

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 Corp., 11065 Knott Avenue, Suite A, Cypress, CA, 90630. Phone: 800-929-3030. Website: www.ctscement.com

- A. Approved Type K Cements:
- 1 Pre-blended KSC Type-K Cement
 - 2 Komponent® or KSC System-K™ used with Type I, II, or V Portland cement conforming to ASTM C150 at approximately 15% KSC Komponent and 85% Portland cement. The percentages will be determined by a laboratory approved by CTS Cement Manufacturing performing ASTM C806 testing. KSC 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 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 0.04% to 0.10% at 7 days when tested in accordance with ASTM C806, provide expansion from 0.05% to 0.09% at 7 days when tested in accordance with ASTM C878, and meet ASTM C845 (modified) as a Type K cement.
- C. If KSC Type-K Cement or KSC Komponent is used, structural steel reinforcing shall have a minimum cross-sectional area of 0.15% and steel reinforcing specified as temperature steel for crack control can be eliminated. When KSC System-K is used, other than minor reinforcement (two #5 bars, 6" from the edge) around the perimeter of the slab, and double diagonal #5 bars, 4 feet long at re-entrant corners and at penetrations, no additional steel reinforcement is required for non-structural concrete.
- 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 0.45 for exterior concrete, 0.50 for interior concrete, and 0.55 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



Shortform Specification for:
KSC System-K Concrete
(Rev 030209)

least 1 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. Drying of the surface shall not be allowed.

END OF SECTION