

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

F325.de

Product Data Sheet

2022-05



FE 80 Allegro

Calcium sulphate floor screed CAF-C30-F6

Product description

FE 80 Allegro screed is a factory-mixed dry mortar on a calcium sulphate basis intended for mixing with water. It consists of anhydrite, special gypsum, superplasticizing admixtures and aggregates (0 to 4 mm), such as grainy natural anhydrite or silica sand.

Quality classification acc. to EN 13813

CA-C30-F6

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

- Very high thermal conductivity
- Very low emission, EMICODE EC 1^{PLUS}
See www.emicode.com/en
- High application performance
- Self-levelling
- Very low shrinkage and stresses
- Quickly load capable
- No sinter layer
- Even surfaces with minimum joint requirement
- Controlled, constant quality



Field of application

FE 80 Allegro is ideal for underfloor heating and for raised access floors in interiors. Its high compressive and flexural strengths make it especially suited for commercial buildings.

It is used as:

- Floating screed, nominal thickness ≥ 35 mm
- Heating screed, nominal thickness ≥ 35 mm above the heating elements
- Screed on a separating layer, nominal thickness ≥ 30 mm,
- Bonded screed, nominal thickness ≥ 25 mm
- Screed as hollow floor, nominal thickness ≥ 30 mm.

Application

Preparation

For 40 kg of dry mortar (1 bag) approx. 6.5 to 7 l of clean water is required.

Mixing

Mixing by machine

FE 80 Allegro flowing screed is mixed with clean water in mixing pumps (e.g. PFT FERRO 100, PFT G 4 or similar) and pumped onto the prepared surface.

Application

Recommended spread 40 to 45 cm ø, determined using a consistence checking tin 1.3 l on an even, non-absorbent surface.

No water should separate from the screed while spreading!

FE 80 Allegro 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 80 Allegro floor screed hardening properties are volume proven.

Movement joints are unnecessary in the screed bay except in the case of heated screed. They must be implemented at the same position across the full width in the screed. Press joints (construction joints) are permitted depending on the work progress, machine performance and building size.

Movement joints for heating floor screed

Joints may be necessary depending on the bay size and floor plan shape. It is common to provide joints in doorways, on surfaces exceeding 10 m in length, in protruding areas and narrow spaces.

Detailed requirements and specifications for joints are available in the IGE Code of Practice "Joints in flowing calcium sulphate screeds".

Drying – Application of covering

Prior to further floor covering being applied the screed requires sufficient drying (ready for coverage). The prerequisite for the readiness to receive a coverage for the FE 80 Allegro are the following moisture levels.

Covering	Vapour-tight coverings (elastic floor coverings) as well as parquet	Vapour-retardant floor coverings (tiles, natural stone) as well as vapour permeable floor coverings (textile, etc.)
FE 80 Allegro unheated	≤ 0.5 CM-%	≤ 1.0 CM-%
FE 80 Allegro heated (heated screed)	≤ 0.5 CM-%	≤ 0.5 CM-%

Observe the following with drying:

- Tilt the window open 1 day (approx. 24 hours) after pouring the screed to reduce the formation of condensation on the windows. FE 80 Allegro is already walkable for this purpose.
- From 2 days after screed installation, open the doors and windows fully to assure the exchange of air (draught). Windows that are tilted open or surge ventilation in the mornings and evenings are insufficient for quick drying as the air exchange rate is too low. Protect the interior area from frost and rain.

As a heated screed, FE 80 Allegro should be heated until dry before the floor covering is laid.

The drying time for screed thickness of 35 mm (unheated) is approx. 3 to 6 weeks depending on the drying conditions.

The following must also be observed (heating up regulations):

Start: Heat up can commence 7 days after application of the screed.

Continue to ventilate well.

1. Set the flow temperature to 25 °C and retain it for three days.
2. Then set the highest temperature (max. 55 °C) and retain it (without night-time operation reduction) until the screed is dry. Alternatively, heating up can be implemented in steps of 5 K per day.
Reference values for drying at maximum flow temperature:
55 °C approx. 10 days,
45 °C approx. 12 days with ~50 mm thickness, otherwise for longer.
Testing for residual moisture with applied foil or CM measurement.
3. After drying, reduce the flow temperature so that the surface temperature of the screed achieves 15 to 18 °C.
4. Test the level of residual moisture with a CM analyzer before laying the floor covering.

Please request the detailed heating up regulations with heating up report, refer to the technical information [Knauf floor screeds on electrical underfloor heating Bo17.de](#) and technical information [Knauf Floor screeds on warm water underfloor heating Bo18.de](#).

Note	The drying time is, in addition to the screed thickness, mainly dependent on the temperature, air humidity and air speed. Continuous ventilation starting just two days after screed application accelerates the drying process.
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	Standard	Unit	FE 80 Allegro
Compressive strength (dry)	EN 13813	N/mm ²	> 30
Flexural strength (dry)	EN 13813	N/mm ²	> 6
Modulus of elasticity	–	N/mm ²	approx. 17000)
Building material class	EN 13813	–	A1fl - non-combustible
Density, drying	–	kg/l	approx. 2.0
Density, wet	–	kg/l	approx. 2.2
Bulk density of dry material, bulk	–	kg/l	1.6
Application time	–	min	approx. 60
Walkable	–	h	after approx. 24
Can be loaded	–	d	after approx. 3
Free expansion when setting	–	mm/m	approx. 0.1
Thermal expansion coefficient	–	mm/(m·K)	approx. 0.015
Thermal conductivity λ_2	–	W/(m·K)	approx. 1.4 – 1.87
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	Packaging unit	Material number	EAN
FE 80 Allegro	Bulk	–	00005529	4003982155894
	40 kg	30 bags / pallet	00005183	4003982000149

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



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