



Knauf Pre-fab Floor Screed – Corrective Actions

F126.de – Pre-fab floor screed on a separating layer / equalization

F127.de – Pre-fab floor screed on an insulation layer

F128B.de – Pre-fab floor screed as heating floor screed type B

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Notes on the document

Knauf technical brochures are the information documents on special topics as well as on the specialist competence from Knauf. The contained information and specifications, constructions, details and stated products are based, unless otherwise stated, on the Certificates of Usability (e.g. National Technical Test Certificate (abP) valid at the date they are published as well as on the applicable standards. Additionally, design and structural requirements and those relating to building physics (fire resistance and sound insulation) are considered.

The contained construction details are examples and can be used in a similar way for various cladding variants of the respective system. At the same time, the demands made on fire resistance and/or sound insulation as well as any necessary additional measures and/or limitations must be observed.

References to other documents

System data sheets

- [D15.de Knauf Wood Joist Ceiling Systems](#)
- [FE22.de Knauf thin-layer heating screed systems](#)

Technical brochures

- [Knauf Pre-fab Floor Screed F12.de](#)
- [Knauf Pre-Fab Screed Brio F12LD.de](#)
- [Knauf Floor Systems - Constructions and Application Technology F20.de](#)

Folders

- [Fire resistance with Knauf BS1.de \(German only\)](#)
- [Sound insulation and room acoustics with Knauf \(only sections in English\)](#)

Product data sheets

- Observe the product data sheets of the individual Knauf system components.

Intended use of Knauf Systems

Please observe the following:

Caution	Knauf systems may only be used for the application cases specified in the Knauf documentation. In case third-party products or components are used, they must be recommended or approved by Knauf. Flawless application of products / systems assumes proper transport, storage, assembly, installation and maintenance.
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Certificates of Usability

Knauf system	Fire resistance
F126.de	abP P-2101/493/16-MPA BS
F127.de	
F128B.de	

The stated constructional and structural properties, and characteristic building physics of Knauf systems can solely be ensured with the exclusive use of Knauf system components, or other products explicitly recommended by Knauf. The validity and up-to-datedness of the stated proofs have to be considered.

Rework of the construction recommendations for Knauf pre-fab floor screed

Changes in the verification procedure for fire resistance classes, which affect the entire industry, have forced us to revise some of our fire protection documents, such as the technical brochure [Knauf Pre-fab Floor Screed F12.de](#). We will examine the reasons for these changes in the following:

The building regulation demands on the construction types result from the individual Federal state building regulations as well as the supplementary administrative regulations and directives. Proof of fulfilment of these requirements can be provided by standards introduced by the building authorities (regulated types of construction), e.g. DIN 4102-4 or individual verifications (non-regulated types of construction) by means of general type approvals (aBG), general building authority test certificates (abP) or project-related type approvals (vBG).

The Model Administrative Regulation - Technical Building Rules (MVV TB) 2023/01, Annex 4, Table 4.2.4, states that no classifications F60-B or F90-B are assigned to the area of the building authority requirement "highly fire-retardant" or "fire-proof". This circumstance is not essentially new, but is now handled in such a way that no new certificates are issued for these fire resistance classes and existing certificates are no longer extended.

This also applies to tested constructions from Knauf that have been tested for ceilings with combustible load-bearing frame, such as wooden beam ceilings, for a period of ≥ 60 minutes and are classified, for example, as F60-B or F90-B in accordance with DIN 4102-2. According to the current status, exceptions are only conceivable in the case of project-related construction type approvals (vBG), where deviating requirements are established as part of a fire protection concept.

What does this mean for planning and application

Due to the suspended extension of the Knauf abP P-3103/9975 stating 23.03.2024, we are adapting our construction recommendations accordingly and can obtain the construction designs in this document via other verification documents.

When dealing with construction projects that have already been approved and/or are currently under construction, those responsible for fire resistance must clarify which version of the verification is to be used for acceptance.

General notes on fire resistance

The values in the following tables on pages [page 6](#) to [11](#) apply for single-sided exposure to fire from the top side of the ceiling. The specified supporting layer thickness is the required minimum thickness for fire resistance. Larger screed thicknesses that are structurally necessary must be considered.

The maximum permissible load per unit area in case of fire is 2 kN/m².

The sequence of the layers required for fire protection listed in the tables on [page 6](#) to [11](#) is mandatory.

