

weber.floor 4180

Fiber-reinforced thin-layer heating screed

Flow-grade calcium sulphate-based and fiber-reinforced thin-layer screed for thicknesses of 25 - 60 mm

Uses	Benefits
<ul style="list-style-type: none">• for residential and commercial buildings• ideal for renovation works• for layer thickness of 25 - 60 mm	<ul style="list-style-type: none">• low shrinkage and low tension• convenient for thin-layer underfloor heating constructions• fits mechanical application very well

Fields of application

As thin-layer floating screed on underfloor heating constructions with heating pipes of a diameter of 12 - 16 mm in residential and commercial buildings.
For use indoors.

Description

weber.floor 4180 is a factory-mixed, calcium sulphate-based and fiber-reinforced screed mortar with a grain size of 0 – 2 mm.

Main features

- **EMICODE EC 1 PLUS**: very low emission of volatile organic compounds (VOC)
- for floor heating systems with a pipe diameter of 12 – 16 mm
- allows large working sections up to 150 m²
- flow-grade and very good levelling property
- provides smooth floor surfaces
- begin of the functional heating (with all pre-heating and cooling measures) after 48 hours
- high bending tensile strength
- high pull-off strength
- normal-drying

Technical values

Absolute water demand	approx. 4.25 liters / 25 kg
Relative water demand	approx. 17%
Flexural strength (28 days)	> 7 N/mm ²
Pot life	approx. 35 - 40 minutes
Application temperature (air)	> +5°C - < +30°C
Application temperature (substrate)	+5°C - +25°C
Reaction to fire	class A 1fl (EN 13813)
Layer thickness	25 - 60 mm
Consistency (slump)	35 - 40 mm (with flow ring: Ø 68 mm/height 35 mm)
Open to foot traffic	approx. 24 hours
Open to light load	approx. 48 hours
Open to full load	after covering maturity
Thermal conductivity	approx. 1.2 W/mK

Quality control

weber.floor 4180 is subject to a regular quality control by self-monitoring according to EN 13813.

General notes

- Comply with the national standards and/or guidelines relating to laying works of screeds. If not issued, and if necessary, request technical advice.
 - Arrange dummy joints for special room geometry, i.e wall entry points, doorways, wall recesses etc. Take over existing movement joints.
 - Floor surfaces up to 150 m² can be installed without movement joints.
 - During application and for 1 week afterwards the temperatures of air and substrate should be $\geq +5^{\circ}\text{C}$.
 - All characteristics mentioned in this data sheet are based on a temperature of +20°C without draught and a relative humidity rate of 65%.
 - High temperatures shorten, lower temperatures extend the pot life.
 - In case of doubt regarding application, substrate or special structural features, request technical advice.
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Special notes

- **Limits of use:** do not use as bonded screed.
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- In case of floating constructions the compressibility of the insulation boards must not exceed 3 mm.
- If their compressibility is ≤ 3 mm, it must be ensured that the covering of the heating pipes with **weber.floor 4180** is at least 30 mm.
- If their compressibility is ≤ 2 mm, the minimum covering of the heating pipes can be reduced by 5 mm, so that their covering with **weber.floor 4180** is at least 25 mm.
- Do not add any foreign substances during mixing, pumping and application.

Substrates

Concrete is allowed as substrate.

Substrate preparation

- In case of uprising damp appropriate waterproofing measures must be taken.
- In the case of use of **weber.floor 4180** on separating membrane or insulation boards, the load-bearing substrate must comply with the national standards and/or guidelines (for ex. DIN 1856 or 18202) and be cleaned.
- If necessary, level out unevennesses and height differences beforehand with for ex. the quick-setting lightweight screed underlay **weber.floor 4514** (4 - 10 cm) or the quick-setting cement- and expanded polystyrene-based lightweight levelling compound **weber.floor 4520** (3 - 25 cm).
- Prior to installation the heating pipes must be filled with water and their watertightness must be checked.
- The substrate preparation must be adapted to the specific job site conditions.

Working instructions

Mixing

- **Mechanical application:** use a mixing and pumping machine which is appropriate for flow-grade screeds.
- For optimal application the whole length of hoses should be at least 40 meters.
- A steady consistency is a pre-requisite for the final properties of the levelling compound. Monitor the consistency regularly via slump test. Take mixed material in the 1.3 liter tin, pour it into the flow ring and measure the slump (35 - 40 mm) on the flow table. The mortar must not show any bleeding.
- **Manual application:** mix with approx. 4.25 liters of water per 25 kg bag for 1 - 2 minutes until lump-free, using an electric drill and an appropriate stirrer. Observe a maturing time of approx. 3 minutes and mix again shortly.

- Excessive water content reduces the mechanical strengths and increases the risk of cracks and shrinkage.

Application

- Before pouring the hoses should be pre-lubricated with a slurry of anhydrite binder or limestone flour and water prior to the pumping of the first mixture. Afterwards this mix is disposed of in a container as waste. Do not use it for the screed mortar.
- When the material is pumped, limited working lanes or sections must be determined, in order to ensure the full workability of the product (mixing, levelling and smoothing) within its pot life. Therefore, the width of each working lane or section should not exceed 8 – 10 meters.
- If the specified width is exceeded, use the self-bonding foam strip **weber.floor 4965** in order to form bays and stop ends.
- Use the wobbling bar **weber Schwabbelstange**; first lengthwise and strongly, then crosswise and somewhat smoother. Such wavelike movements bring a good levelling and aerating effect.
- Clean mixing equipment and tools with water (fresh product). Hardened material must be removed mechanically.

Aftercare

- Protect freshly installed surfaces from draughts, and the direct effects of sunlight and heat during 2 days.
- After application the temperatures of air and substrate should be $\geq +5^{\circ}\text{C}$. during 1 week.

Readiness for covering

- Generally, the covering maturity is reached at the end of the functional heating (with all pre-heating and cooling periods).
- As a rule, **weber.floor 4180** is ready for covering when its residual moisture content has reached a value of 0.5 CM-% (by weight).
- For measurement of residual moisture content use a CM device (carbide hygrometer) as a rule.
- When applied in thicker layers the drying delay will be longer.

Practical information

Water demand:

approx. 4.25 liters / 25 kg

Tools:

Silo mixing and pumping machine, electric drill + stirrer, slump test tools (tin, ring and table), wobbling bar **weber Schwabbelstange**.

Storage:

The product can be stored at least 6 months in its original unopened packaging, if kept indoors dry and protected from moisture.

Consumption

per mm layer thickness: approx. 18.0 kg/m²

Packagings

Type	Sales unit	Number / euro-pallet
Paper bag	25 kg	42 bags

The information in this technical data sheet is based on our current knowledge and experience at the time of printing. However, they do not guarantee in the legal sense.