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CEMENT CONCRETE S 100



Product description

Cement concrete S 100 is a CE-marked, factory-produced, ready-to-use dry concrete that meets quality and strength requirements. Complies with the concrete standard SFS EN 206-1 with a compressive strength class of C 25/30 and a maximum aggregate size of 10 mm.

- Strength class C 25/30
- Complies with SFS-EN 1504-3 requirements, class R3

Applications

- Foundations
- Stairs
- Footings
- Floors
- Recommended minimum layer thickness: 30 mm

The product is listed in the portal for building products that can be used in Nordic Swan Ecolabelled buildings.

Instructions

Base

- The temperature of the substructure must be between +5°C…+25°C
- The substrate may be a concrete base, insulation board, or the product may be cast directly onto the ground
- If cast directly onto a concrete base, the surface must be clean, solid, dust-free, and absorbent
- Any required reinforcement must be installed according to structural drawings
- If the substrate is weak concrete (tensile strength < 0.5 MPa) or insulation board, the concrete must be cast as a floating, reinforced structure. The floating structure must be separated from the subfloor and vertical structures

Priming

- The concrete substrate must be moistened to a matt-damp condition before product installation. No free water must be present.
- Liquid bonding primers are not to be used with this product.

Mixing and Application

- Avoid strong wind, direct sunlight, and rain during application.
- During casting and curing, the air and substrate temperature must be between +5°C and +25°C.
- One 25 kg bag of dry powder is mixed with 2.5–2.75 litres of clean water. It is recommended to start with the minimum amount of water and add more if needed. Do not exceed the

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recommended water amount, as this will reduce the strength values, increase the risk of segregation, and prolong drying time.
- The product is mixed into a uniform mass using a mortar mixer, concrete mixer, or forced-action mixer. Mixing time with mortar or forced-action mixer: approx. 2 minutes, in a concrete mixer: approx. 5 minutes
- After mixing, allow the mass to rest for approx. 10 minutes, then remix briefly.
- Working time is approximately 2 hours from mixing.
- The product is placed into formwork, compacted, and leveled to the correct height. The surface may be finished to the required quality using, for example, a polyurethane float and/or steel trowel, once the material has slightly stiffened.
- Tools should be cleaned with water immediately after use.

After treatment

- Adequate moist curing of the installed product must be ensured during the hardening phase to allow the hydration process to proceed correctly and the desired strength to be achieved. This also helps prevent plastic shrinkage cracking and delamination from the substrate.
- The surface of the installed product should be kept moist for 2 to 5 days. Moist curing can be carried out depending on conditions and application using fine water misting, plastic sheeting, or Fescon Curing compound.
- Especially in spring, curing must be started immediately and performed carefully, as relative humidity is often below 40% RH. Low relative humidity combined with sunlight and wind causes the surface to dry out very rapidly.

Additional Information

- Formwork, reinforcement, and casting work must be carried out in accordance with standard practices and the designer’s instructions.

Waste handling

Storage and handling of waste
See the separate storage and disposal instructions https://www.fescon.fi/en/material-bank

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Technical information

Material usage	Approx. 2.0 kg/m^2/mm
Water requirement	2.5 - 2.75 l/25 kg
Finished compound	Approx. 12 - 13 l / 25 kg
Type	Powder
Binder	Cement
Colour	Grey
Maximum grain size	10 mm
Package size	25 kg, 500 kg and 1000 kg
Storage	Storage time in a dry location approx. 1 year
Density	Approx. 2100 kg/m^3
Layer thickness	Minimum layer thickness 30 mm
Fibre	Not fiber-reinforced
Additives	Additives that improve weather resistance and workability
Usage temperature	+5°C...+25°C
Workability time	Approx. 2 h
Compressive strength	C 25/30
Reaction to fire	A1
Frost resistance	Frost-resistant
Waterproofness	Water-resistant
GWP A1 raw material	0.0891
GWP A2 transport	0.0073
GWP A3 manufacturing	0.0346
GWP A1-A3	0.131
GWP A4 transport	0.0117
GWP A5 assembly	0.00359
GWP unit	kg CO2e/kg
Method for calculating the GWP value	EPD

Limitation of liability, product use notes and restrictions: Please familiarize yourself with Fescon Oy's general terms of delivery and the design and work instructions related to the product.