



CEMENTOL®

TIKSOKRET T-BA

**Non-alkaline sprayed concrete set
accelerating admixture, SIST EN 934-5: T2**

FIELD OF APPLICATION

Cementol Tiksoekret T-BA is a liquid non-alkaline chloride free set-accelerating admixture for sprayed concrete. It's especially recommended for the high quality sprayed concretes with high early strengths and almost no loss of final strength when compared to the concrete without accelerating admixture.

Due to its strong influence on cement setting time, it enables applying highly compact linings with high initial strength and good adhesion on vertical and overhead surfaces in mines, tunnels, for consolidation of rock and cliff-faces etc.

It can be used in the wet-mix sprayed concrete systems as well as in the dry-mix sprayed concrete systems.

ACCORDANCE WITH THE SIST EN 934-1 STANDARD: Table 1

Property	Declared values with acceptable deviation
Appearance	Clear to opaque milky white liquid
Density, 20°C	(1,39 ± 0,03) kg/dm ³
pH, 10 % solution	2,7 ± 1
Water soluble chloride content (Cl ⁻)	Chloride free
Alkali content (Na ₂ O equivalent)	≤ 1,0 %

ACTION

Cementol Tiksoekret T-BA is a set-accelerating admixture with strong influence on the setting time of cement. When added to the concrete mixture, quick setting occurs. Initial setting time decreases to only a few minutes. The effect depends on the type and dose of cement, water-cement (W/C) ratio, temperature of fresh concrete and of the environment and on other admixtures used.

If sprayed linings are not placed in damp surroundings, moist curing is required to prevent water loss and to minimise crack formation.

Cementol Tiksoekret T-BA is alkali-free and does not trigger an alkali-aggregate reaction. Furthermore, strength loss in the accelerated concrete is minimal.

DOSAGE AND INSTRUCTIONS FOR USE

- Dosage: usually 5-7 % of the cement weight (5 to 7 kg per 100 kg of cement), depending on the required effects, water-cement ratio, type of cement, cement dose, cement age and working conditions dosages down to 3 % or up to 10 % can be used.
- Since water-cement ratio influences the setting time, final strengths as well as durability it should be as low as possible. For this reason the addition of superplasticizers is recommended.
- **Cementol Tiksoekret T-BA** should be added in the nozzle of the spray-machine during the spraying process and not directly into the cement mixer!
- In order to determine the optimal dosage for the required setting time, preliminary tests should be done, using the actual material of the job site.

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RECCOMENDATIONS AND WARNINGS

- Cement: usually 450-500 kg/m³; type and dosage depend on the performance requirements; at lower temperatures cements with a higher heat of hydration as well as higher dosages of cement are recommended.
- Aggregate: usually maximum diameter 8 mm.
- Mineral admixtures: in order to improve rheological properties, impermeability, strengths and resistance to aggressive agents silica-fume based admixture **Cementol Mikrosilika** could be added (5-10 % by weight of cement).
- Water-cement (W/C) ratio: depends on the performance requirements but should not exceed 0,50.
- Superplasticizer: one of the superplasticizer should be used to achieve lower water-binder ratio, good adhesion, high early and final strengths, impermeability and durability. The choice of superplasticizer depends on the requirement for water-cement (W/C) ratio, working conditions (long distance transport, high/low temperatures,...) and cement type. The use of one of the polycarboxylate based superplasticizers is recommended: **Cementol Hiperplast 463, Cementol Hiperplast 170, Cementol Hiperplast 974, Cementol Zeta Super S, Cementol Zeta PLUS, Cementol Zeta PLUS-D**. Preliminary tests should be done, using the actual material of the job site.
- By longer distance transport (over 1h) at higher temperatures or when longer work interruption or waiting time before concrete placing is expected plasticizing admixtures **Cementol Delta Ekstra, Cementol Delta Ekstra W** or set retarding admixture **Cementol Retard R2** could be added, too. Preliminary tests should be done, using the actual material of the job site.
- **Cementol Tiksoekret T-BA** should not be used with normal concrete.
- **Cementol Tiksoekret T-BA** should not be mixed with other sprayed concrete set accelerating admixtures! When using another type of set accelerating admixture the whole dosage equipment should be thoroughly rinsed with water!
- All steel parts which come in contact with **Cementol Tiksoekret T-BA** should be made of stainless steel.
- Storage tanks/containers must be clean as impurities might decrease the stability of **Cementol Tiksoekret T-BA**.

PACKAGING

- 60 kg plastic cans, 1200 kg containers

STORAGE

- Store the product protected from damage, frost (temperature > +5°C) and exposure to direct sunlight.
- In tightly closed and undamaged packaging, the shelf life of the product is min. 3 months from the production date.
- The product may still be used after the date of expiry, but the characteristics important for the intended use have to be examined.

SAFETY PRECAUTIONS

In cases of repeated or long-term contact **Cementol Tiksoekret T-BA** may cause irritation of the skin and mucous membranes to sensible persons. When handling the product, protective gloves and goggles or face mask should be used. In case of contact with eyes, rinse immediately with plenty of running water and seek medical advice.

When working with **Cementol Tiksoekret T-BA** general instructions for working with chemicals should be respected:

- eating, drinking or smoking during work is prohibited,
- after finishing work, hands should be thoroughly washed with water.

NOTE

Instructions are given on the basis of our examinations and technical experience. Due to specific conditions and work methods, preliminary tests should be done for every type of use of **Cementol Tiksoekret T-BA** alone or combined with other admixtures.

Since we cannot influence the course of work, we cannot be held responsible for its quality.

Cementol Tiksoekret T-BA, non-alkaline sprayed concrete set accelerating admixture meets the SIST EN 934-1 and SIST EN 934-5 standards requirements.