



Knauf Tribon®

Calcium sulphate based floor screed

Product Description

Knauf Tribon® is self levelling floor screed for general purpose in indoor areas at thicknesses from 10 to 60 mm.

Delivery, Storage and Handling

Bags should be kept in a dry environment in their original packages on pallets horizontally. Pallets should be prevented from direct contact with water and should not be exposed to direct sunlight. Seal damaged and opened bags should not be used. The product can be stored for 6 months.

Standard

TS EN 13813 CA-C20-F5

Fields of Application

- The product is applied on the floor in interior areas, on floors where minimum thickness is desired, floors where a heating floor system is available and onto insulation materials.
- The product can be used in indoor areas like domestic bathrooms, kitchens and cellar with normal humidity levels. If water is expected on the floor such as showers, bathrooms etc., water insulation shall be applied on the screed.
- Not suitable for application in areas such as saunas, Turkish baths, indoor swimming pools etc.

Application Thicknesses

- As self levelling bonded screed with 10-60 mm thickness
- As self levelling floating floor screed on a separating layer (Knauf Schrenzlage) with 30-60 mm thickness
- As self levelling floating floor screed on an insulating layer with 35-60 mm thickness
- As self levelling floating floor screed above heating floor systems 35-60 mm thickness

Properties

- High thermal conductivity
- Can be applied with hand or machine
- Self levelling
- Dimensional stability
- High strength
- Smooth surface
- Application such as ceramic tiles, laminate wooden floors, PVC without further treatment

Application

Preparation of the Substrate

The condition of the substrate is crucial in terms of screed bonding and strength. Therefore, the surface has to be strictly controlled. The substrate shall be free of dirt which may affect the screed bonding such as dust, paint, oils, bitumen and etc. If a direct application on the floor is intended after cleaning, the floor's residual moisture rate shall not exceed 4% and the floor shall have compressive strength of minimum 15 MPa.

The temperature of both substrate and the surrounds while the construction works are carried out should be amongst +5°C and 35°C. In case of cracks in the surface subject to application, the surface shall be repaired by using special repairing screed.

It is recommended to use edge strips (Knauf Randdämmstreifen FE) in screed applications. This polyethylene insulation tape prevents any leakage of the screed from the application area and absorbs expansions in the floor.

Edge strip (Knauf Randdämmstreifen FE) shall be applied and fixed around the location and the building's supporting elements (walls, columns etc.) which shall reduce impact noise and determine the screed limit.

If the levelling screed is intended to be applied on wooden floor, first separating layer (Knauf Schrenzlage) or an insulation system shall be applied. In such case, the wooden floor shall be durable and protected from probable biological damages and no cracks shall be exist on the floor.

Preparation of Mortar

After preparing the surface area and preparing the mixture as required and calculation of thickness the screed may be applied both manually or mechanically. If necessary, the area shall be divided into sections.

In case of manual preparation, 30 kg of screed shall be mixed with 6.6 lt. of clean water with the aid of a mechanical mixer for at least 2 minutes until a homogenous mixture is achieved. Do not add any foreign materials into the prepared mortar. For large areas, PFT® Cayman machine shall be used whereas for smaller areas, a combination of PFT® ZP3M and HM 24 shall be used. To determine the appropriate slump; fill the slump funnel with screed which is ready for use (1,3 lt capacity). Lift the funnel and let the screed flow. The formulated diameter shall be 52 to 56 cm. The aforementioned test shall be conducted in at least 2 minutes after the dry material has been mixed with water. All tools and machines shall be cleaned before starting to work. During preparation and pouring of the mixture, the water shall not rise upwards and the filling shall not sink down. This situation may appear due to improper storage conditions (humid environment, damaged packing, storage period exceeding 6 months) or incorrect mixture rate. The screed line is determined by a water gauge or laser.

