

KNAUF



Drywall and Floor Systems

2008-02

F321 Knauf Floor Screed FE 25 *A tempo*

Fast-setting self-leveling calcium sulfate floor screed CAF-C30-F6

Product Description

Knauf Floor Screed FE 25 A tempo is a factory-mixed dry mortar, calcium sulfate-based, to be mixed with water. It consists of special gypsum, liquefier and aggregates (0 to 4 mm).

Quality classification

according to DIN EN 13813: CA-C30-F6

Order information

40 kg bag Material no. 00005349
Silo (bulk) Material no. 00005527

Fields of Application

Knauf Floor Screed FE 25 A tempo is applied as self-leveling bonded floor screed, floor screed on separating layer, on insulation layer or as heating floor screed with high compressive strength (> 30 N/mm²) and tensile strength (> 6 N/mm²).

Knauf Floor Screed FE 25 A tempo can be dried immediately after application (immediate heating up of heating floor screed).

The short drying time allows for early floor covering and fast usability of rooms. Knauf Floor Screed FE 25 A tempo is the ideal screed for deadline sites (fast readiness for floor covering) and for floors with high strength requirements (e.g. schools, commercial buildings).

Application

For 40 kg of dry mortar (1 bag) 7 l of water are required.

Mix Knauf Floor Screed FE 25 A tempo 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 45 cm, determined with Slurry Spread Box 1.4 l on an even, non-absorbent surface.

While spreading no water should separate from the screed.

Technical Data

Density

dry approx. 1.9 kg/l
wet approx. 2.1 kg/l

Bulk density of

dry material
bulk 1.5 kg/l

Efficiency of 100 kg

dry mortar approx. 54 l

Application time

approx. 40 minutes

Consumption

per 1 cm screed thickness approx. 19 kg/m²

Compressive strength

dry > 30 N/mm²

Bending tensile strength

dry > 6 N/mm²

Free expansion

during setting approx. 0.5 mm/m

Thermal conductivity

$\lambda_z = 1.4 \text{ W/mK}$

Thermal expansion coefficient

approx. 0.015 mm/(mK)

Reaction of mortar

alkaline

Elastic modulus

approx. 17 000 N/mm²

(Young's Modulus)

Building material class A1

non-combustible

Can be trafficked

after approx. 3 hours

Load

after approx. 8 hours

Storage of

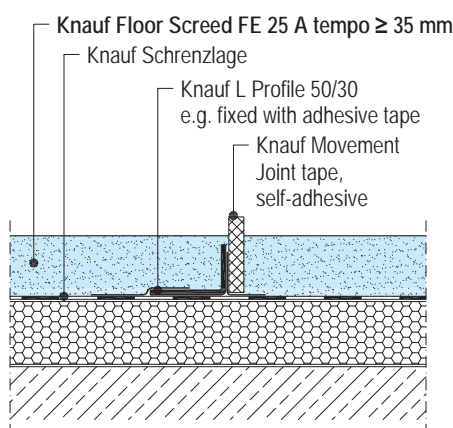
dry mortar up to 3 months

Movement Joints

Knauf Floor Screed FE 25 A tempo expands slightly during hardening. Separate all adjacent vertical components from screed using min. 8 mm thick edge strips. Provide joints in door openings and if the diagonal length of the area is over 10 m.

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.

For further information see Code of Practice "Fugen in Calciumsulfatfließestrichen" of the IGE.



Drying , Floor Covering

As heating floor screed, FE 25 A tempo should be heated until dry before covering!

Dry heating immediately after application

- Switch floor heating to maximum temperature (max. 55 °C/131 °F) immediately after application of the screed. Values of orientation for drying: For 35 mm screed thickness (type B) approx. 5 days, for 55 mm screed thickness (type A) approx. 10 days, if screed thickness is ≥ 60 mm dry heating period must be increased.

Dry heating of the hardened screed

- If the screed cannot be dry heated immediately after application, start with 25 °C/77 °F heating temperature for one day, then switch to max. heating temperature (max. 55°C/131°F).

In general

Keep maximum heating temperature without lowering overnight until screed is dry.

Testing of residual moisture

Testing of residual moisture with applied foil or CM measurement.

FE 25 A tempo as heating floor screed is ready to be covered after reaching a residual moisture of ≤ 0.3 CM-% for all kind of covers.

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

Knauf FE 25 A tempo without floor heating is ready to be covered after reaching a residual moisture of

≤ 1.0 CM-% for covers open to vapor or
≤ 1.0 CM-% for vapor-retardant covers, e.g. tiles,

≤ 0.5 CM-% for vapor-proof covers and parquet (CM measurement).

The drying time for a screed thickness of 35 mm can be estimated approx. 8 to 14 days depending on the drying conditions.

Note:

Drying time depends, beside the screed thickness, mainly on temperature, humidity, and air speed. Steady ventilation, starting right 2 days after screed application accelerates the drying process. Additional heating (no gas burner) and the use of Knauf Dry Heating Cable shorten the drying process.

Further information:

Brochure "Knauf Fließestriche: Konstruktion und Verarbeitungstechnik".

For further details for the application fields, see Technical Data Sheet F21.

Bonded Floor Screed, nominal thickness ≥ 25 mm

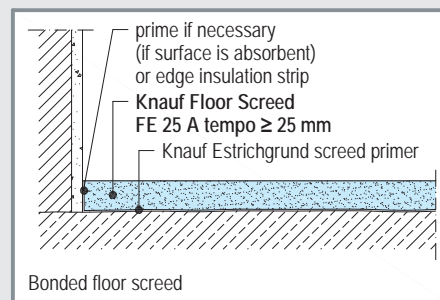
■ The substrate should be sufficiently solid, rough, dry and free of grease and cracks..

