TKK

CEMENTOL EXPERT

ZETA PLUS

CE

Plasticizing and superplasticizing admixture

AREA OF USE

Cementol Zeta Plus is a specially formulated complex superplasticizer. Due to its specific composition and wide dosing interval it can be used as a platicizing or superplasticizing admixture. It is intended for the production of ready-mix, construction-site concrete as well as pumped concrete of different qualities at higher temperatures. It is a robust superplasticizer thus the danger of concrete segregation is diminished.

Its use enables:
- reduction of mixing water content with unchanged workability of concrete,
- extended workability time,
- longer transportation of concrete from preparation to installation.

We use it for:
- preparation of concrete with good workability and easy-to-cast concrete,
- ready-mix concrete,
- pumped concrete,
- durable concrete with lower porosity.

It contains no chlorides or other substances that cause corrosion of reinforcing steel, so it can be used in reinforced concrete and prestressed structures without restriction.

TECHNICAL CHARACTERISTICS

Characteristic	Declared value
Appearance	Dark brown liquid
Density, 20 °C	(1.06 ± 0.02) kg/L
pH	6.5 ± 1.0
Water-soluble chloride content [Cl^-]	Chloride free
Alkali content [Na_2O equivalent]	< 3.0 %

COMPLIANCE

Cementol Zeta Plus – plasticizer, complies with the requirements of EN 934-1 and EN 934-2 / T2,

Cementol Zeta Plus – superplasticizer, complies with the requirements of EN 934-1 and EN 934-2 / T3.1 and T3.2

ACTION

Superplasticizer molecules are adsorbed on the surface of cement particles. Because of the composition and shape of the molecules, cement particle aggregation is prevented, the friction force between the particles in the cement paste is reduced, and the fluidity and thus workability of the cement paste is increased. Because of the unique structure of the molecules, adsorption occurs gradually and over a longer period of time, allowing the concrete to retain its good workability for a longer period of time.

DOSAGE AND INSTRUCTIONS FOR USE

The recommended dose is:

- as a plasticizing admixture 0.3 – 0.6 % of binder weight (0.3 – 0.6 kg per 100 kg of binder).
- as a superplasticizing admixture 0.7 – 1.4 % of binder weight (0.7 – 1.4 kg per 100 kg of binder).

Dosage depends on the requirements for the properies of fresh and hardened concrete: the type and amount of cement, water-cement ratio and the desired degree of concrete workability.

To determine the optimal dosage, we recommend performing preliminary tests with the material that will be actually used.

Cementol Zeta Plus can be added to a concrete mix diluted with mixing water, or it can be added in concentrated form to an already prepared fresh concrete mix of a lower consistency class, or after we have added 70-80% of the mixing water. Mix well to distribute the admixture evenly throughout the concrete mix. The recommended wet mixing time is 3 minutes.

If a consistency correction is required before concrete prepared with Cementol Zeta Plus is installed, the admixture can be added directly to the concrete mixer of the transport vehicle. In this case, use an admixture that has been pre-diluted with water in a 1:4 ratio (1 part Cementol Zeta Plus + 4 parts water), and mix for 1 minute per 1 m^3 of concrete, and at least 5 minutes.

Cementol Zeta Plus is compatible with a wide range of additives, including Cementol Delta family plasticizers, Cementol Hiperplast family hyperplasticizers, Cementol B NOVI hardening accelerator, Cementol Eta family air-entrainig admixtures, and Cementol Retard family set retarders.

Cementol Zeta Plus is incompatible with Cementol Zeta family superplasticizers, hardening accelerating admixture Cementol Omega F-conc., and air-entrainig admixture Cementol SPA.

Before using a higher number of admixtures in a concrete mixture, we advise prior examinations. In this case, they must be added to the concrete mixture separately (one after the other).

Stir before use.

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.

During concreting and curing of fresh concrete we respect the principles of good practice.

PACKAGING

drums 50 kg, IBC containers 1 m^3

STORAGE

- The product should be stored at temperatures between +5 °C and +35 °C. We need to protect it from damage, freezing and direct sunlight.
- A properly stored product has a shelf life of at least 2 years 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

No special measures are required when working with Cementol Zeta Plus. 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.
We recommend special attention and consultation with the technical service when using Cementol Zeta Plus in self-compacting SCC concretes and/or in combination with air-entraining admixtures. Since we cannot influence the course of work, we cannot be held responsible for its quality!

TKK d. o. o. · Srpenica 1, 5224 Srpenica, Slovenija
+386 (0) 5 38 41 300 | info@tkk-group.com | www.tkk-group.com