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FLOOR CONCRETE LB 7



Product description

Fescon Floor concrete LB 7 is a pumpable, special cement-based floor concrete with very fast drying properties for indoor use. It is ideally suited for sloped floor castings in both new construction and renovation projects.

- For layer thicknesses 30-150 mm
- Very easy to pump
- A surface that can be waterproofed in one work stage
- Can be coated after 3–7 days
- Rapid drying and strengthening
- Good workability properties, also when spreading manually
- Fibre-reinforced
- Floor concrete LB 7 is mixed at ground level and pumped to where it is needed
- No problems with dust or splashes at the work site. No more sacks at the site to disturb other work stages

Applications

- Floor casting in new construction and renovation, when the structure must be ready quickly
- Concrete floor casting, filling, levelling and grading indoors (dry and wet rooms)
- Suitable for filling chases indoor, because it dries quickly
- A surface that can be waterproofed in one work stage
- Floors with underfloor heating
- Can be used in floating, reinforced floors (e.g. 150/5 mm). The minimum thickness is 50 mm in such cases

The product is listed in the portal for building products that can be used in Nordic Swan Ecolabelled buildings.

Instructions

Base

- Concrete substrate, wood- and gypsum-based boards, insulation board
- The substrate must be clean, solid, and dust-free, and it must be vacuumed.
- Loose layers, cement laitance, and other impurities must be mechanically removed to ensure proper adhesion between the floor concrete and the substrate.
- The substrate must be sufficiently strong, stable, and load-bearing.
- The floor must be constructed as a floating, reinforced structure if the substrate consists of weak concrete (tensile strength < 0.5 MPa), wood, or insulation. The floating floor must be separated from the subfloor with Fescon Separation Fabric and from vertical structures with Fescon Bordering Strip.
- The temperature of the subfloor must be > +10°C and the relative humidity < 95% RH. The relative humidity of the subfloor affects the drying time of the floor screed.

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Priming

- Priming is carried out according to the instructions for Fescon Adhesion promoter or Flow Primer, depending on the substrate.
- Non-absorbent surfaces (e.g. ceramic tiles, epoxy, metal surfaces) must be pre-treated in accordance with the Primer PLUS instructions.

Instructions for use

- The work area must be completely protected from wind, draft, sun and rain.
- When working on the floor, the indoor temperature must be +10°C…+25°C and the indoor relative humidity more than 40%
- A sack (20 kg) of floor concrete is mixed with 2.5–3.0 litres of cold water. When pumping the concrete, measure the amount of water using the flow device provided by Fescon. Lift the plate 15 times, after which the flow must be between 180 and 200 mm.
- You must not exceed the amount of water, because it weakens the floor concrete's strength properties, increases the risk of bleeding and extends the drying period.
- Floor concrete is mixed into an even paste.
- Floor concrete is spread with a pump or manually on the substrate, the compacted and levelled with a straightedge. The surface of the cast is ground, if necessary, to reach the necessary quality (such as using a polyurethane grinder and/or a steel trowel.
- Workable for about one hour after adding water.
- When finished working, wash the tools immediately with water.
- Any dried filler is removed mechanically
- If cement paste has separated into the floor concrete surface during grinding, the surface must be ground with a diamond grinding wheel before waterproofing.

Flooring

- Floor concrete LB 7 can be waterproofed immediately with Fescon waterproofing products.
- It may be coated with ceramic tiles, plastic coating, textile carpets, vinyl tiles, board parquet/laminate or cork. If necessary, the surface is ground and/or filled over with Fescon fillers, such as Fescorapid or FlowPlan.
- It can be also painted over or covered with epoxy. You must nevertheless ensure that the technical properties of the mass fulfils the coating manufacturer's requirements concerning the substrate.
- In wet rooms, certified Fescon waterproofing products must be used. Waterproofable after approx. 3–7 weeks (+20°C, relative humidity 50%)
- The need for any curing must be assessed case by case, depending on the purpose of use and drying conditions.
- Curing can be effected by means of a plastic membrane or a Fescon curing compound. No water may be added.
- Floor concrete may not be left without coating for more than three months as it may crack and break off.
- Check the humidity of the entire floor structure before installing any coating.
- In order for floor concrete to dry well, the relative humidity of indoor air must be less than 50% and the temperature more than +20°C. Poor conditions slow down the development of floor concrete's strength properties and extend the drying period.
- You must nevertheless ensure that the plaster's technical properties meet the requirements set by the floor coating manufacturer and RYL, taking into account the entire structure. - The straightness of the finishing plaster is measured, if necessary, under RT guideline 14-11039.

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Other considerations

- The recommended layer thickness is 30–150 mm. Locally, such as around floor drains, the thickness may be 10 mm.
- We recommend that you do not cast an area of more than 15 m^2 at a time. If casting areas larger than 15 m^2, the risk for cracks is higher, and the floor structure must be designed to factor in enough shrinkage, according to BY45/BLY 7 Betonilattiat 2014 (Concrete floors). The maximum area of finished flooring to be cast at the same time is approx. 50–100 m^2.
- When casting extensive finished flooring to the substrate, the tensile strength of the underlying concrete must be greater than 1.5 MPa. When dimensioning the surface tile, adhesion to the substrate is a key factor in preventing the tiles from becoming loose owing to shrinkage.
- For pumping render mortars and vertical joint concretes with a maximum aggregate size of 3 or 4 mm, it is recommended to use a sufficiently powerful rendering pump with a minimum power output of 5.5 kW and a stator size suitable for 7 or 8 mm aggregates. The use of automatic mixing pumps is not recommended, as the mixing time in automatic systems is too short. This may negatively affect the solubility of the mortar admixtures and the performance properties of the mortar.

Waste handling

Storage and handling of waste
See the separate storage and disposal instructions https://www.fescon.fi/en/material-bank

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Technical information

Material usage	Approx 1.8 kg/m^2/mm
Water requirement	2,5 - 3.0 l/20 kg
Type	Powder
Binder	Special cement
Colour	Grey
Maximum grain size	3 mm
Package size	20 kg
Storage	Storage time in a dry location approx. 1 year
Layer thickness	30–150 mm (minimum 50 mm when installed as a floating, reinforced structure) Locally, for example around floor drains, a casting thickness of 10 mm can be applied.
Fibre	Fibre-reinforced, plastic fibre
Additives	Additives to improve workability, casein-free
Usage temperature	+10°C...+25°C
Workability time	Approx. 1 h
Coatable	3–7 days (+20°C, RH 50%)
Walkable	Approx. 4 - 8 h
Strength class	C 30 (EN 13813)
Adhesion strength	> 1.0 MPa to concrete (28 days, +20°C, RH 50%)
Flexural bond strength	F 4 (EN 13813)
Surface tensile strength	> 1.5 MPa (28 days, +20°C, RH 50%)
Frost resistance	Not frost-resistant, for indoor use only
Waterproofness	Water-resistant
GWP A1-A3	0,32
GWP unit	kg CO2e/kg
Method for calculating the GWP value	Generic

Limitation of liability, product use notes and restrictions: Please familiarize yourself with Fescon Oy's general terms of delivery and the design and work instructions related to the product.