

Note on English translation / Hinweise zur englischen Fassung

This is a translation of the product 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.

KNAUF



Floor Systems

F323f.de

Product Data Sheet

2022-05



FE Fire

Flowing screed CAF-C25-F5 for fire protection of buildings

Product description

FE Fire flowing screed is a factory-mixed dry mortar on a calcium sulphate basis intended for mixing with water. It consists of special gypsum, superplasticizing admixtures and aggregates (0 to 4 mm).

Quality classification acc. to EN 13813

CA-C25-F5

Storage

Dry mortar up to 6 months

Quality

In compliance with EN 13813, the product is subject to initial type testing and continuous factory production control and bears the CE marking.

Properties and added value

- High level of constitutional water
- Very low emission, EMICODE EC 1^{PLUS}
See www.emicode.com/en
- For fire resistance classes F30, F60 and F90
- Certified systems (abP)
- Can be heated early as a heated screed
- Very low shrinkage and stresses
- Quickly load capable
- No sinter layer
- Even surfaces with minimum joint requirement



- Controlled, constant quality

Field of application

FE Fire is used in fire protection of buildings against exposure to fire from above on wooden joist ceilings, reinforced concrete ceilings, steel beam and steel trapezoid profile ceilings as well as in old and new buildings.

Used for fire protection as

- Screed on a separating layer
- Screed on an insulating layer
- Heating floor screed

For constructions with FE Fire for fire resistance refer to the technical brochure [F20.de Knauf Floor Systems](#).

Certificate of Usability

DIN 4102-4

German National Technical Approval (abP) P-2101/351/18-MPA BS

Application

Mixing

Mixing by machine

FE Fire floor screed is mixed with clean water using mixing pumps (e.g. PFT FERRO 100) and pumped onto the prepared surface.

Application

Recommended spread Ø 38 to 43 cm, determined using a consistence checking tin 1.3 l on an even, non-absorbent surface. Maximum mortar temperature +25 °C.

No water should separate from the screed while spreading!

FE Fire levels to a horizontal flat surface when pitched with a screed brush or a dappling bar.

Cleaning

In case of machine application, the machine and hoses must be cleaned within 30 minutes at the latest after machine standstill.

Movement joints

FE Fire hardening properties are volume proven. Structural joints must be implemented with the same position and across the full width in the screed. Further joints may be necessary depending on the bay size and floor plan shape.

Detailed recommendations for joint arrangement can be found in the Code of Practice "Joints in flowing calcium sulphate screeds" (IGE/IWM). Apply edge and movement joints with non-combustible insulation materials (mineral wool insulation strips, melting point ≥ 1000 °C). They must be protected against moisture from the flowing screed mortar by foil strips or similar (heated screed) or a bath shaped separating layer.

Drying – Application of covering

FE Fire can be walked on after approx. 12 h. Ventilation can commence after 24 h.

As a heated screed, FE Fire should be heated until dry before the floor covering is laid.

Heat up regulations for FE Fire:

Commence 48 h after application.

1. Set the flow temperature to 25 °C.
2. After a further 24 h set the highest temperature (max. 55°C) and retain it (without nighttime operation reduction) until the screed is dry.
3. Test for residual moisture with CM measurement.
4. After drying, reduce the flow temperature so that the surface temperature of the screed achieves 15 to 18 °C.

FE Fire is ready to be covered after the residual moisture has reached 0.5 CCM % for all covering types.

Please request the detailed heating up regulations with heating up report, refer to the technical information [PBo18.de Knauf floor screeds on warm water underfloor heating](#).

Note	The drying time is, in addition to the screed thickness, mainly dependent on: Temperature, air humidity and air speed. During heating up controlled ventilation for drying of the screed must occur. Preferably by a fan (installed in window), extracting the air from the building.
Note	After coordination of trades with area heating and area cooling systems of the BVF, the measurement points for CM measurement must be arranged.
Note	For further information on planning and design of Knauf floor systems with Knauf flowing screed, see technical brochure Knauf Floor Systems F20.de .

Heating protocol for coverage ready heating

Investor:

Building site:

Heating engineer:

Site manager:

Every change in the flow temperature (warm water heating) or floor thermostat setting (electrical heating) during heat up and cooling must be documented exactly to 5 °C. Every drying test should be documented.

Heating system:

Screed applied on:

Average screed thickness: mm

Coverage of heating element:

min.: mm max: mm

Heat up (coverage ready heating)

Date	Flow temperature / floor thermostat setting in °C	Signature

- Ventilation
- Window ventilation

Date from	Date to	Ø h per day

Preliminary drying test
(e.g. foil test ¹⁾)

Date	Dry yes/no	Signature

Drying test
(CCM measurement)

Date	Residual moisture in %	Signature

Reduction of the flow temperature

Date	Flow temperature / floor thermostat setting in °C	Signature

Coverage ready heating completed

Date	Outdoor temperature in °C	Signature

Place / Date

Signature (Site manager)

Please keep this document!

1) Does not replace CM measurement before laying floor covering

Technical data

Designation	Standards	Unit	FE Fire
Compressive strength (dry)	EN 13813	N/mm ²	> 25
Flexural strength (dry)	EN 13813	N/mm ²	> 5
Modulus of elasticity	–	N/mm ²	approx. 17000
Building material class	EN 13813	–	A1fl - non-combustible
Density, drying	–	kg/l	approx. 2.0 – 2.1
Density, wet	–	kg/l	approx. 2.2 – 2.3
Bulk density of dry material, bulk	–	kg/l	1.6
Application time	–	min	approx. 40
Walkable	–	h	after approx. 12
Can be loaded	–	d	after approx. 3
Free expansion when setting	–	mm/m	approx. 0.1
Thermal expansion coefficient	–	mm/(m·K)	approx. 0.014
Thermal conductivity λ_2	–	W/(m·K)	approx. 1.4
Yield from 100 kg dry mortar	–	l	approx. 53
Reaction of mortar	EN 13454	–	alkaline

The stated technical data were evaluated acc. to the respective test standards. Deviations under site conditions are possible.

Material requirement and efficiency

Material requirement	Consumption approx.
Per 1 cm screed thickness	19 kg/m ²

Product range

Designation	Application	Material number	EAN
FE Fire	Bulk	00667520	4003982505811

Sustainability and environment

Short description	Unit	Value
Requirements of the German AgBB-scheme	–	fulfilled
Complies with the requirements of the French emission class	–	A+
Certificates	–	Emicode EC 1 ^{PLUS}



Observe safety data sheet!

For safety data sheets and CE marking see
pd.knauf.de



Videos for Knauf systems and products can be found under the following link:

www.youtube.com/knauf



The Knauf Infothek App now provides all the current information and documents from Knauf Gips KG at any time and in every location in a clear and comfortable way.

[Knauf Infothek](#)

Knauf Direct

Technical Advisory Service:

▶ knauf-direkt@knauf.com

▶ www.knauf.de

Knauf Gips KG Am Bahnhof 7, 97346 Iphofen, Germany

All technical changes reserved. Only the current printed instructions are valid. 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. 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.

All rights reserved. All amendments, reprints and photocopies, including those of excerpts, require our expressed permission.