without lumps is created. Then, take 1 package of Coloring Powder for 7.5kg Lavaplaster container or 2 packages for 15kg Lavaplaster container,



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add water and, after closing the lid tightly, stir vigorously to ensure that the dye is fully dispersed and the mixture is homogeneous without sediment or pigment flocculation and undispersed residues. Then, empty the dye cans into the prepared LavaPlaster mixture and stir for 2-3 minutes, until the whole material is uniformly tinted.

Then, apply a layer of the now tinted Lavaplaster and after it dries (after 4-6 hours), if we deem it necessary, lightly wipe the surface with sandpaper No. 180-220. Wipe the dust residues well, create a new mixture and apply the second layer on which we form the desired final texture and effect ("clouds", "presses", "water").

**Step 4:** 24 hours after the application of the final coat and once **LavaPlaster** is completely dry, the surface can be sanded lightly with sandpaper No. 180-220 in order to smooth any imperfections. Next, wipe the surface well and use a well-squeezed mop or cloth to ensure that any traces of dust have been removed.

**Step 5:** Protection of applied cement coating with varnish system.

#### **Primer application**

Once **LavaPlaster** is completely dry, apply a layer of **LavaDrops Primer** varnish primer with a short hair roller on the entire surface. Consumption:  $0.1 \text{ kg/m}^2$ 

#### Varnish application

One day after the application of **LavaDrops Primer**, we prepare half of the required quantity of **LavaDrops Plus** varnish in a mixing ratio of 5: 1 (A + B) by gradually adding

component B in the component A under constant mixing with a low-speed mixer until a homogeneous material is created. Then dilute the mixture up to 5% with clean water and apply a on the entire surface using a short hair roller. After 6-12 hours prepare the rest of the varnish in the same way and apply the second and final layer, ensuring the uniform coverage of the entire surface and taking care to spread the varnish correctly in order to avoid marks from the roller.

**Caution:** After mixing the two components the material is workable for ~ 1 hour. Appropriate quantities must be mixed according to the above instructions. For this reason, precision scales are required, as incorrect mixing of the two components will lead to a material failures and not correct chemical reaction between the two components that will lead to poor performance of the vanish. The surface can be used at least after 24 hours, while for the development of the final mechanical properties and hardness at least 7 days are required.

### MAINTENANCE

No special maintenance is required, only standard cleaning with the usual household cleaners.

The use of heavy machinery should be avoided without prior surface protection (pallet trucks, etc.).

### FINISHES

Classic, Concrete Board, Forest, Rough, Wooden floor, Acid Free, Palm.





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Grading	0 to 200 μm
Workability time (20°C)	60 - 90 minutes
Minimum application temperature	+ 5°C
Drying time of each coating layer (20°C)	60 - 120 minutes depending on the substrate Drying times depends on temperature and humidity.
Storage	2 έτη
Shades	Available in more than 130 shades
Flow (EN 1015-3)	155mm
28 days flexural strengths (EN 1015-11)	9.1 MPa
28 days compressive strengths (EN 1015-11)	45.0 MPa
Water Absorption Coefficient (EN 1015-18)	0.02 kg/m²/min <sup>0.5</sup>

