

**Suggested Specifications for Application of Portland Cement-based plaster
And cement-based stucco finish
In Addition to ASTM C-926**

1. Scope:

- 1.1 This suggested specification covers the requirements for equipment used to mix job-site blended or manufactured pre-blended plaster/stucco mix designs.
- 1.2 This suggested specification preparation of protecting windows, doors, electrical outlets, etc. from damage from getting plaster/stucco on them.
- 1.3 This suggested specification lists materials used to produce plaster/stucco mortar mix designs.
- 1.4 This suggested specification is for plaster/stucco mix designs.
- 1.5 This suggested specification covers application for three-coat plaster and curing of the plaster/stucco application.
- 1.6 This suggested specification covers clean-up and removal of plaster/stucco materials, equipment, preparation of materials, scaffolding, etc. from the completed plaster/stucco project.
- 1.7 This suggested specification is an **addition** not an **exclusion** from ASTM C-296 Standards, **and to obtain a minimum of 2,500 psi value.**

Section 9A: Equipment

9.01A: Equipment for pneumatically pumping whereby pump and mixer are of one unit, or whereby the mixer is set up to pump in such a way so as to have the plaster/stucco mix design drop into the pump hopper from a distance equal to that of the manufacturer's pump mixer one unit equipment.

9.02A: Unit mixing/pumping equipment **shall not be modified** whereby the screen on the pump hopper **shall not be removed** and screen installed on mixer.

9.03: Pumping equipment shall be maintained in accordance with the manufacturer's recommendations whereby no water leaks shall be present at manifold, pistons, hose reducers, or connections.

9.04: Mixer speed shall be set at 54 to 60 rpm's.

Section 9B: Stucco Materials

9.1B: Cement: Type I, II & III ASTM C-150 low alkali Portland cement (94-pound sacks).

9.2B: Water: Use only clean tap water. No recycled water shall be allowed.

9.3B: Admixture: Kel-Crete Premium Liquid Admixture as manufactured by Kel-Crete Industries, Inc. (phone: 800-845-1833).

9.4B: Sand: Plaster/stucco sand in accordance with ASTM C-897.

9.5B: Kel-Prime curing/bonding/hardening/sealing agent as manufactured by Kel-Crete Industries, Inc. (800-845-1833).

Section 9C: Preparation

9.1C: Windows, doors, electrical, etc. shall be covered prior to application of plaster/stucco.

9.2C: In-place concrete, asphalt, etc. shall be covered and protected from plaster/stucco application droppings, over sprays, etc.

9.3C: All items such as vehicles, etc. shall be covered and protected from overspray of the plaster/stucco.

Section 9D: Mixing Instructions for the first “scratch” and second “brown” coats of plaster

1. Water: Add 5 gallons of clean tap water to mixer for each 94-pound sack of Portland cement to be mixed for **dry sand conditions. Note: Moisture content of the sand must be considered.**
2. Admixture: Add 3 ounces of Kel-Crete Premium Liquid Admixture to the water, and with the water as each sack of cement is mixed thereafter.
3. Cement: Add each sack of Portland cement (94-pound sacks) to the water/admixture in the mixer. (See Option #1.)
4. Sand--First (scratch) coat: Add **3 ½ parts sand for each one part of cement to be mixed (329 pounds of sand for each 94 pounds of cement). This would be approximately twenty-two full #2 flat-nosed shovels per 94 pounds of cement.**
5. Sand—Second (brown) coat: Add **4 ½ parts sand for each 94 pounds of cement to be mixed (423 pounds of sand for each 94 pounds of cement).** This would be approximately twenty-eight to twenty-nine full #2 flat nosed shovels per 94 pounds of cement.
6. Mixing time: Shall be 3 to 5 minutes from the time the last shovel of sand is added to the mixer. **Do not mix for more than 10 minutes.**
7. Slump: Mortar shall be a consistency of 2 ½” to 3” slump in a water-to-cement-to sand ratio. A 2 ½ “ to 3” slump can be determined when 2/3 of the plaster mortar passes through the hopper screen, and 1/3 of the plaster has to be shaken or vibrated down through the screen.
8. Options allowed:
 - A. For a faster gelled mix one may add approximately ten #2 flat nosed shovels of sand to the mixer before the cement is added.
 - B. For delays such as lunch breaks, etc. one may break the set time and add approximately one hour to the actual set time. **Stop the mixer** for 2 to 3

8B. continued:

minutes, restart mixing for 1 to 2 minutes. Make sure all the mortar gets mixed in the mixer, hopper, and hose.

C. This mix design will give approximately **3,500 psi with a 2 ½ to 3” slump** in a water-to-cement ratio. Adjustments may be allowed in the sand-to-cement ratio to give a **lower or higher psi** however the slump of the mortar shall not be adjusted.

Section E: Third Coat “stucco finish coat” mixing instructions:

Mix design shall be in the same order as in **Section 9D**. Adjustments of the sand amounts shall be allowed to give the desired finish. No other adjustments shall be allowed.

Section F: Application before first “scratch” and after second “brown” coats

1. Kel-Prime: Mix Kel-Prime 50/50 with clean tap water. With a brush apply one coat of the Kel-Prime mixture around all windows, doors, edges, and to all plaster trims and **expansion joints**. The Kel-Prime mixture should also be applied to all washer and dryer vents, and electrical outlet edges. Note: **Do not get Kel-Prime on glass or the face of the electrical outlets.**
2. First “scratch coat”: Apply the scratch coat at a thickness of 3/8” and apply in a horizontal direction.
3. Second “brown coat”: Apply the brown coat over the scratch coat as soon as the scratch coat is rigid enough to receive it without damage at a 3/8” thickness. Rod or float per desired texture finish.
4. Kel-Prime: Mix Kel-Prime curing/bonding/hardening/sealing agent 50/50 with clean tap water. Kel-Prime may be applied with a brush, paint roller, or sprayer of any type to all plastered areas as soon as possible after plaster has obtained a final set.
5. Third “finish coat”: Apply the finish coat at a thickness of 1/8” per the desired texture finish 48 hours after the brown coat has been applied.

Note: Clean any tools or equipment that was used with Kel-Prime **as soon as possible after use.**

Note: Kel-Prime dries fast and clear.

Note: No moist curing is required with Kel-Prime.

Section G: Climatic Conditions

1. **No plaster/stucco applications** shall be applied when the temperature is **32 degrees or below** in 24 hours.
2. No plaster/stucco applications shall be applied when **cold, windy and dry climatic conditions exist.**
3. **No plaster/stucco** application shall be applied when **hot, windy and dry climatic conditions exist.**
4. **Exceptions:** Contractor may apply the plaster/stucco if he protects or shields the project from conditions as stated in Items #1, 2, and 3.

Section H: Cleanup

1. Contractor shall remove all preparation and protection materials from the project.
2. Contractor shall remove all scaffolding, equipment, etc. that was used for the application of plaster/stucco from the project.

Technical Support

Should the plaster/stucco applicator have any questions in reference to this suggested specification he may call 800-845-1833 for technical support.

End of Suggested Specifications