

Expansive agent for concrete

AREA OF USE

Cementol Ekspanditor is a powder admixture used in conjunction with other concrete components to reduce or compensate for shrinkage in concrete made from ordinary Portland cements.

It is used when it is particularly important to compensate for shrinkage of concrete and/or mortar:

- Grouting machines, crane tracks, foundations,
- Anchor grouting,
- Casting of concrete floors with a larger halftone grid,
- For the construction of facilities that must be watertight (reservoirs, swimming pools, wastewater treatment plants, white tubs),
- For the execution of visible, architectural concretes without cracks,
- For the production of various concrete elements, precast elements,
- Miscellaneous refurbishment work and the like.

It does not contain chlorides.

TECHNICAL CHARACTERISTICS

Characteristic	Declared value
Appearance	Grey-white powder
Bulk density	[1.10 ± 0.05] kg/L

ACTION

The admixture is made from a special clinker that is high in calcium sulfoaluminate. The reaction with water produces ettringite $[3\text{CaO} * \text{Al}_2\text{O}_3 * 3\text{CaSO}_4 * 32\text{H}_2\text{O}]$, which compensates for the shrinkage of concrete caused by drying due to its large volume.

In this way, Cementol Ekspanditor prevents the formation of cracks in the concrete.

DOSAGE AND INSTRUCTIONS FOR USE

The recommended dose is 5 – 15% of cement weight [5 – 15 kg per 100 kg of cement].

Usually a dose of 7-10% is sufficient depending on the requirements or the desired effects.

The amount of cement in the concrete is reduced by the amount of Cementol Ekspanditor added.

Preliminary tests with materials that will be actually used in concrete production are used to determine the optimal dosage. Because the effect of Cementol Ekspanditor is influenced by a variety of factors, including the type and dose of cement, water-cement ratio, aggregate composition, shape and dimensions of the structure, installation conditions, and especially curing of fresh concrete, we

recommend preliminary tests for each individual case of use. In this way, we define the impact on workability, expansion, and strength.

Preliminary tests are mandatory:

- when using higher doses [$> 10\%$] of the expansion admixture; and
- in cases where the condition for controlled expansion is not provided [min. 0,15 % of steel reinforcement per concrete cross-section].

Add it to the dry cement and sand mixture and thoroughly mix it in so that it is evenly distributed throughout the dry mixture. Then add the required amount of water. Concrete containing Cementol Ekspanditor is mixed for slightly longer than normal concrete.

We recommend using Cementol Ekspanditor in conjunction with a plasticizer, superplasticizer, or hyperplasticizer to facilitate concrete casting and/or reduce the water-cement ratio.

Cementol Ekspanditor is compatible with many admixtures, such as: plasticizers from the Cementol Delta family, superplasticizers from the Cementol Zeta family, and hyperplasticizers from the Cementol Hiperplast family. It is also compatible with air-entraining admixtures from the Cementol Eta family and the hardening accelerating admixtures Cementol B NOVI and Cementol B Novi-conc.

Other types of concrete admixtures can be used, with the exception of calcium chloride-based admixtures, which reduce expansion.

If we want to use Cementol Ekspanditor in concrete that also contains silica-fume, the maximum dosage is 5% per binder weight [max. 5% per total weight of cement and silica-fume].

When designing a concrete mixture, we respect the requirements and principles of the EN 206 standard: Concrete - specification, performance, production and conformity, as well as the relevant national provisions.

Cementol Ekspanditor requires a sufficient amount of water or moisture to be effective and achieve optimal expansion. Appropriate wet curing is therefore needed to achieve the desired effects. Wet concrete curing is recommended for at least 7 days after installation. When surface wetting is not possible, we recommend using a curing agent of fresh concrete such as Kontrasol 22 V or Kontrasol NOVI.

ADDITIONAL INSTRUCTION

When mixing fresh concrete, care should be taken to ensure that Cementol Ekspanditor **is homogeneously mixed-in and does not** accumulate in clusters that may cause local over-expansion during hydration and thus local damage to the concrete's surface.

PACKAGING

25 kg bags, 1000 kg big-bags

STORAGE

- Store the product in its original sealed packaging in a dry, airy location. Keep it away from potential damage, water and moisture.
- A properly stored product has a shelf life of at least 1 year after the date of manufacture.
- The product may still be used after the date of expiry, but the characteristics important for the intended use have to be examined.

HEALTH, SAFETY AND ECOLOGY

When working with Cementol Ekspanditor, wear protective gloves, eye and face protection. Follow the general instructions for working with chemicals: take care of cleanliness, do not eat, drink or smoke while working. After finishing work, wash hands thoroughly with water.

More information on safe handling and disposal of the product is available in the safety data sheet, which is provided on request, and is also available from the dealer or distributor where you purchased the product.

WARNING

Instructions and recommendations are given based on examinations in our laboratories and experience to date. Due to specific conditions and work methods, preliminary tests are advised for every type of use, for each individual case of use of the product alone, or in combination with other admixtures.

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



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