Note on English translation / Hinweise zur englischen Fassung

This is a translation of the technical data sheet valid in Germany.

All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.

Knauf Gips KG denies any liability for applications outside of Germany as this requires changes acc. to the respective national standards and building regulations.

F322

Drywall and Floor Systems | 2008-05

F322 **Knauf Floor Screed FE 50** *Largo*

Self-leveling calcium sulphate floor screed CAF-C25-F5

F322 Knauf Floor Screed FE 50 Largo

Self-leveling calcium sulphate floor screed CAF-C25-F5

Product description

Knauf Floor Screed FE 50 Largo is a factory-mixed dry mortar, calcium sulphate-based, to be mixed with water. It consists of anhydrite, special gypsum, liquefier and aggregates (0 to 4 mm), such as grainy natural anhydrite or silica sand.

Quality classification
according to DIN EN 13813: CA-C25-F5

Order information

40 kg bag	Material no. 00005182
Silo (bulk)	Material no. 00005528

Fields of application

Knauf Floor Screed FE 50 Largo is the ideal self-leveling floor screed for single-family dwellings, town houses, multi-story residential or office buildings, as

- floor screed on insulation layer, nominal thickness ≥ 35 mm,
- heating floor screed, nominal thickness ≥ 35 mm above heating element,
- floor screed on separating layer, nominal thickness ≥ 30 mm,
- bonded screed, nominal thickness ≥ 25 mm.

Application

For 40 kg of dry mortar (1 bag) 6.5 l of clean water are required.

Mix Knauf Floor Screed FE 50 Largo with clean water and pump on prepared surface using a mixing pump (e.g. FErro 100, PFT G4/ G5, or similar).

Slurry spread should be 38 to 43 cm ø, determined with Slurry Spread Box 1.3 l on an even, non-absorbent surface.

While spreading, no water should separate from the screed.

Technical data

Density	
dry	approx. 2.0 to 2.1 kg/l
wet	approx. 2.2 to 2.3 kg/l
Bulk density of dry material	
bulk	1.6 kg/l
Efficiency of 100 kg dry mortar	approx. 53 l
Application time	approx. 60 minutes
Consumption	
per 1 cm screed thickness	approx. 19 kg/m²
Compressive strength	
dry	> 25 N/mm²
Bending tensile strength	
dry	> 5 N/mm²
Free expansion during setting	approx. 0.1 mm/m
Thermal conductivity	λ_z = 1.4 to 1.6 W/mK
Thermal expansion coefficient	approx. 0.016 mm/(mK)
Reaction of mortar	alkaline
Elastic modulus (Young's Modulus)	approx. 17 000 N/mm²
Building material class A1	non-combustible
Can be trafficked	after approx. 24 hours
Load	after approx. 3 days
Storage of dry mortar	up to 3 months

Movement joints

Hardening properties of Knauf Floor Screed FE 50 Largo are volume proven. Joints are not necessary within the field, except in case of floor heating (exception: structural settlement joints should be transferred in full width at the same position into the floor screed). Construction joints depending on work progress, machine performance and size of the object are allowed.

Movement joints for heating floor screed

Depending on the area size and layout, joints can become necessary. It is common to provide joints in door openings, if the length of the area is over 10 m or for area protrusions and taperings. Detailed information is included in the Code of Practice of the IGE/WTM/BNM "Fugen in Calciumsulfat-Fließestrichen".

Drying , floor covering

As heating floor screed, FE 50 Largo should be heated until dry before covering!

Rules for heating dry of FE 50 Largo:

Start: 7 days after application

1. Set up flow temperature to 25°C (77°F) and maintain it for three days.
2. Subsequently switch to maximum temperature (max. 55 °C / 131 °F) and maintain it without lowering overnight until screed is dry. Heating up can be done alternatively in increements of 5 K per day.
   Values of orientation for drying at maximum flow temperature:
   55 °C (131 °F) approx. 10 days,
   45 °C (113 °F) approx. 12 days for ~50 mm thickness, otherwise for longer.
   Testing of residual moisture with applied foil or CCM measurement.
3. Reduce flow temperature after drying in a way that a surface temperature of the screed of 15 to 18 °C (59 to 65 °F) is achieved.
4. Test residual moisture with CCM analyzer before covering screed.

