

# Stucco Retro™

## Product Definitions and Descriptions

The three major types of stucco are described below:

**Job Mixed Stucco:** A mixture of Portland cement, hydrate lime, aggregate (usually sand) and water, mixed as directed in the Portland Cement Plaster (Stucco) Manual. This stucco mixture is applied to a metal lath base, attached to the outside of the substrate (the underlying structure), allowing stucco to embed the lath. The substrate should be or have a moisture barrier to minimize water entry into the structure. The first coat embeds the lath and is referred to as the scratch coat. The second coat brings the thickness to a full  $\frac{3}{4}$ " , the minimum acceptable standard. Additives are available in the final coat to achieve a variety of textures and colors. This is considered traditional stucco. There are many synthetic products available to achieve the third coat. Some are elastomeric coatings and some are acrylics. These coatings are widely used in stucco/synthetic stucco systems.

**Mill Mixed Stucco:** Consists of the same basic materials as job mixed, however, some manufacturers add chemical plasticizers to enhance the work ability of the stucco and some add fibers to provide extra strength. The lath system is basically the same as job mixed but the accessory trim pieces will be designed for the required depth of the mill mixed system. Most systems require a minimum of  $\frac{3}{8}$ " to be considered as stucco. The texture is often applied in the 2<sup>nd</sup> coat of this application, however, the texture and color can be provided in the application of a 3<sup>rd</sup> coat.

**Synthetic Stucco:** Exterior Insulated Finish System hereinafter called EIFS. The materials used to form the EIFS vary from manufacturer to manufacturer. EIFS is a barrier type cladding system that relies entirely on the exterior surface to keep moisture out. There is no internal draining system, therefore, the design and quality of workmanship is an important component in ensuring a water-tight finish.

**EIFS Polymer Based (PB):** Commonly referred to as the soft system. The higher resin content of PB's made the texture more soft and flexible. The system is adhesively and/or mechanically attached to the substrate. EIFS PB has been the most commonly used system for the last ten years in the Mid-South. The expanded polystyrene (EPS) base of the system is  $\frac{3}{4}$ " thick minimum. The EPS board is usually attached to the structural sheathing with a polymer modified cement or an emulsion type cement that does not attack the EPS board. In some instances, large (usually plastic) washers are nailed or screwed through the EPS board to provide additional or primary attachment of the EPS board to the substrate or frame. After allowing time

to cure, usually 24 hours, fiberglass mesh is embedded into a layer of polymer modified cement troweled over the EPS board. This material must dry before the finish coat can be applied (usually another 24 hours). The finish coat is most often an elastomeric or acrylic that contains color and the type aggregate required to obtain the desired texture. This system is a single barrier, water exclusion system. The fiberglass mesh, the cement embedding coat and the finish coat form the lamina of this system. Most manufacturers have tested their lamina for water penetration and most are watertight. However, a water vapor can pass through, allowing the system to ventilate. Because this system is a single barrier system, when or if water infiltrates through an unsealed area, it is trapped until it vaporizes. If this condition persists, and the source of water intrusion is not stopped, structural damage could occur. In response to the water infiltration problems with the PB system, most manufacturers have designed a moisture management system (PBMM). The purpose of this system is to release any trapped water down a drainage plane between the sheathing and the ESP board. The PB MM variance from the regular PB systems requires it to be mechanically attached.

**EIFS Polymer Modified:** Common referred to as the hard system. This system is a cross from mill mixed stucco and the EIFS PB moisture management system. This system does not provide a drainage plane and the wall has a hard base and finish coat. This system can often be installed over EPS board or extruded polystyrene.