



Shortform Specification for:  
**Type-K Concrete**

SECTION 03 30 00 CAST-IN-PLACE CONCRETE

Use Type-K Cement to make Type K shrinkage-compensating concrete. Manufacturer shall be CTS Cement Manufacturing Corporation, 11065 Knott Avenue, Suite A, Cypress, CA 90630. Phone: 800-929-3030. Website: [www.ctscement.com](http://www.ctscement.com)

- A. Approved Type-K Cements:
  - 1. Pre-blended CTS Type-K Cement
  - 2. Komponent® or CTS System-K™ used with Type I, II, or V portland cement conforming to ASTM C150 at approximately 15% Komponent® and 85% portland cement. The percentages will be determined by a laboratory approved by CTS Cement performing ASTM C806 testing. Komponent® and portland cement samples shall be delivered to the laboratory 6 weeks prior to the first concrete placement.  
[Note to specifier: CTS Cement Manufacturing Corporation needs to approve the laboratory, since many laboratories are unfamiliar with the testing required for Type-K Cement and Type-K Concrete.]
- B. Type-K Cement shall provide expansion from .04% to .10% at 7 days when tested in accordance with ASTM C806, provide expansion from .05% to .09% at 7 days when tested in accordance with ASTM C878, and meet ASTM C845 (modified) as a Type-K Cement.
- C. If CTS Type-K Cement or Komponent® is used, structural steel reinforcing shall have a minimum cross-sectional area of .15% and steel reinforcing specified as temperature steel for crack control can be eliminated. If CTS System-K™ is used, no steel reinforcement is required for non-structural concrete, such as slabs on grade.
- D. Sand and coarse aggregate shall comply with ASTM C33 and water shall be potable. Admixtures shall be approved by manufacturer. Water/cement ratio shall be .45 for exterior concrete, .50 for interior concrete, and .55 for concrete receiving a dry shake hardener. Slump shall be 5" ± 1". Mix and place per manufacturer's recommendations. Pre-pour conference shall be at least one week before first concrete placement.
- E. Start water cure as soon as it can be done without marring the surface. Water cure for 7 days. Surface shall be kept continuously wet. Wetting and drying of

the surface shall not be allowed.