Technical leaflet

SCREED-SX

Fast setting cement mortar - binder for floor screeds

Description

SCREED-SX is a fibre-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 that is being produced offers the following advantages:

- Fast hardening and high early strengths.
- Long workability time.
- Fast walkability (after approximately 6 hours*)
- Its contained moisture is reduced fast.
- It offers higher mechanical strength than a screed with normal setting cement.
- Receives covering with tiles after 24 hours, regardless of its thickness.
- It can be used and as a floating screed.
- It can be pumped for faster application.
- Ideal for areas that have to be delivered fast for use.

Fields of application

- Filling and leveling of floors to be covered with tiles, marble, wood, parquet, for floors with underfloor heating system etc. in thickness between 2 and 10 cm.
- Cement mortar grade for terraces and outdoor areas.
- Ideal for areas that have to be covered fast even with parquet, since its contained moisture is reduced faster than a screed with normal setting cement. (Approximately 2-4 days after the application depending on the mixing ratio with sand and water).
- It can be mixed also with perlite in order to produce light weight screeds.

Technical data

Form:	cementitious powder
Color:	grey
Bulk density of dry mortar (without sand):	1,16 ± 0,05 kg/l
Required sand:	80-100 kg per 20 kg of SCREED-SX (1 part of SCREED-SX with 4-5 parts of sand by weight)
Water demand:	approximately 12 l for 20 kg of SCREED-SX + 80-100 kg 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
Wear resistance (Tabert):	250 mm^3
Pot life:	1-2 h at +20^{0}C
Walk ability:	After at least 6 hours (20^{0}C and 50% R.H.)

Moisture content*:

- 24 h: 3,5%
- 2 days: 1,5%
- 3 days: 1,1%

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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
Wear resistance (Tabert):	302 mm^3
Pot life:	1-2 h at +20^{0}C
Walk ability:	After at least 6 hours (20^{0}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. Substrate surface should be watered well before the application of the screed. Very absorptive substrates should be primed with the acrylic primer UNI-PRIMER. The application of the screed follows after the primer has dried out (approx. after 2 hours). Primer consumption: 100-200 g/m^2.

2. Application
1 bag of 20 kg of SCREED-SX is mixed with 80-100 kg of sand and approximately 12 l 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 minutes until a uniform mass is formed, add gradually more sand until the desired workability is achieved and mix for at least 2 more minutes. Depending on the moisture content of the sand more water might 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: SCRRED-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/m^2/cm.

SCREED-SX

Packaging

SCREED- SX is supplied in 20 kg 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^{0}C.
- In case of problem with rising moisture and application of wood/parquet floorings, it is recommended before the application of SCREED-SX to apply first the special epoxy primer DUROPRIMER-SG and broadcast quartz sand of 0,3-0,8 mm granulometry, on its fresh layer. Respectively, in areas with rising moisture where tiles or marbles are going to be fixed it is recommended to apply first the brushable sealing slurry AQUAMAT. Consult the respective technical leaflets of these products.
- The sand that will be used must be free of lime or other impurities, as the workability of the screed and the final strengths 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 leaflets of these products.
- After the 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, and is classified as irritant.
- Consult the directions for safe use and precautions written on the packaging.

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