



FLORIDA LATH & PLASTER BUREAU

What Constitutes "Stucco"?

The Florida Building Code defines "stucco" as a Portland cement-based plaster mixed and applied according to the ASTM C 926, "Standard Specification for Application of Portland Cement-Based Plaster." This standard contains specific requirements for the materials, methods and quality control used in applying stucco, including approved thicknesses for different application substrates.

Currently, there are no standards governing the production or application of "one-coat stucco."



Florida Lath & Plaster Bureau
6353 Lee Vista Blvd.
Orlando, Florida 32822
www.flapb.com

Technical Bulletin

TB-ST-#05-03.21

Choosing the Right Materials for Stucco in Florida

Materials

Sand

Aggregates for stucco must meet the requirements of ASTM C897, "Standard Specification for Aggregates for Job-Mixed Portland Cement-Based Plasters." There are no appreciable amounts of natural sand within Florida that will meet all of the sieve requirements of that Standard. However, the Standard includes language, Section 5.4.1 which allows the use of local aggregates with a history of successful integration in stucco. The specifier need only to reference this Standard in the Project Specifications.

Cement

Stucco Cements manufactured within the state of Florida are specifically designed for use in our uniquely harsh environmental conditions and with locally available, natural aggregates. Stucco Cements hold the following performance advantages over other mixes approved in ASTM C 926:

- *Better workability* - means increased production rates and lower costs;
- *Increased plastic window* - provides for less re-tempering;
- *Lower water/cement ratio* - reduces the tendency to shrink and/or crack;
- *Better availability* - pre-packaged stucco cement provides for a more consistent jobsite mix;
- *Better sulfate resistance* - Florida's salt air environment creates a high sulfate exposure;
- *Safety* - Reduced chance of injury due to exposure to the caustic, hydrated lime.

Though other mixes are approved by the Standard, Stucco Cements provide the specifier with the best combination for producing a quality, plastered project in our Florida climate. Specify plaster types M, MS or P for base coats and FM, FMS or FP for finish coats (ASTM C 926, Tables 2 and 3 respectively).

Water

Water must be cool and potable. The rule of thumb is, "If you won't drink it, don't make stucco with it!" In addition, hot water will cause to mortar to "flash" set. This destroys the workability and ultimate performance of all mortar types. The specifier need only call for "cool and potable water."

Lath

Metal

ASTM C 1063, "Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster" governs the use of metal plaster bases (lath) and accessories. This Standard requires the use of ¼ inch self-furring lath of a minimum weight of 2.5 lbs/yd² for vertical surfaces. Note that there is no acceptance of 1.75 lb. lath.

Non-Metallic

Recently, ASTM has approved and published three new Standards regarding non-metallic laths Including fiberglass and PVC . These laths are approved for use on vertical walls only. The Standards are: ASTM C1764 Test Methods, ASTM C 1788 Specifications which provides performance parameters based on testing per C 1764, and C 1787 , " Standard Specification for Installation of Non Metallic Plaster Bases (Lath) Used with Portland Cement-Based Plaster in Vertical Wall Applications," which describes Installation Currently, non-metallic laths will be subject to local jurisdictional acceptance; though universal acceptance should be forthcoming with the next code cycle.

Surface-Applied Bonding Agents

Bonding Agents applied directly to the surface of solid bases must comply with the requirements of ASTM C932. There are two criterion that must be adhered to:

First, the agent must be tinted. Tinting provides proof of installation. Agents that dry clear are not easily discernable without expensive testing. And secondly, the agent must not Re-emulsify, be re-tackifying or re-wettable as these characteristics degrade the bond capability of the agent. Follow the manufacturer's application instructions carefully.

Fiber

ASTM C 926 allows for the addition of ½ inch natural or synthetic fibers to enhance the crack resistance or pumpability of a plaster mix. These fibers must meet the requirements of ASTM C 1116, "Specification for

Fiber-Reinforced Concrete and Shotcrete." Many fibers will create a fuzz when used in the finish coat. Check your fiber in a small area prior to inclusion in the finish coat.

Admixtures

Integrally mixed Bonding Agents - Agents that are mixed into the plaster prior to application are considered admixtures. As such, they do not have to meet the requirements of ASTM C932 as do surface-applied agents.

Waterproofing Agents - All Florida manufacturers of masonry or stucco cements include a waterproofing admixture integrally ground into the mix during production. These admixtures are designed to increase the water retention rate of the plaster so as to enhance the hydration or curing process as well as to increase the water repellency of the hardened plaster. The jobsite addition of further waterproofing agents is not recommended.

Accelerators and Retarders—The FLAPB does not recommend that addition of either accelerators or retarders, of any kind, in plaster in Florida.

Chloride based admixtures can lead to premature degradation of lath, fasteners and accessories.