

**Tuff-Kote Flex 10,000--Kel-Prime  
Three-Coat Plaster System  
Suggested Specification  
ICC ESR Report #2099**

Division 9: Plaster

Section 9001: General:

This specification addresses all aspects for obtaining the best possible three-coat plaster system. The plaster contractor shall be certified for proper application in reference to **climatic conditions, equipment use, environmental safety, mix design, and cleanup** so as to provide a minimum **10year warranty** for the project.

Section 9002: Quality Assurance:

A. Inspection: The general contractor and plaster contractor shall jointly inspect all lathing materials and trims so that they are properly installed in accordance with the manufacturer's specifications. Each shall provide the architect with a jointly signed letter attesting to the completion of inspection.

B. Preparation: The plaster contractor shall provide protective cover for all windows, doors, electrical outlets, A/C equipment, concrete, blacktop areas, etc. so as to not allow the mixing or application of plaster getting on such areas.

C. Climatic Conditions:

1. **Cold weather:** No plaster shall be applied where the temperature is 32 degrees or below, or if the temperature is to drop below 32 degrees during the 2 ½ hours of final set time.
2. **Hot/windy conditions:** Applied plaster shall be kept moist and protected so as to not allow set before proper hydration has taken place during the 2 ½ hours of final set time.

D. Equipment:

1. Plaster equipment shall not be modified from manufacturer's original design.  
**Example: Screen shall be on pump hopper, not on mixer.**
2. Plaster pump shall be properly maintained and serviced so as to have no water leaks at the hose connection or manifold.

Section 9003: Materials List:

- A. Tuff-Kote/Flex 10,000: ICC report #ESR-2099; 80-pound bags as manufactured by Incide Technologies, Inc. for Kel-Crete Industries, Inc. Phone #: 800-845-1833.
- B. Water: Clean tap water only.
- C. Sand: Washed plaster sand.
- D. Kel-Prime as manufactured by Incide Technologies, Inc. for Kel-Crete Industries, Inc. Phone #: 800-845-1833.
- E. Blocked paint with 8 ounces of Kel-Prime concentrate added in water.

Section 9004: Gelled mix design for first “scratch” coat:

- A. Water: Add 4 gallons of water per 80-pound sack of Tuff-Kote to be mixed in mixer.
- B. Cement: Add Tuff-Kote/Flex 10,000 to mixer.
- C. Sand: Add 3 ½ parts sand to one part Tuff-Kote (80 lbs.): 280 lbs. or approximately nineteen #2 flat-nosed shovels to mixer.
- D. Mixing time: Allow total mix design to mix for **three minutes** and no more than **ten minutes** after the last shovel of sand is added.
- E. Water: If needed add a small amount of water to obtain a 2 ½” to 3” slump (see attached “Exhibit A”).

Section 9005: Gelled mix design for second “brown” coat:

- A. Water: Add 4 gallons of water per 80-pound sack of Tuff-Kote to be mixed in mixer.
- B. Cement: Add Tuff-Kote/Flex 10,000 to mixer.
- C. Sand: Add 4 parts sand to one part Tuff-Kote (80 lbs.): 320 pounds or approximately twenty-two #2 flat-nosed shovels to mixer.
- D. Mixing time: Allow total mix design to mix for **three minutes** and no more than **ten minutes** after the last shovel of sand is added.
- E. Water: If needed add a small amount of water to obtain a 2 ½” to 3” slump (see attached “Exhibit A”).

Section 9006: Gelled Mix Design for the “finish” coat:

- A. Water: Add 4 gallons of water per 80-pound sack of Tuff-Kote to be mixed in mixer.
- B. Cement: Add Tuff-Kote/Flex 10,000 to mixer.
- C. Sand: Add 4 parts sand to one part Tuff-Kote (80 lbs.): 280 lbs. or approximately nineteen #2 flat-nosed shovels to mixer.
- D. Mixing time: Allow total mix design to mix for **three minutes** and no more than **ten minutes** after the last shovel of sand is added.
- E. Water: If needed add a small amount of water to obtain a 2 ½” to 3” slump (see attached “Exhibit A”).

Section 9007: Application:

- A. First “scratch” coat shall be applied at not less than 3/8” thickness and scratched horizontally at all areas of application.
- B. Second “brown” coat shall be applied at not less than 3/8” thickness and darbied and rodded to obtain a rough surface to receive the finish coat.

Note: At this point it is suggested that the double-back method of plastering be applied whereby the second “brown” coat may be applied as soon as the first “scratch” coat has reached a hardness so as to resist damage of pressure from the second “brown” coat. Depending upon the climatic conditions this is normally is about 2 ½ hours. This process will obtain longer water retention for proper hydration in both coats of plaster.

- C. Third “finish” coat shall be applied after 48 to 72 hours of hydration of the first “scratch” and second “brown” coats have been applied.

Section 9008: Kel-Prime sealing/curing/hardening application:

- A. Mix Kel-Prime 50/50 with clean tap water.
- B. Apply Kel-Prime to all plaster areas 48 to 72 hours after the finish coat has been applied.
- C. Kel-Prime may be applied with a sprayer, roller, brush, etc. Keep the applicator clean with water after each use.
- D. A ph reading shall be taken before “Item E” is applied. An acceptable ph reading is normally “48” obtained from the Kel-Prime application.
- E. Eight ounces of Kel-Prime shall be added to each gallon of paint used on the project.

Section 9009: Tuff-Kote vapor breathing paint for all plaster areas:

Section 9010: Clean up:

Plaster contractor shall remove all coverings, protective materials, plaster droppings, equipment, etc. from the project site.

Section 9011: Warranty:

Kel-Crete Industries, Inc. and the plaster contractor will sign a joint warranty as to the following conditions:

1. Kel-Crete Industries, Inc. will give a 10-year warranty to replace any defective material at no cost to the project.

2. Plaster contractor will give a 10-year warranty to replace or repair any defective areas of plaster application at no cost to project.

Secton 9012: Summation:

- A. It is understood by all parties that this is a “Suggested Specification” and that each project my have variables that must be considered.
- B. Kel-Crete Industries, Inc. shall provide technical support to the plaster contractor and project. Phone #: 800-845-1833. Plaster contractor shall contact Kel-Crete Industries, Inc. should the company have any concerns with the application of this “Suggested Specification”.

End of Suggested Specification

## **Exhibit “A”**

In the absence of a slump cone the following method may be used to obtain a 2 ½” to 3” slump for proper gelled mortar pumping:

1. Mix the mortar in accordance with Section 9005.
2. Dump the gelled mortar into the screen on the pump hopper.
3. Two-thirds of the mortar should pass through the screen by gravity.
4. One-third of the mortar should have to be shaken or vibrated through the screen.

### Summation:

The obtained results by following these instructions are:

1. Easier pumping.
2. Reduced fuel costs.
3. Reduced rebound.
4. Reduced equipment and repair costs.
5. Reduced labor costs.
6. Reduced material costs.
7. Increased psi values.
8. Greatly reduced shrinkage cracks.