

BETEK BUILDING CHEMICALS

FRIOL 0°C®

Friol 0°C is a liquid mortar admixture that adds resistance against freezing by accelerating the hydration of cement and reducing setting period.

APPLICATION AREAS

Used in protecting concrete and mortar against freezing in winter, pouring concrete down to -10°C, reducing setting period of concrete and mortar.

TECHNICAL SPECIFICATIONS

Form	Liquid
Color	Light brown
Density	1.25 ± 0.03 g/ml
pH	6.5 ± 0.5
Viscosity	100 mPas (23°C)
Chloride	None

SPECIFICATIONS

- Accelerates the formation of aluminate and silicate gels in the first place due to the reactions of cement with water in fresh concrete. Speeds up the hydration of fresh concrete and thus enables the concrete to harden and strengthen rapidly. Removes the risk of freezing while pouring concrete in cold weathers (below 0°C).
- Shortens the hardening period of cement like admixtures in other alkali structures and improves the strength of concrete in the beginning. Does not display any decrease in strength values and total compressive strength in time.
- More active than the admixture with chloride in the same concentration even though it does not include any chloride. Does not have any corrosive impact on the reinforcement due to its nature. Enables saving money since it decreases application temperature and time besides saving time in places where early molding is considered thanks to its fast setting.
- Offers a slight water reducing quality due to its ability to add fluidity to fresh concrete. Increases strengths and resistance against frost with this reduced water amount.
- Improves the workability of fresh concrete in prefabricate and precast concrete works.

CAUTION! Friol 0°C should be defrosted by waiting in room temperature when it freezes in its package under temperatures below -10°C. Defrosted product should be mixed thoroughly and then used.

APPLICATION

The recommended amount for Friol 0°C is 2% of the cement weight. This amount changes in between 1% and 3% depending on the work conditions and the requested setting periods. It is recommended to use fresh and pure Portland cement. Moreover, the dosage should not be lower than 300 kg/m³ (6 bags of cement). Mortar mixing water is reduced in the amount of Friol 0°C. Friol 0°C is added to this mixing water.

CAUTION! If the concrete will be poured at low temperatures, it is required to take the precautions defined in the standards. It is also required to take the protective measures against curing and freezing. By ensuring that the concrete internal temperature is minimum +5°C with operations like warming mortar mixing water, aggregates and molds, and thermally insulating concrete surfaces and molds, the environment required for the concrete to harden should be created.

CONSUMPTION

Mix an amount that is 1-3% of the dry cement weight depending on the amount of cement in the mortar.

STORAGE

May be stored for a long time in its unopened and original packaging (at min -10°C and maximum +90°C).

Note: The concrete poured using Friol 0°C should be protected using rush mat, nylon, straw, sack or thermal insulation materials.

PACKAGING

5 kg, 20 kg and 35 kg Plastic Pail

Hazard statements

H272 May intensify fire; oxidiser.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P221 Take any precaution to avoid mixing with combustibles.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment

Chloride Content: $\leq 0.1 \%$

Alkali Amount: $\leq 0.05 \%$

