

Concrete Masonry – Stucco Bond to Block

Please Note: This technical Note is developed to clarify the requirement for achieving “bond” of stucco to block. This does not address stucco applied on any other substrates.

ASTM C 926

ASTM C 926 is the primary standard for the application of stucco. It outlines the requirement for application on various substrates.

The relevant reference follows:

- 5.2 Surfaces of solid bases receive plaster, such as masonry, stone, cast-in place or precast concrete shall be straight and true within ¼ inch in 10 feet and shall be free of form oil or other elements, which would interfere with bonding.
 - 5.2.1 Solid surfaces shall have the suction (ability to absorb water) or surface roughness or both, to provide the bond required for plaster.
 - 5.2.2 Smooth or nonabsorbent solid surfaces, such as cast-in-place or precast concrete shall be prepared to receive Portland cement plaster by one of the following methods:
 - 5.2.2.1 Sandblasting, wire brushing, acid etching, or chipping or a combination there of.
 - 5.2.2.2 Application of a dash-bond coat applied forcefully against the surface, left untroweled, undisturbed, and moist cured for at least 24 hour or;
 - 5.2.2.3 Application of a bonding compound suitable for exterior exposure solid surfaces in accordance with the manufacturer’s written directions.
 - 5.2.3 Where bond cannot be obtained over the entire surface to receive plaster by one or more methods in 5.2.2, or where total plaster thickness will exceed the total thickness specified in Table 1 for types of solid bases, furred or self-furring metal plaster base shall be installed in accordance with the Specifications C 1063.

Discussion

1. The ASTM C 926 envisions that the concrete block is of sufficient “ROUGHNESS” that the applied stucco will achieve a MECHANICAL bond with the block. The Block standard ASTM C 90, in prior years, required the block to be ROUGH if it

was to be used with an application of stucco. This requirement was dropped from the block standard (ASTM C 90) only because the manufacturing of block is not the right place for a standard for the application of stucco.

2. FCPA Tek S95-1 illustrates various textures. For achieving good stucco bond to block, this is a good reference document. See www.FCPA.org
3. FCPA Tek S92-1 discusses achieving mechanical bond and/or suction bond on block. This is also a good reference document. See www.FCPA.org

Bonding Agent

Remember under ASTM C 926 where the block is not rough enough and/or a suction bond was not sufficient, as is the case with many smooth blocks, then under 5.2.2.3 the Application of a bonding compound suitable for exterior solid surfaces, shall be applied, in accordance with the manufacturer’s written directions.

1. ASTM C 932 is the specification for the correct bonding agent to be used with exterior stucco. It should be noted that numerous projects in Florida are built with a bonding agent that is intended for INTERIOR use only. Most of the PVA’s are meant for interior use and should be avoided. For exterior use the correct bonding agent is a bonding agent that meets the requirements of ASTM C 932. Check with your manufacturer and request of him a certification that the bonding agent meets ASTM C 932.

References

The pertinent references are listed:

1. **ASTM C 926** “Standard Specification for Application of Portland Cement-Based Plaster (Stucco)”
2. **ASTM C 932** “Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering”
3. **FCPA Tek Note 95-1** “Stucco on Block-Choosing the RIGHT block for Stucco”
4. **FCPA Tek Note No. S92-1** “Stucco on Block”