Fire resistance permissible intermediate layers, with the exception of sheet metal in the tables on [page 6](#) to [11](#) can also be additionally arranged between the necessary layers.

- Non-combustible building materials are e.g.:
Mineral fillers, Knauf boards (GKB/GKF/Vidiwall), Trockenschüttung PA dry bulk leveller., Brio Schüttung dB, and S 400 Sprint.
- ≤ 5 mm separating layers are, e.g.:
Knauf Schrenzlage, Knauf Integral Auflagerdämmstreifen support insulation strips, Malervlies fleece layer, Wellpappe corrugated cardboard, PE foil, ...

Construction

- Brio should be aligned and applied with a minimum 200 mm joint offset, joints and screw heads / staple backs must be filled with Uniflott.
- Bonding of the rebates with Brio Joint Adhesive or Knauf Weissleim PVA glue, fastening of the rebates with Knauf gypsum fibre screws or staples (spacing ≤ 300 mm).
- On trapezoid metal sheets with top spacing ≤ 100 mm, filling the corrugations with a stable and substantial material can be omitted.

Perimeter application

- Edge insulation strips: Building material class A, melting point ≥ 1000 °C, density ≥ 90 kg/m³ (e.g. Knauf edge insulation strips made of mineral wool).


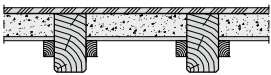
Layers above the base substrate

- Above Brio constructions with a fire resistance classification, either a thin-layer underfloor heating system (e.g. Uponor Minitec) with N 440 or alternatively and additional Brio board layer for accepting special cut heating pipe grooves can be installed.
- Commonly used floor coverings can be applied on the Brio pre-fab floor screed constructions.

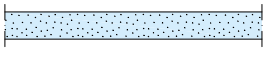
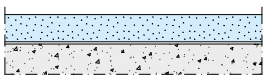
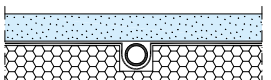
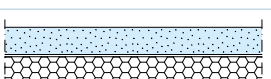
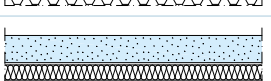
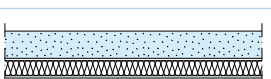

Fire resistance in conjunction with wood joist ceilings (construction type IV)

Fire resistance in conjunction with wood joist ceilings (construction type IV)

Requirements for wood joist ceilings

Building type	Description
 <p>Wood joist ceiling without sound boarding</p>	<p>Sheathing</p> <ul style="list-style-type: none"> ■ Wooden composite boards: ≥ 16 mm, $\rho \geq 600$ kg/m³ with tongue and groove connection or ■ Wooden floorboards ≥ 21 mm with tongue and groove <p>Joists</p> <p>Width ≥ 40 mm, spacing ≤ 900 mm (strength class C24 acc. to DIN EN 338, sorting class S10 acc. to DIN 40741)</p>
 <p>Wood joist ceiling with sound boarding</p>	

Fire resistant constructions Knauf pre-fab floor screed in conjunction with wood joist ceilings

Flooring construction	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction	
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom) Permissible intermediate layers (see also page 5)
Scheme drawings			
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed			
	F30	Brio 18	– Non-combustible building materials and/or separating layer made of ≤ 2 mm textile fleece or ≤ 4 mm corrugated cardboard
		Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18	25 mm Uponor Siccus Non-combustible building materials
		Brio 18	≥ 20 mm EPS/XPS Non-combustible building materials
		Brio 18 MW	– Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18 WF	≥ 20 mm EPO-Leicht light levelling mortar Non-combustible building materials


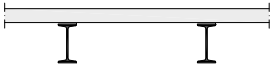
Fire resistant constructions Knauf pre-fab floor screed in conjunction with wood joist ceilings (continuation)

Flooring construction Scheme drawings	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction	
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom) Permissible intermediate layers (see also page 5)
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed			
	F60	Brio 18	≤ 2 mm textile fleece or ≤ 4 mm corrugated cardboard Non-combustible building materials
		Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18	≥ 60 mm EPS/XPS on 12.5 mm Knauf Vidiwall 1Mann or GKB Non-combustible building materials
		Brio 18	25 mm Uponor Siccus on ≥ 35 mm EPS/XPS on ≥ 10 mm Knauf WF on 12.5 mm Knauf Vidiwall 1Mann or GKB Non-combustible building materials
		Brio 18 MW	– Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18 WF	≥ 40 mm EPO-Leicht light levelling mortar Non-combustible building materials
	F90	Brio 18	≥ 40 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18	≥ 60 mm EPS/XPS on 12.5 mm Knauf Vidiwall 1Mann or GKB Non-combustible building materials
		Brio 18	25 mm Uponor Siccus on ≥ 35 mm EPS/XPS on ≥ 10 mm Knauf WF on 12.5 mm Knauf Vidiwall 1Mann or GKB Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 40 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18 WF	≥ 60 mm EPO-Leicht light levelling mortar Non-combustible building materials

