WEBER JB 600/10 P NON-SHRINK GROUT FROST C50/60-10

- The strength development continues even at a temperature of -15 °C without the need for additional heating
- Easy flowing compound that fills the mould well
- Resistant to salt and freezing

ABOUT THIS PRODUCT

Salt and frost resistant, class R4 compound designed for demanding casting and soldering applications in winter conditions. While fresh, the compound expands slightly, therefore ensuring that the moulds are filled tightly. Strength class C50/60-10 according to SFS-EN 206. Maximum grain size 10 mm.

AREA OF USE

Installation, pointing and second stage concrete application of concrete elements and anchorage soldering. The thickness of each layer is approx. 15-100 mm.

Exposure classes: XF3, XF2, XC4, XS3, XD3, XA1.

Product fulfills the requirements of R4-class according to SFS-EN 1504-3, cementitious non-shrink grout to be used in accordance with concrete repair principles 3.2 or 4.4.

SUBSTRATE

The substrate is cleaned carefully of ice, snow and other impurities. The best adhesion is achieved on coarse or coarsened concrete. The substrate must be free of frost at the start of the application.

When using galvanised steel in grouting or anchorage casting it must be ensured that the surface treatment has become passive. Non-passivated zinc reacts with the fresh concrete compound, resulting in the formation of hydrogen. The layer of hydrogen gas, which is formed around the steel, may cause the adhesion between the

PRODUCT SPECIFICATION

Material consumption	Approx. 20 kg/m²/10 mm layer
Recommended water content	2.6-2.9 l/25 kg of dry mix (10.5-11.5%)
Mixed volume	Approx. 480 l/1000 kg
Adjustable time	Approx. 30 minutes.
Binder	CEM I 52,5 N
Aggregate	Natural sand, grain size 0-10 mm
Additive	Additives that improve workability and weather resistance and increase the volume of fresh concrete as well as additives that ensure strength development at low temperatures.
Adhesion strength 28 days	> 2.0 MPa (EN 1542)
Compressive strength class	C50/60-10
Compressive strength 1 day	Approx. 2 MPa (-5°C, EN 12390-3). Approx. 1 MPa (-15°C, EN 12390-3).
Compressive strength 7 days	Approx. 30 MPa (-5°C, EN 12390-3). Approx. 10 MPa (-15°C, EN 12390-3).
Compressive strength 28 days	Approx. 45 MPa (-5°C, EN 12390-3). Approx. 20 MPa (-15°C, EN 12390-3).
Restrained shrinkage/ expansion	Adhesion strength after test > 2.0 MPa (EN 12617-4)
Unrestrained shrinkage 28 days	Approx. 0.7 mm/m (EN 12617-4)
Fire class	A1 (EN 13501-1)
Frost resistance	XF2 and XF3 (Salt-frost resistant) (Tile test SS-137244 Metod A and SFS 5447). > 2.0 MPa (SFS-EN 13687-4).
Carbonation resistance	Pass (EN 13295)
Modulus of elasticity	> 20 GPa (EN 13412)
Air content	2-6%
Chloride content	< 0.05% (SFS-EN 1015-17)
Capillary absorption	≤ 0.5 kg/(m²*h$^{0.5}$) (SFS-EN 13057)
Density	Approx. 2200 kg/m³
Expansion (early age)	Approx. +1%
Water cement ratio	0.3 (with maximum water volume)
Storage conditions	Shelf life is 12 months from date of manufacture (unopened package, dry space)
Package	25 kg sack. 1000 kg large sack.
GTIN-codes	6415910022327 (25 kg) 6415910022341 (1000 kg)
Certifications	CE, FI, Key Flag Symbol

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steel and the hardened concrete to break. In unclear circumstances sufficient passivation must be ensured through preliminary testing.

MIXING

A total of 2.6-2.9 litres of clean potable water is added to one sack (25 kg) of Non-Shrink Grout Frost, depending on the flexibility requirement. Mixing should ideally be carried out using a concrete mixer or a slowly rotating drilling machine beater. The minimum amount of water is measured into the mixing vessel and the dry product is added while stirring constantly approx. 2-3 minutes. After the initial mixing the agility of the compound is inspected and if necessary, the remainder of the water is added. The maximum amount of water must not be exceeded as it lowers the strength and increases shrinkage and the risk of disintegration of compound.

WORK INSTRUCTIONS

Once mixed, Non-Shrink Grout Frost remains suitable for casting for about 30 minutes. However, in order to fully benefit from the expansion, which affects the filling capacity of the grout, casting should be carried out as soon as possible after mixing. The casting is performed from one side only. If necessary, the pouring of the grout can be aided by compacting or gentle vibrating.

If casts that exceed 100 mm in thickness are produced as a single layer, a compound of maximum stiffness must be used in order to avoid the risk of disintegration. Casting can also be carried out in two layers so that the top layer is cast approximately 24 hours after the bottom layer. In that case, bottom layer must be coarsened to ensure good adhesion. More detailed working instructions are available in brochure ”4-62 weber Juotoslaastit - Työohje”, which is available in Finnish language.

AFTER-TREATMENT

The finished surface is prevented from drying too quickly with the help of a plastic cover, for example, or treated with aftercare products for at least 7 days. Aftercare can also comprise moistening, if the finished surface can be kept free of frost for the duration of the aftercare period.

When Non-Shrink Grout Frost is used on bearing structures strength development at worksite conditions must be ensured before structure is loaded with, for example, concrete elements. The strength development slows down remarkably at temperatures below 0 °C. The additives that ensure strength development at low temperatures only ensure the development of so called freezing strength with Non-Shrink Grout Frost not to be damaged.

DISCLAIMER

As there are different conditions at every opportunity, Weber can not be held responsible for anything other than the information provided under the heading ”Product Specification”. Examples of information and circumstances, which are outside Saint-Gobain (whether specifically stated or not) include storage, construction, processing, interoperability with other products, workmanship and local conditions.

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