

# Flowtech Klima

Self-levelling substrate for thermal comfort, ideal for any type of underfloor heating system.

Co-developed with Knauf, Flowtech Klima is a certified solution that combines living comfort with energy savings for the environment and cost savings for the end user.



## Rating 2

1. Starting from a 10 mm minimum thickness above the heating system
2. Based on natural calcium sulphates and raw materials with low environmental impact
3. Easy to apply also with plastering machines
4. Suitable for laying on all types of underfloor heating systems and coverings
5. High dimensional stability and long-lasting performance

- ✓ Regional Mineral ≥ 60%
- × Recycled Regional Mineral ≥ 30%
- ✓ CO<sub>2</sub> Emission ≤ 250 g/kg
- × VOC Low Emission
- × Recyclable

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## Areas of application

### → Intended use:

Floating laying on underfloor heating systems and desolidarised laying to create fluid screeds, with normal setting and drying, jointless surfaces up to 400 m<sup>2</sup>. Bonded thicknesses from 10 to 40 mm.

### Compatible adhesives:

- gel adhesives, mineral adhesives, single- and two-component organic mineral adhesives
- reactive-epoxy and polyurethane, single and two-component cement-based adhesives, dispersed in water or solvent solutions

### Covering materials:

- porcelain tiles, ceramic tiles, klinker and cotto of all types and formats
- natural stone, recomposed materials, marble
- Hardwood floors
- Textiles, rubber, PVC, LVT, linoleum, carpet
- raised floors
- Cementoresina

### Substrates:

- Embossed traditional underfloor heating systems
- Smooth traditional underfloor heating systems
- Lowered underfloor heating systems

Internal floors in domestic and commercial applications.

Do not use in external applications, on highly flexible substrates subject to thermal expansion, or on wet surfaces or substrates subject to continuous moisture rising.

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## Instructions for use

### → Preparation of substrates

The substrate must comply with current technical regulations and national standards. In general, substrates must be free of dust, oil and grease, free from any moisture rising, with no loose, flaky or imperfectly anchored parts such as residues of cement, lime, paint coatings and adhesives, which must be completely removed. The substrate must be stable, non-deformable, without cracks and have already completed the curing period of hygrometric shrinkage.

- Low-absorption substrates: smooth substrates with very low absorbency levels or which are completely non-absorbent, such as ceramic tiles, marble floor tiles, epoxy paints, residues of oxidised adhesives and smoothed concrete layers which are compact and properly anchored, must be prepared by applying Active Prime Fix or Active Prime Grip eco-friendly adhesion promoter, following the instructions for use. If necessary, prior mechanical abrasion can also be used. Any substances used for surface treatment, such as wax or parting compounds, must be removed mechanically or using specific chemical products.

- High-absorbency substrates: on screeds which are compact but very absorbent, apply Active Prime Fix in order to reduce and regulate the level of absorption. In the case of absorbent substrates with weak consistency apply Keradur Eco. Respect the indicated waiting time before carrying out correction of the surface with a self-levelling product.

### → Preparation

Pour approximately 5 l of clean water into a clean container; then pour one bag of Flowtech Klima, while stirring. Mix with a low-rev electric agitator until a smooth, lump-free and self-levelling mixture is obtained. Larger quantities of Flowtech Klima may be prepared in suitable mixers. After the first mixing, it is advisable to leave the mixture to rest for approx. 2 minutes and then mix again briefly. Adding extra water does not improve the workability of the self-levelling product, and may cause shrinkage in the plastic phase of drying, resulting in less effective final performances including a reduction in surface hardness, compressive strength and adhesion to the substrate.

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## Instructions for use

### → Application

Flowtech Klima is generally applied with mixing pumps. Use of a lightened, cylindrical-section, levelling bar will be required to free the self-levelling product from air bubbles created by high absorbency levels of the substrate and to obtain a smooth and perfectly even surface. Any additional correction must be carried out as soon as the previous layer is ready for foot traffic (approx. 18 hrs at +23 °C and 50% R.H.) after applying Active Prime Fix. In the case of low temperatures and high humidity it is advisable to keep the environment ventilated during application and during the hours immediately following application, in order to avoid the formation of condensation on the surface of the self-levelling product during the setting phase. Protect from air currents at actual floor level.

### → Flowtech Klima: laying types and thicknesses

- Laying on rigid separating layers:  $\geq 20$  mm
- Laying on traditional underfloor heating systems (embossed or smooth insulation with compressive strength  $\geq 150$  kPa):  $\geq 10$  mm above the heating system
- Laying on traditional underfloor heating systems (embossed or smooth insulation with compressive strength  $< 150$  kPa):  $\geq 20$  mm above the heating system
- Laying on lowered underfloor heating systems anchored to the slab floor:  $\geq 5$  mm above the heating system
- Bonded laying on rigid substrates: 10 – 40 mm

### → Cleaning

Residual traces of Flowtech Klima can be removed from tools using water before the product hardens.