Application

The screed shall be applied until achieving the specified level on the floor. After the application, dappling bar or special screed brooms shall be used for finishing the final levelling and removal of air bubbles. During and after pouring process, avoid any ventilation and direct sunlight in the environment so that the mixture can bond evenly and hardens in the first day. If this rule is not followed, micro cracks may occur on the screed surface.

The drying period depends on the thickness of the screed, ambient temperature and humidity level of the location. As of the second day of the application, it shall be ensured that the location shall be properly ventilated in order to reduce the drying period of the screed. The drying period may vary from 1 to 6 weeks depending on the screed thickness and drying conditions. It is recommended that the screed shall be poured at the first stage of finishing processes or during the general construction works. During or after gypsum board applications, no screed shall be poured because the high humidity level in the air may damage such materials. Gypsum board and plaster applications may be done when the humidity level in the place is maximum 60%. The residual moisture rate shall be specified with a humidity meter by an expert using appropriate control methods.

Direct Application on Floor

Before fixing the edge strips (Knauf Randdämmstreifen FE) prime shall be applied on the floor surface (i.e. Knauf Estrichgrund). The prime shall be diluted with water at a rate of 1:1 and shall be applied as one or two layers depending on the suction of the substrate. The prime shall be applied evenly onto the surface with a rolling brush or paint brush. The prime shall be rested for drying before starting application on the surface (minimum 12 hours). The period between the complete drying of the primer and starting of further works shall be as short as possible in order to prevent any occurrence of construction dust on the floor surface. In applications made directly on the floor, it is recommended to use edge strips without folio. In this case, the edge impermeability of the spilled screed shall be ensured (i.e. by repairing screed). Application thickness of 10 to 60 mm is possible.

Application onto Separating Layer

This application is recommended for floors with low strength (i.e. painted, oil-etc.). A screed of 30 to 60 mm thickness can be applied on separating layer (Knauf Schrenzlage). After fixing the edge strip, the folio shall be opened and Knauf Schrenzlage which is a special separating paper shall be applied. Application is started at the edges in such way that the folio shall overlap. The paper shall overlap the joints at least 8 cm. The paper edges corresponding to the wall are fixed with edge strips. Use of an inappropriate paper in screed applications may cause swelling and therefore blisters and damages in the ready to use screed may occur.

Application onto Insulation Layer

A levelling screed of 35 to 60 mm thickness shall be applied onto the insulation layer made of insulation materials. It is used for improving the characteristics of the surface heat insulation and for reducing the impact noise level. Also, if necessary, it assists for raising the floor level up to the measurement as per the project. It is recommended to use EPS as an insulation layer. First, EPS is placed on the floor, then the edge strip is applied along the upper level of the insulation layer. The separating tape (Knauf Schrenzlage) shall be installed in such way that the insulation layer and the folio at the edges shall overlap. If the floor is not even or if the height difference exceeds 10 mm, it is recommended to conduct preliminary levelling before layering insulation material, with Knauf Tribon® or similar screeds depending on the height difference. However, the insulation layer and separating layer shall be applied after the levelling screed has dried.

Application onto Heating Floor Systems

Screed thickness on heating floor systems is calculated based on the condition that the height of the screed over the heating element shall be minimum 35 mm. In this case, the total screed thickness shall not exceed 60 mm. By this, excessive energy consumption for heating the screed and heat losses can be prevented.

Edge strips shall be applied around the application area. If the floor is not levelled or if the height difference is over 10 mm, a preliminary levelling is recommended using Knauf Tribon® or similar screeds depending on the height difference. Once the levelling layer is dry, it is recommended to start the insulation and heating floor system. During the installation of heating floor systems, the instructions for installation and fixing of the system manufacturer have to be followed. In this case, the system shall be checked and it shall be taken into account that the system shall be compatible with such screed. The fixing methods of the heating elements shall be in such way that they shall not reach the surface during screed pouring. Assembled heating elements shall be checked for their reliability before pouring the screed. In screeds with heating floor systems, the drying period may be reduced by using a heating element in order to speed up the drying process.

