

Surface Bond Material

The surface bond is a Portland cement based, fiber reinforced pre-mixed compound. It also contains epoxies, waterproofing agents, dehydrators and sand. It is applied via trowel. Its consistency should be almost that of peanut butter. Too much water in the mix facilitates shrinkage cracking during the curing process. It is listed as a water resistant material and is much stronger than regular stucco but it can still crack. Depending upon the outside temperature, its workability is approximately 45 minutes. The surface bond is optional with mortar set block. Coverage is approximately 25 to 30 square feet to a 50 lb. bag.

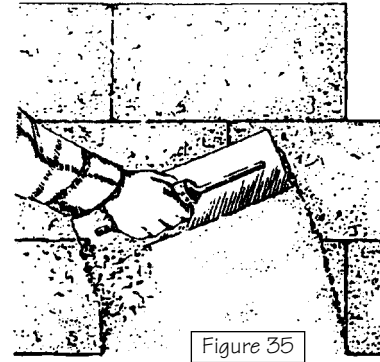


Figure 35

Surface Bond Preparation

Prior to applying the surface bond cement, the walls should be wetted thoroughly but not soaked. This wetting of the block and keeping the block damp while applying the surface bonding cement is very important (see Figure 34). Dry block will suck the moisture out of the surface bonding cement causing a loss in bonding strength. In very dry climates or where warm winds are prevalent during application, this wetting process may have to be repeated during application to assure proper adhesion and strength.

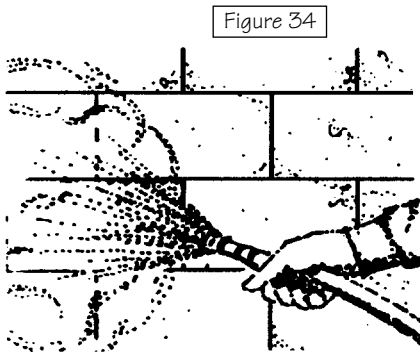


Figure 34

Surface Bond Application

Apply the surface bonding cement only when the weather is above 40°F and insure that the surface is maintained above this temperature for at least 24 hours after application. The surface bonding cement is applied and easily worked with an ordinary plasterer's trowel. The surface bond should be applied to a minimum thickness of 1/8" using upwardly sweeping diagonal strokes (see Figure 35).

All block and joints should be covered evenly forcing material into the joints between the blocks. Excessive troweling should be avoided. This causes the fiber to come to the surface which affects the curing process and ultimate strength of the surface bond. If for any reason the application is interrupted, stop at a natural break point such as a corner, door, or window opening.

Surface Bond Curing

The surface bonding cement takes its initial set within one to two hours and will gain much of its ultimate strength within 24 hours of application. To insure maximum performance and proper dehydration, the surface of the bonded wall should be misted regularly within the first 24 hours after application and within 48 hours in dry or windy climactic conditions. Keep the surface bond from freezing for the first 48 hours after application.

Interior Surface Bonded Walls

The interior surface bond is to be applied in a semi-smooth to smooth finish immediately after the block is erected and just prior to the framing stage of construction. Window openings that have windows in them are to be surface bonded around the entire perimeter (which includes the top) and return to the window itself. A rounded 'bull nose' edge is to be applied which allows for the drywaller to utilize a bull nose corner bead (see Drywall section). The mason squarely sets the windows and checks for plumbness but the surface bond applicator needs to double check the window installation prior to surface bonding.

Exterior Surface Bonded Walls

The exterior surface bond can be applied as a first coat or 'brown coat' prior to an unlimited array of finishes using steel, rubber, wooden or sponge trowels that can create different textures over the surface bond. These finishes can be regular stucco then painted or synthetic integral colored stucco.