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FLOW FS

Product description

A cost-effective and versatile fiber-reinforced, cement-based floor screed. Suitable for a wide range of adhesive carpeting in public areas and for floor levelling in residential construction, either hand-applied or pumped. Can be used for the surface casting of thermal floors and floating floor systems in public spaces and residential buildings, and for levelling cavity slabs and concrete floors. Flow FS is low alkaline.

- Layer thickness 4 - 50 mm (partial levelling max. 80 mm)
- Can be pump-applied and manually levelled
- Compressive strength C 20, material usage 1.7 kg/m^2/mm
- Self-leveling

Applications

- Floor levelling for adhesive carpeting in public premises
- For alkaline protection
- Floor leveling screeds for living spaces
- For surface castings of heated floors and floating floor systems
- For leveling cavity slabs and concrete floors

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

Instructions

Base

- Concrete flooring, cavity tiles, cement-based screeds, gypsum plasterboard, unsurfaced wood-based building boards and insulating boards.
- The base must be clean, dust-free, solid and firmly fixed in place.
- Loose layers, cement paste, and other impurities have been mechanically removed to ensure adhesion between the floor levelling compound and base
- The tensile strength of the base must be greater than 0.5 MPa. If the base is made of weak concrete (tensile strength less than 0.5 MPa), the floor must be a floating structure of wood, gypsum board or insulation board. The floating floor structure must be detached from the base floor by Fescon Separation fabric and from vertical structures by Fescon Bordering strip.
- The temperature of the underfloor structure is > +10°C and relative humidity < 95% RH The relative humidity of the underfloor structure affects the setting of the floor levelling compound
- If necessary, any unevenness can be corrected with Fescon floor screeds suitable for the application before floor leveling.
- Possible leakage areas are sealed with putty

Priming

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- Priming is performed according to the instructions of Fescon Adhesive Promoter or Flow Primer, depending on the base
- Priming of non-absorbing surfaces (such as ceramic tiles, epoxy, metal surfaces) according to the instructions of Primer PLUS

Instructions for use

- The workspace must be protected all over against wind, draught, sun, and rain
- When pumping, the minimum layer thickness must be checked with the floor work contractor
- During floor work, the indoor temperature has to be +10°C…+25°C, and the relative humidity of the indoor air > 40% RH
- Mix a bag (20 kg) of the levelling compound in 3.6 - 4.0 litres of cold water
- The levelling compound is mixed to a consistent paste with a drill paddle, or if pumped, with an automated or pipe mixer.
- Apply the levelling compound with a steel trowel or pump onto the surface being levelled. Pumped floor leveling with a thickness of 10–30 mm is finished with a roller screed, and thicker layers are leveled by breaking the surface tension of the leveling compound.
- Workable for about half an hour after adding water.
- Wash tools with water immediately after completing the work
- Make sure ventilation is adequate after finishing the floor levelling compound work.
- If need be, the setting of the floor levelling compound can be accelerated by grinding the surface because this reduces the resistance of water vapour in the surface of the floor levelling compound
- The setting times are greatly affected by the conditions at the work site, ventilation, and the amount of water used in the floor levelling compounds
- Pumping from a tanker lorry is not recommended < -20°C
- The floor load capacity is estimated work site specifically with the floor levelling contractor

Covering

- The surface can be covered with ceramic tiles, plastic coverings, textile carpets, vinyl tiles, engineered wood/laminate flooring, and cork. If necessary, a skim coat with Fescon hand-applied levelling compounds, such as FlowPlan, should be used.
- It must be ensured that the screed meets the technical requirements of the floor covering manufacturer and the RYL guidelines for the substrate, taking the entire structure into account.
- Once the screed has reached the required moisture level for the selected floor covering, the covering should be installed or post-treatment started.
- The screed must not be left uncoated for more than 3 months due to the risk of cracking and detachment.
- Always check the moisture content of the entire floor structure before installing the floor covering.
- Favourable drying conditions for the screed require an indoor relative humidity below 50% RH and a temperature above +20°C. Poor conditions will slow down the development of the screed's strength properties and extend the drying time.
- In conditions with relative humidity below 40% RH, special attention must be paid to the timing of post-treatment. The need for post-treatment should be assessed on a case-by-case basis.

Commissioning - hot water circulation heating

- Floor heating with water circulation may be started after seven days from applying the floor levelling compound. The water temperature is first set to +20°C. The final water temperature may be applied after the floor covering is installed. Higher water temperatures cause a major an increase of it cracking, so they must be avoided at all costs.

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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. 1.7 kg/m^2/mm
Water requirement	3.6 – 4.0 l / 20 kg (125 – 135 mm:n flow as measured by Fescon flow plate)
Type	Powder
Binder	Special cement
Colour	Grey
Maximum grain size	1.2 mm
Package size	20 kg, 1000 kg, bulk delivery
Storage	Storage time in a dry location approx. 12 months
Layer thickness	4 – 50 mm (partial levelling max. 80 mm), as a floating floor structure min. 30 mm over a floor heating pipe min. 16-20 mm
Fibre	Fibre-reinforced, plastic fibre
Additives	Substances improving workability, casein-free
Usage temperature	+10°C...25°C (platform and internal temperature)
Workability time	Approx. 0.5 h
Coatable	It is carried out 1 to 8 weeks later, depending on the conditions and layer thickness (+20°C, RH 50 %)
Walkable	Approx. 4 – 6 h
Strength class	C 20 (EN 13813)
Compressive strength	> 20 MPa (28 days +20°C, RH 50%)
Adhesion strength	> 1.0 MPa for concrete (28 days, +20°C, RH 50%)
Flexural bond strength	F 4 (EN 13813)
Surface tensile strength	> 0.6 MPa
Wear resistance	RWFC 550 (EN 13892-7)
Frost resistance	Non-frost resistant, for indoor spaces
pH	< 11 low alkaline (hardened material)
Waterproofness	Water-resistant

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.