Application

In this case, following rules have to be followed:

After the pouring process, the screed shall be rested for one week (7 days). Furthermore, the temperature of the heater shall be adjusted to 25°C and shall be kept at this level for three days (+3 days). After that, the temperature shall be increased by five degrees every day and shall be increased to the maximum level of 55°C (+6 days more) and shall be kept at this level without decreasing the temperature in the night until complete drying is achieved (+10 days more). After drying, the temperature of the heater shall be decreased to reach a screed surface temperature of 15 to 18°C. In heating floor systems, the maximum temperature of the heater shall be 55°C whereas during usage the allowable maximum temperature shall be 40°C.

Expansion Joints

Compared with cement screeds, the dimensional determination of Knauf Tribon® screed almost stays constant when the strength increases and during usage. Expansion during bonding to the floor is approximately 0,1 mm/m and no movement joint is required in large areas. Movement joints shall be applied where the construction joints are located in the building. In case of screeds applied onto heating floor systems, door sills and if the diagonal distance of the area is over 10 meters, movement joints shall be allocated. Also, it is recommended to apply movement joints in screeds without heating floor systems and areas which will be exposed local temperature such as sunlight and where sound insulation is required. In such joints, appropriate expansion joint profiles may be applied. The product type shall be selected according to the type of the adjacent place and screed height.

Movement joints may also be applied after pouring the ground screed. For this purpose, the screed shall be cut vertically at 1/4 to 1/3 rate. The joint width shall be minimum 5 mm. After this process, the joint shall be filled with water proof filling material.

Application Tools

PFT® Cayman for large areas; PFT® ZP3M and HM24 combination for smaller areas

Application Temperature

Do not apply material at air and/or substrate temperatures below +5°C and above +35°C.

Safety Instructions

- Wash hands with plenty of water after handling.
- Use protective gloves / protective clothing / eye protection / face protection.
- In case of contact with eyes: Rinse your eyes cautiously with water for several minutes. If there is a lens remove it and continue to rinse.
- If eye irritation persists: Get medical advice / attention.

Residual Moisture Rates Depending on Coverings

| Covering | Screed Without Heating Floor | Screed With Heating Floor |
|---|------------------------------|---------------------------|
| Vapor permeable coatings (carpets etc.) | ≤ 1.0 % | ≤ 0.3 % |
| Vapor retardant coverings (ceramic etc.) | ≤ 1.0 % | |
| Vapor-proof coverings (PVC, wooden parquets etc.) | ≤ 0.5 % | |

Technical Properties

| Description | Unit | Value |
|-----------------------------|-------------------|------------------|
| Applicable thickness | mm | 10 - 60 |
| Density (dry mortar) | kg/m ³ | 1100 - 1300 |
| Density (dry screed) | kg/m ³ | 1700 - 1950 |
| Water ratio | L / bag | 6,6 |
| Reaction to fire | - | A1 ^{fl} |
| Screed application duration | minutes | 60 |
| Compressive strength | MPa | ≥ 20 |
| Flexural strength | MPa | ≥ 5 |
| Thermal conductivity | W/mK | 1 |
| Walkable in | hour | > 2 * |
| Load receivable in | hour | > 24 |
| Applicability in | week | 1 - 6 |
| Application temperature | °C | 5 - 35 |

* This period may differ depending on the application area width, substrate structure, application thickness and ambient temperature.

Material Consumption

| Product | Unit | Consumption (kg/m ²) |
|---------------------------|------|----------------------------------|
| Knauf Tribon® (for 10 mm) | kg | 17 |

Packaging

| Product | Weight (kg) | Packaging (pcs/pallet) | Material Number |
|---------------|-------------|------------------------|-----------------|
| Knauf Tribon® | 30 | 48 | 618741 |

System Performance Values

Please check for detailed information;

[Knauf Technical Website](#)

[Document Center](#)

Application

It is suggested to follow the technical details which given on Knauf system brochures for application.

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