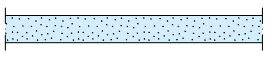
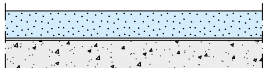
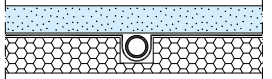
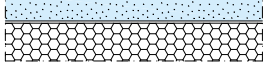
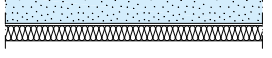
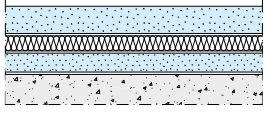
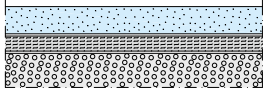
Fire resistance in conjunction with solid ceilings

Fire resistance in conjunction with ceilings ceiling

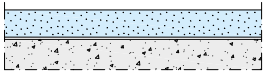
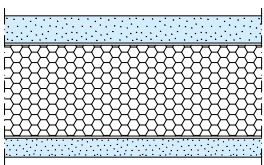
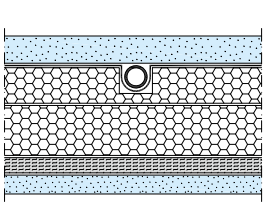
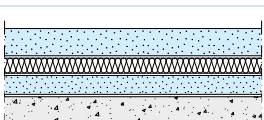
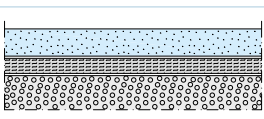
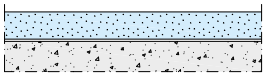
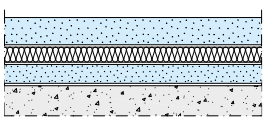
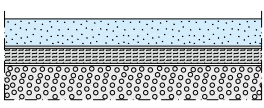
Requirements for solid ceilings

Building type	Description
	Solid ceiling Normal-weight concrete, compressive strength category C 20/25 to C 50/60 Minimum thickness: F30 or F60 of 80 mm, F90 of 100 mm Larger thicknesses may be required for structural reasons.
	Steel girder ceiling Structural rating of the steel girder Covering: Concrete or similar Minimum thickness of covering: 80 mm for F30 or F60 100 mm for F90

Fire resistant constructions Knauf pre-fab floor screed in conjunction with solid ceilings

Flooring construction	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction	
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom) Permissible intermediate layers (see also page 5)
Scheme drawings			
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed			
	F30	Brio 18	– Non-combustible building materials and/or separating layer made of ≤ 2 mm textile fleece or ≤ 4 mm corrugated cardboard
		Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18	25 mm Uponor Siccus Non-combustible building materials
		Brio 18	≥ 20 mm EPS/XPS Non-combustible building materials
		Brio 18 MW	– Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 20 mm Trockenschüttung PA dry bulk leveller Non-combustible building materials
		Brio 18 WF	≥ 20 mm EPO-Leicht light levelling mortar Non-combustible building materials

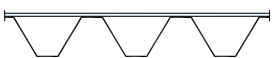
Fire resistant constructions Knauf pre-fab floor screed with solid ceilings (continuation)

Flooring construction Scheme drawings	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction		
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom)	Permissible intermediate layers (see also page 5)
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed				
	F60	Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18	≥ 60 mm EPS/XPS on 12.5 mm Knauf Vidiwall 1Mann or GKB	Non-combustible building materials
		Brio 18	25 mm Uponor Siccus on ≥ 35 mm EPS/XPS on ≥ 10 mm Knauf WF on 12.5 mm Knauf Vidiwall 1Mann or GKB	Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 20 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18 WF	≥ 40 mm EPO-Leicht light levelling mortar	Non-combustible building materials
		F90	Brio 18	≥ 40 mm Trockenschüttung PA dry bulk leveller
	Brio 18 MW		12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 40 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
	Brio 18 WF		≥ 60 mm EPO-Leicht light levelling mortar	Non-combustible building materials