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## Special notes

→ Joints: allow for expansion around the perimeter, laying the Tapetex compressible tape along the whole perimeter of the room, on the walls and on any other vertical elements protruding from the supporting layer. Large and continuous surface areas need to be fractionized as soon as they can withstand foot traffic so to create areas  $< 400$  m<sup>2</sup> with 20 m maximum individual size. All the joints located in the substrate must be respected.

→ Moisture measurement: residual moisture can only be measured properly using a calcium carbide hygrometer. Normal electrical hygrometers are not recommended, as they provide inconsistent and incorrect values due to the special binders used.

→ Laying on underfloor heating systems: after laying Flowtech Klima, the initial start-up cycle of the system must be carried out as follows:

- The thermal cycle begins 7 days after laying (that must be performed with the system under pressure)
- After 7 days, rise the flow temperature to between +20 °C and +25 °C and maintain it for at least 3 days

- Then rise the flow temperature to between +50 °C and +55 °C and maintain it for at least 4 days
- Gradually lower the flow temperature to +20 °C. Floors can then be laid only after checking residual moisture levels of the self-levelling product with a calcium carbide hygrometer.

→ Bonded laying or laying on rigid separating layers: wait for a drying period of approximately 7 days per cm of thickness before laying the floors. Always check residual moisture levels with a calcium carbide hygrometer:

- When laying ceramic tiles with cement-based adhesives, apply Active Prime Fix undiluted.
- When laying hardwood floors, prepare the Flowtech Klima surface according to standard UNI 11371.
- When laying decorative resins from the Kerakoll Color Collection range, prepare the Flowtech Klima surface according to the technical data sheets of the systems.

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## Certificates and marks



# Abstract

Certified, high-performance laying of a substrate with self-levelling consistency and a minimum thickness of 10 mm on underfloor heating systems will be carried out with an eco-friendly, mineral, normal-setting self-levelling product compliant with standard EN 13813 class CA–C30–F7, GreenBuilding Rating 2, such as Flowtech Klima by Kerakoll Spa. Apply with plaster pumps. Average coverage:  $\approx 1.8 \text{ kg/m}^2$  per mm of thickness created.

Technical Data compliant with Kerakoll Quality Standard	
Appearance	White pre-mixed
Apparent volumetric mass	≈ 1.80 kg/dm³
Mineralogical nature of inert material	silicate – crystalline carbonate
Grading	0 – 1000 µm
Shelf life	≈ 6 months from production in the original sealed packaging, protect from humidity
Mixing water	approx. 5 l / 1 25 kg bag
Specific weight of the mixture	≈ 1,9 kg/dm³
Self levelling time	≈ 50 min.
End setting time	> 5 h
Temperature range for application	from +5 °C to +30 °C
Maximum thickness	from 10 to 40 mm
Foot traffic	≈ 18 hrs
Waiting time before laying:	refer to the “Special notes” section
Coverage	≈ 1.8 kg/m² per mm of thickness
Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site, i.e.temperature, ventilation and absorbcency level of the substrate and of the materials laid.	

Performance		
HIGH-TECH		
Adhesion to concrete after 28 days	$> 2 \text{ N/mm}^2$	EN 13892-8
Resistance to:		
- compressive after 24 h	$\geq 10 \text{ N/mm}^2$	EN 13892-2
- compressive after 7 days	$\geq 15 \text{ N/mm}^2$	EN 13892-2
- compressive strength after 28 days	$\geq 30 \text{ N/mm}^2$	EN 13892-2
- flexural after 28 days	$\geq 7 \text{ N/mm}^2$	EN 13892-2
- strain parallel to the laying surface	$> 2.5 \text{ N/mm}^2$	UNI 10827
Dimensional stability	$< 0,01 \text{ mm/m}$	EN 13892-9
Thermal conductivity	$1.41 \text{ W/(m K)}$	UNI EN 12664
Classification/Conformity	CA–C30–F7	EN 13813
Values taken at $+23 \text{ }^\circ\text{C}$ , 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.		

# Warning

- Product for professional use
- abide by any standards and national regulations
- do not use Flowtech Klima to correct substrate irregularities greater than 40 mm
- do not add other binders, additives or pigments to the mixture
- low temperatures and high relative humidity lengthen the drying time and can saturate the environment; this may have a negative effect on the quality of the surface of the self-levelling product
- an excessive quantity of water will reduce strength and the drying time
- before laying moisture-sensitive coverings, check residual moisture levels with a calcium carbide hygrometer
- protect from direct sunlight and currents of air for the first 18 hrs
- respect the elastic joints present in the substrate
- if necessary, ask for the safety data sheet
- for unstable wooden types, particular substrates and for any other issues, contact the Technical Customer Service Kerakoll:  
+ 39 0536.811.516  
[www.kerakoll.com/contatti](http://www.kerakoll.com/contatti)



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in January 2025 (ref. GBR Data Report – 01.25); please note that additions and/or amendments may be made over time by KERAKOLL SpA; for the latest version, see [www.kerakoll.com](http://www.kerakoll.com). KERAKOLL SpA shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building site and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.