FE 50 Largo as heating floor screed is ready to be covered after reaching a residual moisture of ≤ 0.3 CCM-% for all kind of covers.

(Please request detailed heating up rules with heating up report from Knauf).

Knauf FE 50 Largo without floor heating is ready to be covered after reaching a residual moisture of

≤ 1.0 CCM-% for covers open to vapour or

≤ 1.0 CCM-% for vapour-retardant covers, e.g. tiles,

≤ 0.5 CCM-% for vapour-proof covers and parquet (CCM measurement).

The drying time for a screed thickness of 35 mm can be estimated at approx. 3 to 6 weeks depending on the drying conditions.

Note:

Drying time depends, beside the screed thickness, mainly on temperature, humidity, and air speed. Steady ventilation, starting just two days after screed application accelerates the drying process.

Further information:

Brochure "Knauf Fließestriche: Konstruktion und Verarbeitungstechnik".

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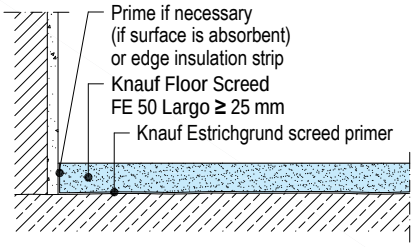
Bonded floor screed, nominal thickness ≥ 25 mm

- The substrate should be sufficiently solid, rough, dry and free of grease and cracks..

Apply an appropriate primer before screed application:

- Prime absorbent surfaces such as raw concrete with diluted Knauf Estrichgrund (volume ratio: 1 part of Estrichgrund + 1 part of water).
- Prime non-absorbent mineral surfaces with suitable special primers (e.g. Knauf Spezialhaftgrund).
- Use a bonding floor sealant (e.g. Knauf FE-Abdichtung) if rising humidity is likely to occur.

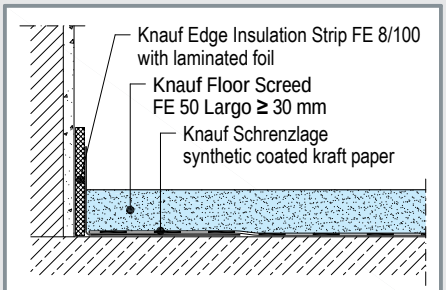


Bonded floor screed

Floor screed on separating layer, nominal thickness ≥ 30 mm

- Apply a layer of Knauf Schrenzlage on the prepared substrate with a sheeting overlap of at least 8 cm;

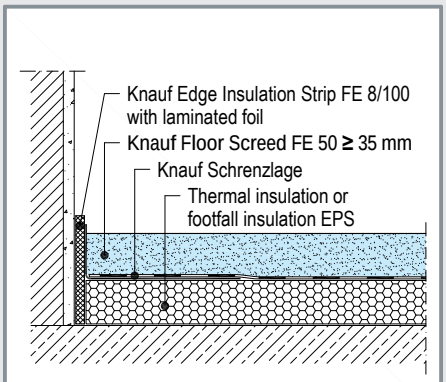
If basic floors have contact with soil (in basements) a humidity sealing is necessary according to DIN 18195-4 or equivalent, e.g. Knauf Abdichtungsbahn Katja Sprint. Apply a layer of Knauf Schrenzlage on the sealing.



