



CTS Komponent® — DATASHEET

Additive for Non-Shrink and Low-Shrinkage Concrete

RECOMMENDED SPECIFICATIONS FOR CTS KOMPONENT® CONCRETE

CEMENT:

Shall be normal portland cement Type I or II conforming to ASTM C150.

EXPANSIVE COMPONENT:

Shall be CTS Komponent®, an expansive Type-K component manufactured by CTS Cement Manufacturing Corporation. It shall be added to the concrete mix at the batch plant or at the jobsite.

AGGREGATES:

Shall be clean, well graded and conform to ASTM C33.

WATER:

Shall be clean and potable.

ADMIXTURE:

Most admixtures are compatible with shrinkage-compensating concrete. (Check with CTS Cement on experience with a given admixture.)

RECOMMENDED PROCEDURE FOR BATCHING AND MIXING CTS KOMPONENT® CONCRETE:

Sufficient mixing of concrete to obtain a uniform mix is important for any concrete construction project and is required for CTS Komponent® concrete. The addition of CTS Komponent® dry powder is similar to the addition of fly ash to a concrete mix where special batching and mixing procedures are used to assure a uniform product.

BATCHING AND MIXING PROCEDURES:

The ingredients for shrinkage-compensating concrete can be batched or put into a truck mixer in various ways. The preferred batching procedure is: 1. Charge the mixer with approximately 80% of the mixing water and air-entraining admixture per the mix design. 2. Ribbon feed the CTS Komponent® and portland cement in with coarse aggregate and sand with the mixer drum turning at mixing speed. 3. Add the remainder of aggregates and sand. 4. Mix for 5 minutes at mixing speed. 5. Check the slump of the mix. A slump of 5" ± 1" is recommended for most work.

JOBSITE CONDITIONS:

Pre-Pour Meeting: A Pre-Pour Meeting is recommended to coordinate the work.

Slump Loss: A slump loss during transit is to be expected and the amount of loss depends on the length of haul and temperature.

REINFORCEMENT:

Accepted engineering practices for structural elements provide sufficient reinforcement for Komponent® Cement Concrete. However, in non-load-bearing members such as slabs on grade, for non-shrink cement the minimum amount of reinforcement should be about 0.15% of the gross cross-sectional area of the concrete in each direction. For low-shrinkage concrete a smaller amount of reinforcement may be used. Reinforcement should be placed about 1" to 2" from the top allowing for

adequate cover. It is recommended that support of rebar be with metal chairs or metal bar supports.

PLACEMENT:

Good hot weather practices in accordance with ACI 305 (cool aggregates, cool water, or compatible retarder) should be followed on all concrete placed in temperatures in excess of 90°F. Good cold weather practices in accordance with ACI 306 should be followed when concrete is placed in temperatures below 50°F. No Calcium Chloride Is Allowed.

FINISHING:

Normal finishing techniques should be used to produce the required finish. Due to little bleed water in CTS Komponent® Concrete, the finishing can be started as soon as the concrete has started to set.

CURING OF CONCRETE:

Water cure is required (either fog spray or covering the concrete with wet burlap) for seven days.

AVAILABILITY:

CTS Komponent® cement is available in 88-lb. bags, 1-ton super sacks and bulk powder: The bulk powder Komponent® cement is stocked in silos and railcars at CTS Cement terminals in three locations: Los Angeles, CA, Nazareth, PA, Juarez, Mexico. In addition, for large projects, Komponent® can be delivered by rail — in pneumatic or bottom dump railcars — to the nearest available rail site.

TECHNICAL SUPPORT AND SALES:

Based on over 35 years of experience on diverse shrinkage-controlled concrete products, CTS Cement Manufacturing Corporation can provide contractors, engineers, and project owners with professional technical services on any Komponent® application.

For more information about Komponent®, please [contact CTS Cement](#).