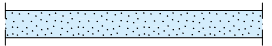
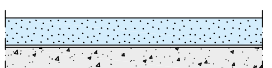
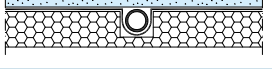
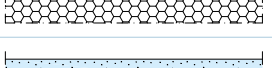
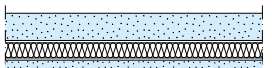
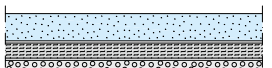

Fire resistance in conjunction with trapezoid sheet metal ceilings

Fire resistance in conjunction with trapezoid sheet metal ceilings

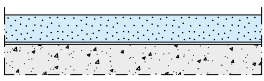
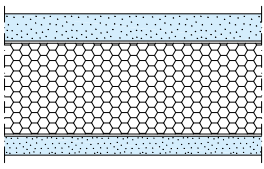
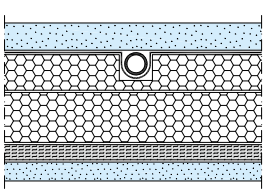
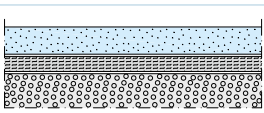
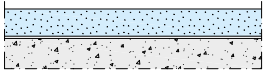
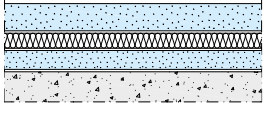
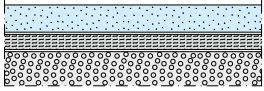
Requirements for trapezoid sheet metal covers

Building type	Description
Steel trapezoid profile ceiling 	Structural rating of the steel trapezoid profile ceiling, with additional, tightly jointed layer between the ceiling and floor construction: <ul style="list-style-type: none"> ■ Gypsum board GKF: ≥ 12.5 mm or ■ Gypsum fibre board: ≥ 10 mm or ■ Wooden composite boards: ≥ 16 mm, $\rho \geq 600$ kg/m³ with tongue and groove connection or ■ Wooden floorboards ≥ 21 mm with tongue and groove or ■ Cementitious boards ≥ 10 millimeters

Fire resistant constructions Knauf pre-fab floor screed in conjunction with trapezoid sheet metal ceilings

Flooring construction Scheme drawings	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction		
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom)	Permissible intermediate layers (see also page 5)
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed				
	F30	Brio 18	–	Non-combustible building materials and/or separating layer made of ≤ 2 mm textile fleece or ≤ 4 mm corrugated cardboard
		Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18	25 mm Uponor Siccus	Non-combustible building materials
		Brio 18	≥ 20 mm EPS/XPS	Non-combustible building materials
		Brio 18 MW	–	Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 20 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18 WF	≥ 20 mm EPO-Leicht light levelling mortar	Non-combustible building materials

Fire resistant constructions Knauf pre-fab floor screed in conjunction with trapezoid sheet metal ceilings (continuation)

Flooring construction Scheme drawings	Fire resistance class	Knauf Pre-Fab Floor Screed floor construction		
		Base layer Required minimum thickness for fire resistance	Fire resistant construction underneath the supporting layer Required (from top to bottom)	Permissible intermediate layers (see also page 5)
F126.de / F127.de / F128B.de Knauf Pre-fab floor screed				
	F60	Brio 18	≥ 20 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18	≥ 60 mm EPS/XPS on 12.5 mm Knauf Vidiwall 1Mann or GKB	Non-combustible building materials
		Brio 18	25 mm Uponor Siccus on ≥ 35 mm EPS/XPS on ≥ 10 mm Knauf WF on 12.5 mm Knauf Vidiwall 1Mann or GKB	Non-combustible building materials
		Brio 18 WF	≥ 40 mm EPO-Leicht light levelling mortar	Non-combustible building materials
	F90	Brio 18	≥ 40 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18 MW	12.5 mm Knauf Vidiwall 1Mann or GKB on ≥ 40 mm Trockenschüttung PA dry bulk leveller	Non-combustible building materials
		Brio 18 WF	≥ 60 mm EPO-Leicht light levelling mortar	Non-combustible building materials



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Knauf Integral
Gypsum fibre technology
for floors, walls and ceilings

Knauf Performance Materials
Refined perlite for horticulture
and industrial applications,
technical insulation

Knauf PFT
Machine technology
and plant engineering

Marbos
Mortar systems
for cobblestone paving

Sakret Bausysteme
Dry mortars for new
projects and renovations