

## SC 1-F

Fibrated, ready-to-use screed for shrinkage-compensated substrates

CE MARK EN 13813, Class CT-C35-F7

### Description

SC 1-F is a premixed powder compound that, with the only addition of water, forms a cementitious mixture to be used for making up fast drying, shrinkage compensated sub-soils suitable for ceramic tiles, parquet and subsequent resin coating.

Ideally the thickness of substrates made with SC 1-F shall range from 5÷6 cm, but it can be used to make different thicknesses up to a minimum of 2.5 cm for floating installation on sliding sheet and 2 cm over pipes on radiant floors with subsequent installation of either marble or large format porcelain stoneware tiles. For glued parquet floorings, the minimum recommended thickness (on radiant floors) is 4 cm. SC 1-F is CE marked according to the European Standard EN 13813 and is classified as CT-C35-F7.

### Where to Use

SC 1-F is used to obtain at will and in a very short time a substrate ready to receive a subsequent waterproofing coats installation, e.g. :BETONGUAINA, floor resins or any type of tiles.

In fact, SC 1-F allows the installation of BETONGUAINA, water-based epoxy resins and both ceramic and cotto tiles after only 24 hours from casting, but it allows the installation of rubber flooring, carpet and wood after only 10 days.

### Underfloor heating

SC 1-F makes possible to create sub-soils ideally suited for heated floors to be subsequently coated with any kind of finish.

SC 1-F is not chemically aggressive towards the most common type of pipes (made of polypropylene, etc.) used in the heating system.

In this case, after the screed is laid, it is advisable to start heating slowly and then switch to cooling, before proceeding with the coatings laying.

### Advantages

SC 1-F screeds:

- reach a good compression resistance in a relatively short time;
- are ready for use;
- can be applied by adhesion in thin layers, up to 2 cm over pipes on radiant floors;
- has very low shrinkage.

### Application

Special attention must be given to the mixture during cast preparation both for what concerns handling the product while dry and the mixture; to this end, great care should be taken in following the warnings as well as the instructions given in the sections "How to use", "Warnings" and "Useful tips", in order to achieve the objectives established for the project.

### Installation of a Structural or Floating Screed

First it must be clear whether the to be made screed should adhere to the existing substrate (structural screed) or be separated from it (floating).

#### *Substrate Preparation for Floating Screed*

A waterproof sheet (minimum thickness of 200 micron) or a 100 g/m<sup>2</sup> geotextile or more shall be applied to the installation area, with edges overlapped by at least 20 cm.

Position a 4÷5 mm thick foam strip along the perimeter and around pillars (if any).

#### *Preparing the substrate to receive a Structural Screed*

Check the substrate moisture content and, if it exceeds 2.5% (carbide measured), apply one or two layers of NORPHEN SW SOLID to the bottom **until a continuous film has formed**, then broadcast the surface, wet on wet, with a layer of quartz sand, grain size ranging from 0.7 to 1.2 mm.

If the substrate is dry, apply a foamed strip all around the perimeter (as above) and prepare a liquid mortar consisting of 1 part of undiluted GROVE PRIMER and 3 parts of SC 1-F.

Apply the grout on the installation surface with a scrubber.

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Cast the SC 1-F screed within few minutes.

### How to Use

SC1-F screed can be installed in different ways depending on the mixture preparation method.

#### In a drum concrete mixer

Normally 8 SC 1-F bags at a time can be mixed.

Pour into the mixer all the water needed by the mixture that **equals to 2.1÷2.4 litres each 30 kg sack**.

Add 7 bags of product and mix for no longer than 60÷90 seconds.

Add a bag or part of it and keep mixing **for no more than 2 minutes**, ensuring that a mix with a **wet soil consistency** is obtained.

In case of formation of round agglomerates, break them into the mixer and mix again before installing the screed

Take the material out of the mixer and proceed with laying, compaction and then work it with the straight edge.

As soon as it begins to harden, smooth the screed with a disc machine, spraying (if needed) a small amount of water on the surface to get a better finish.

#### In a continuous mixer

Empty the SC1 bags into the car and start it.

Adjust the water flow until obtaining a **wet soil consistency**.

Remove any existing residual product used to set up the machine as it might jeopardize the final result.

Proceed with the installation of the screed.

#### With a pressure pump

Keep in mind that the SC 1-F screeds, being fibrated, has lower fluidity properties than a normal ready-to-use screed. Normally it is possible to pump from approx. 40 meters distance, with a single pipe (jointless). Therefore, adjust the machine so as to obtain both an optimum mixture and push.

**Pour enough SC 1-F for one fill, add water to achieve the right consistency and leave to mix for no longer than 2 minutes.**

Download and proceed with the installation of the screed.

### Tools Cleaning

Clean tools and equipment with clean water. Hardened material can be removed by mechanical means.

### Coverage

To obtain 1 cm thickness of dry product approx. 15-17 kg of product per 1 m<sup>2</sup> shall be used.

### Warnings

- Be sure to store the bags in the shade and away from humidity
- Strictly abide to the exact mixing time and water amounts as instructed in the section "How to use".
- During the hardening phase, do not add any water to regenerate the product if it has started to set.

### Useful Tips

- The introduction, at one third from the bottom, of a reinforcing welded mesh (wire 5 mm, opening 20x20 mm) will certainly improve the screed performance and help eliminate any crack due to shrinking.
- In case of a cold shut a piece of welded mesh should be inserted between the cast ends, to avoid any joint formation.
- Over piping or drainage you must reinforce with a hexagonal mesh (minimum screed thickness no less than 2 cm) to avoid crack formation.



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### Specifications

PRODUCT IDENTITY DATA			
consistency		---	dust
colour		----	grey
solid residue		%	100°
granulometry, UNI EN 933-1		mm	≤2.5
APPLICATION DATA (at +23°C and 50% RH)			
mix bulk density		kg/m <sup>3</sup>	2100±50
mixing water		%	7÷8
pot life		min	90-120
application temperature		°C	from +5 to +35
minimum applicable thickness:	cover to pipework in heated floors	mm	20
minimum applicable thickness:	Parquet coating laid with glue (radiant floor)	mm	40
minimum applicable thickness:	for floating installation	mm	25
curing time for the installation:	pottery	hours	24
curing time for the installation:	cotto and natural stone	hours	72
curing time for the installation:	wood, vinyl, rubber, carpet	days	10
FINAL PERFORMANCE (in accordance with EN 13813)			
compressive strength	at 28 days	N/mm <sup>2</sup>	>35
resistance to bending:	at 28 days	N/mm <sup>2</sup>	>7
thermal conductivity, λ (*)		W/(m·K)	1.8±0.2
reaction to fire		class	A1 <sub>fl</sub>

Note: The test method refers to regulations as indicated on the table

(\*): The determination was carried out using a physical model compatible with the one of the reference standard UNI EN 12664:2002.

### Packaging and storage

Packaging	30 kg bag in 56 bags pallets
Storage	12 months in its original packaging, in a covered and dry place. At temperatures between +5°C and +35°C. The product is moisture sensitive.

### Legal Notice

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### Edition

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