

SCREED-SX

Fast-setting cement mortar - binder for floor screeds

Description

SCREED-SX is a fiber-reinforced, fast-setting mortar that replaces cement (the binding material) in floor screeds. It consists from special fast-setting cements and additives. When mixed with sand and water, the cement mortar produced offers the following advantages:

- Fast hardening and high early strength.
- Long workability time.
- Fast walkability (after approx. 6 h*)
- Moisture content is reduced fast.
- It offers higher mechanical strength than a screed with normal setting cement.
- It can be covered with tiles shortly after application, even after 24 h depending on its thickness.
- It can be used and as a floating screed.
- It can be pumped for faster application.
- Ideal when fast return-to-service is required.

Fields of application

- Filling and levelling of floors to be covered with tiles, marble, wood, parquet, for floors with underfloor heating system, etc. at thickness between 20 and 100mm.
- Cement mortar grade for terraces and outdoor areas.
- Ideal for areas that have to be covered fast even with parquet, since moisture content is reduced faster than a screed with normal setting cement. (Approx. 2-4 days after application depending on the mixing ratio with sand and water).
- It can be mixed also with perlite in order to produce lightweight screeds.

Technical data

Form:	cementitious powder
Color:	grey
Bulk density of dry mortar (without sand):	1.16 ± 0.05 kg/l
Required sand:	80-100kg per 20kg of SCREED-SX (1 part of SCREED-SX with 4-5 parts of sand b.w.)

Water demand: approx. 12l for 20kg of SCREED-SX + 80-100kg of sand to produce a semi-dry screed

Mixing ratio with sand 1:4 b.w.

Bulk density of fresh mortar:	1.88 ± 0.05 kg/l
Compressive strength 1 day:	6.00 ± 0.50 N/mm ²
Flexural strength 1 day:	2.00 ± 0.50 N/mm ²
Compressive strength 28 days:	18.00 ± 0.50 N/mm ²
Flexural strength 28 days:	6.00 ± 0.50 N/mm ²
Adhesion strength:	1.50 ± 0.30 N/mm ²
Abrasion resistance (Taber test):	250 mm ³
Pot life:	1-2 h at +20°C
Walkability:	After at least 6 h (20°C and 50% R.H.)
Moisture content*:	
• 24 h:	3.5%
• 2 days:	1.5%
• 3 days:	1.1%

Mixing ratio with sand 1:5 b.w.

Bulk density of fresh mortar:	1.97 ± 0.05 kg/l
Compressive strength 1 day:	2.50 ± 0.50 N/mm ²
Flexural strength 1 day:	1.00 ± 0.50 N/mm ²
Compressive strength 28 days:	13.50 ± 0.50 N/mm ²
Flexural strength 28 days:	4.00 ± 0.50 N/mm ²
Adhesion strength:	1.00 ± 0.30 N/mm ²
Abrasion resistance (Taber test):	302 mm ³
Pot life:	1-2 h at +20°C

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Walkability: After at least 6 h
(20°C and 50% R.H.)

Moisture content*:

- 24 h: 5.7%
- 2 days: 3.4%
- 3 days: 2.6%

* The values are indicative, as the final result is affected by the moisture content of the sand. The sand used for these tests contained 4.1 to 4.9% moisture. It is always recommended to measure the moisture content of the screed before applying coatings sensitive to moisture.

The technical data was measured at 23±2°C and 50±5 % relative humidity.

Directions for use

1. Substrate

The substrate must be free of loose materials, dust, grease, etc., prior to application of the new screed. For application thickness up to 50mm to absorbent cementitious substrates, it is recommended to apply first a bonding layer using ADIPLAST polymer latex, so as to ensure excellent adhesion to the substrate.

SCREED-SX is applied while the bonding layer is still fresh (fresh on fresh). Mixing ratio of ADIPLAST bonding layer:

Cement : sand : ADIPLAST : water = 1 : 1 : 0.5 : 0.5 by volume.

For application thickness larger than 50mm to absorbent cementitious substrates, it is recommended to properly saturate the substrate with water before the installation of the new cement mortar.

Very absorbent substrates should be primed with the acrylic primer UNI-PRIMER. The application of the screed follows after the primer has dried (approx. after 2-3 hours). Primer consumption: approx. 200g/m².

2. Application

1 bag of 20kg of SCREED-SX is mixed with 80-100kg of sand and approximately 12l of water.

Mixing in a screed pump:

Generally, due to the unknown moisture content of the sand, which will affect the workability of the screed, it is recommended to add first half the quantity of sand, then the water and finally SCREED-SX.

After mixing for about 2 min. until a uniform mass is formed, add gradually more sand until the desired workability is obtained and mix for at least 2 more min. Depending on the moisture content of the sand, more water may be required in order to prepare a screed with semi-dry or plastic consistency.

Mixing with a low revolution mixer:

For mixing small quantities, a low revolution mixer can be used, following the above mixing instructions and by keeping a steady mixing ratio by weight: SCREED-SX : Sand : Water = 1 : 4-5 : 0.6.

Laying procedure is the same as for concrete, after pouring the screed on the floor.

Consumption

Approx. 2.0 – 3.5 kg/m²/cm.

Packaging

SCREED-SX is supplied in 20kg paper bags.

Shelf life – Storage

12 months from production date if stored in original, unopened packaging, in places protected from moisture and frost.

Remarks

- Temperature during application should be at least +5°C.
- In case of problem with rising damp and application of wood/parquet floorings, it is recommended before the application of SCREED-SX to apply first the special epoxy primer DUOPRIMER-SG and broadcast quartz sand of 0.3-0.8mm grain size, on its fresh layer. Respectively, in areas with rising damp where tiles or marble are to be fixed, it is recommended to apply first the brushable cement-based waterproofing slurry AQUAMAT. Consult the respective technical datasheets of these products.

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- The sand that will be used must be free of lime or other impurities, as the workability of the screed and the final strength will be affected negatively.
- Using more water than the recommended dosage will improve the workability but also will delay the setting time and the rate of reduction of the contained moisture.
- If a very smooth surface is required, the self leveling screeds FLOWCRET 1-10 EXPRESS or FLOWCRET 3-30 EXPRESS can be used on top of SCREED-SX at least 3 days after its application. Consult the respective technical datasheets of these products.
- After application, the fresh screed must be protected from dehydration due to high temperature and air flow.
- The product contains cement, which reacts as alkaline with water, thus is classified as irritant.
- Consult the safety instructions written on the packaging before use.

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