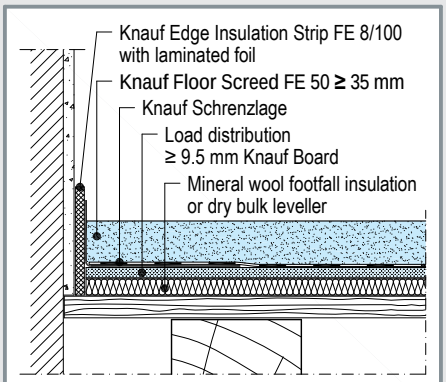
Floor screed on separating layer

Floor screed on insulation layer, nominal thickness ≥ 35 mm

- See detail drawings for various insulation constructions;
- Cover insulation with Knauf Schrenzlage or equivalent;
- For basic floors without a basement below, apply a humidity sealing (acc. to DIN 18195-4 or equivalent, e.g. Knauf Abdichtungsbahn Katja Sprint);



Floor screed on insulation layer, solid ceiling

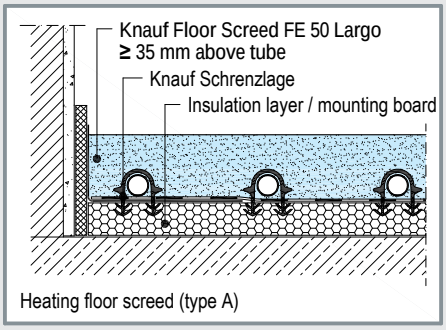


Floor screed on insulation layer, wood joist ceiling

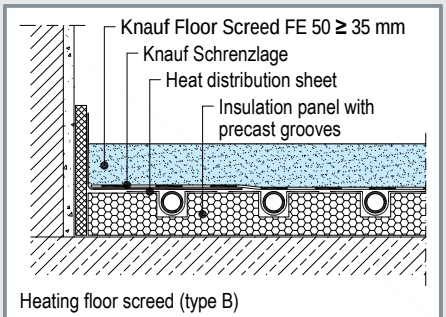
Heating floor screed, nominal thickness ≥ 35 mm

- Type A: nominal thickness ≥ 35 mm above tube;
- Apply heating screed (construction type A) in 2 layers if necessary;

Secure heating elements against buoying. If this is not done, apply screed in two layers.



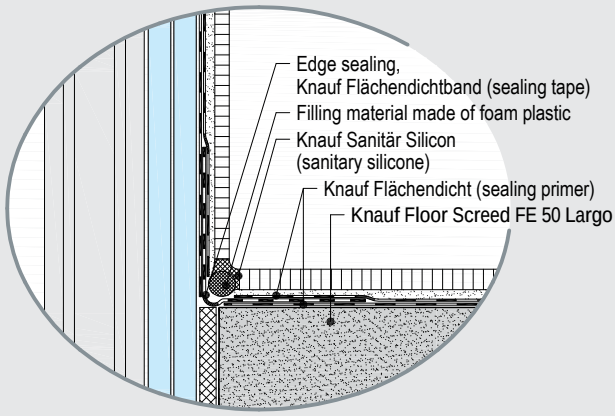
Heating floor screed (type A)



Heating floor screed (type B)

Construction in domestic areas of high humidity, e.g. kitchens and bathrooms

In domestic areas of high humidity, the screed construction should be sealed with a water-proof sealant, e.g. Knauf Flächendicht with Flächendichtband, to protect it against the effects of moisture.



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Heating up report for covering-ready heating

Fill in every change of flow temperature in case of water heating or every change of floor register setting in case of electric floor heating during heating up process and during lowering of temperatures exactly to 5 K*. Every testing of drying should be documented.

Builder: **Building site:**	**Heating installer:** **Building site supervisor:**
Heating system: **Date of screed application:**	**Average screed thickness:** mm **Thickness of heating tube covering:** **min.:** mm **max:** mm

Heating up (covering-ready heating):

Date	Flow temperature in °C / °F	Signature

Testing of drying (foil test):**

Date	Dry yes / no	Signature

Lowering of flow temperature:

Date	Flow temperature in °C / °F	Signature

Covering-ready heating finished:

Date	Outdoor air temperature in °C / °F	Signature

* K = Kelvin; is the scientific unit of temperature. A temperature increase of 5 K is commonly an increase of 5°C.

** Does not replace CCM measurement before covering.

Please retain report

Place / Date **Signature**

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** 0,14 €/Min.

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