

Processing and properties

Cement screed should be produced in accordance with professional rules of the trade and to current standards. The additive should lie within the standards' favourable sieve curves. Mortar is produced using positive mixers or using screed-mixer pumps. Cement screeds should be earth-moist to stiff in consistency when processed using MB-PVP by being frugal with water. Correct addition of plastic to the screed mortar improves the compaction of the finished screed. Also, the bending tensile strength, pressure resistance, adhesiveness, surface smoothness, speed of drying and temperature distribution of underfloor heating and cooling systems. **MB-PVP must be stored in a frost-free place.**

Recommendation for identifying the water content

Take one shovel of fresh mortar from the mixer. Place on non-absorbent ground or leave on the shovel. Drag back and forth with the smoothing trowel. Cement paste should still come up.

Dosing and procedure

Carry out a preliminary test before first use.

1. Additive for cement-bound fillers

1 - 3 l of MB-PVP is added with a mixer to 1 bucket (8 - 10 l) of finished filler. The greater the elasticity and adhesive effect required, the higher the dosage.

2. Stabilisation of cement screeds

- On weakly absorbent screed surfaces, generously brush on 1:10 proportion MB-PVP/water using a broom;
- Brush 1:10 proportion MB-PVP/water onto highly absorbent, sanded screed as a first step; in the second step, evenly distribute 2:10 to 3:10 proportion MB-PVP/water on the surfaces that are still moist, avoid ponding;
- For improving damaged screed surfaces or those to be sanded: on surfaces still moist, fill with cement-bound filler with the addition of 1:1 proportion MB-PVP/water.

3. Smooth cement finish

Mix pure MB-PVP and cement with a stirrer. The consistency should be soft to stiff plastic. Only thin with MB-PVP, not with water.

4. Screed repairs

Paint the edges of the repair with neat MB-PVP. Prepare mortar made from 2:1 proportion sand/cement to a plastic consistency using non-dilute MB-PVP. Rub part of the mortar intensively into still-damp edges of the repair site; fill the repair using the rest, compact and smooth. For joints and cracks, first wet them well using 1:1 proportion MB-PVP/water; pour cement slurry (cement and non-dilute MB-PVP) into joints that are still damp.

5. Normal cement screed and slab mortar

This is used particularly for improving compaction of the screed and adhesion in the case of underfloor heating and cooling systems with the pipes.

- Normal dosage 0.5 % of cement weight, or 0.125 l per sack of cement (25 kg)
- Increased dosage 1 % of cement weight for rather faster drying

6. Use of binding agents

MB-PVP can also be used accordingly with binding agents such as gypsum, lime and anhydrite. However, it is imperative that a preliminary test be carried out before first use.

7. MB-PVP for MB-Estrich-Flachsystem (Flat screed system, EFS-40)

The cement screed is produced in accordance with the professional rules of the trade and current standards.

Per mixing (200 l mixer screed pump)

50 kg cement = 2 sacks + 4.0 l MB-PVP (= 1 l/m² bzw. 25 l/m³) + 8 kg KrampeHarex steel fibres KE 20/1.7 (= 2 kg/m²) + Sand grain 0 - 8 must be added in accordance with the professional rules of the trade and standards in accordance with the sieve curve. Approx. 4.0 m² is thus produced using a screed thickness of 4 cm. Expect rapid hardening and being able to walk on it early after 3 - 5 days. The minimum amount of water must be used.

Per mixing (1 m³)

250 kg cement = 10 sacks + 20.0 l MB-PVP (= 1 l/m²) + 40 kg KrampeHarex steel fibres KE 20/1.7 (= 2 kg/m²) + Sand grain 0 - 8 must be added in accordance with the professional rules of the trade and standards in accordance with the sieve curve. Approx. 20.0 m² is thus produced using a screed thickness of 4 cm. Expect rapid hardening and being able to walk on it early after 3 - 5 days. The minimum amount of water must be used.

8. MB-PVP for rapid screeds based on cement

The frugal use of water is imperative.

Normal dosage for rapid drying

2.0 l MB-PVP is added to 50 kg cement. This is equivalent to 4 % of cement weight. At a thickness of approx. 4 cm of unheated normal screed, this quantity is sufficient for approx. 4 m². At a thickness of approx. 6 cm of heated normal screed, this quantity is sufficient for approx. 3 m². Under normal conditions, early strength with laying readiness can be expected in approx. 5 - 6 days.

High dosage for rapid drying

4.0 l MB-PVP is added to 50 kg cement. This is equivalent to 8 % of cement weight. At a thickness of approx. 4 cm of unheated normal screed, this quantity is sufficient for approx. 4 m². At a thickness of approx. 6 cm of heated normal screed, this quantity is sufficient for approx. 3 m². Under normal conditions, early strength with laying readiness can be expected in approx. 3 - 4 days.

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Recommendation for identifying the water content

Take one shovel of fresh mortar from the mixer. Place on non-absorbent ground or leave on the shovel. Drag back and forth with the smoothing trowel. Cement paste should still come up.

Dosage

Per mixture made by the screed pump (200 l mixer screed pump), 2 sacks of cement (50 kg) are used.

Pump delivery using manual compaction and manual smoothing

Per mixture, 0.175 l MB-Typ E* is now added; this is equivalent to the content of 3.5 canister caps or 0.35 % of the cement weight.

With a screed thickness of approx. 4 cm, each mixture produces approx. 4.0 m² of screed (0.044 l MB-Typ E/m²).

With a screed thickness of approx. 6 cm, each mixture produces approx. 3.0 m² of screed (0.058 l MB-Typ E/m²).

Pump delivery using mechanical compaction and mechanical smoothing

Per mixture, 0.050 l MB-Typ E* is now added; this is equivalent to the content of 1 canister cap or 0.1 % of the cement weight.

With a screed thickness of approx. 4 cm, each mixture produces approx. 4.0 m² of screed (0.013 l MB-Typ E/m²).

With a screed thickness of approx. 6 cm, each mixture produces approx. 3.0 m² of screed (0.017 l MB-Typ E/m²).

Pump delivery using manual compaction and mechanical smoothing

Per mixture, 0.100 l MB-Typ E* is now added; this is equivalent to the content of 2 canister caps or 0.2 % of the cement weight.

With a screed thickness of approx. 4 cm, each mixture produces approx. 4.0 m² of screed (0.025 l MB-Typ E/m²).

With a screed thickness of approx. 6 cm, each mixture produces approx. 3.0 m² of screed (0.033 l MB-Typ E/m²).

For quick hardening and quick laying, we recommend using 3x to 5x the dosage. Readiness for laying (< 2 % residual moisture) can then be expected in approx. 5 - 10 days. A precondition for good results is using minimal water.

* specific weight of MB-Typ E: 1 kg/l