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.

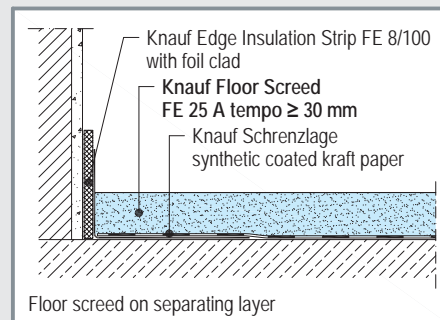


Bonded floor screed

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.



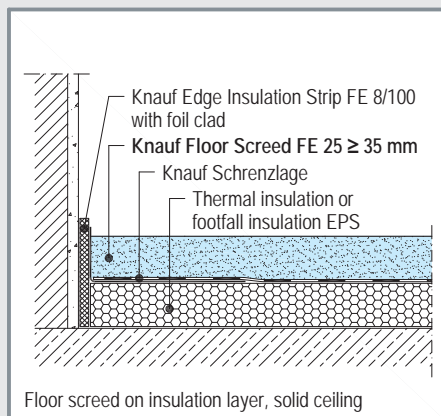
Floor screed on separating layer

Floor Screed on Insulation Layer, nominal thickness ≥ 35 mm

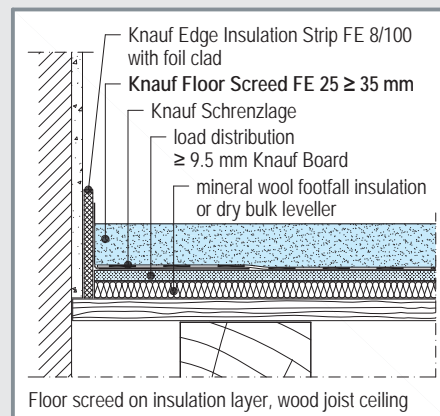
■ See detail drawings for various insulation constructions.

■ 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



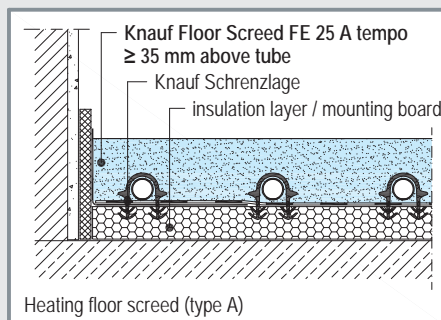
Floor screed on insulation layer, wood joist ceiling

Heating Floor Screed, nominal thickness ≥ 35 mm

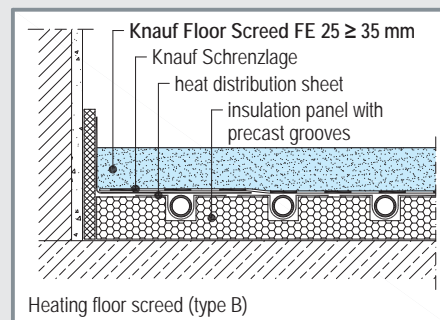
■ Type A: nominal thickness ≥ 35 mm above tube;

■ 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.



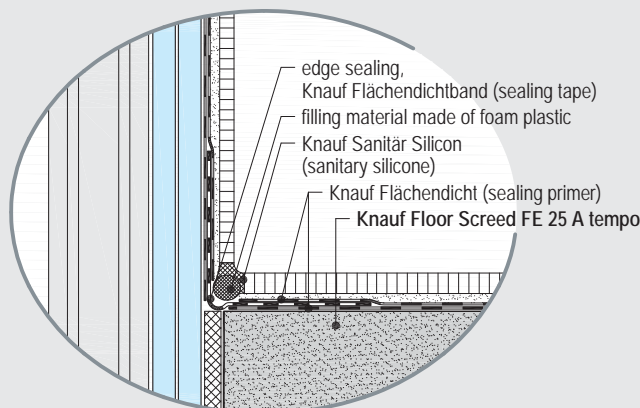
Heating floor screed (type A)



Heating floor screed (type B)

Construction in domestic moist rooms, e.g. kitchens and bathrooms

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



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 reported.

Builder:

Building site:

Heating up duration:

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 CM measurement before covering.

Please retain report

Place / Date

Signature

Knauf Direct
Technical Advisory Service:

▶ Phone.: +49 9001 31-1000 *
▶ Fax: +49 1805 31-4000 **

▶ www.knauf.de

Knauf Drywall and Floor Systems Am Bahnhof 7, 97346 Iphofen, Germany

* A rate of 0.39 € per minute will be charged for calls from within the German landline network. Callers whose phone numbers are not registered in the address database of Knauf Gips KG, i.e. private builders or non-patrons, will be charged a rate of 1.69 € per minute. Calls from mobile phones will be charged 1.48 € per minute.
** 0,14 €/Min.



All technical changes reserved. Only the current printed instructions are valid. Our warranty is expressly limited to our products in flawless condition. All application quantities and delivery amounts are based on empirical data that are not easily transferable to other deviating areas. The stated information represents current state-of-the-art Knauf technology. The entire state of approved engineering rules, appropriate standards, guidelines, and rules of craftsmanship are not included herewith. These and all application instructions have to be adhered to separately by the installer. All rights reserved. All amendments, reprints and photocopies, including those of excerpts, require the express permission of Knauf Gips KG, Am Bahnhof 7, 97346 Iphofen, Germany. Delivery via professional building material distributors only, in accordance with our current business, delivery and payment terms.