A Hard System to Beat

For a beautiful and versatile exterior finish with the toughness, durability, and serviceability of portland cement concrete - select traditional portland cement plaster.

It’s time to rethink Stucco!
THE REAL THING

Traditional portland cement plaster is a time-tested exterior finish. It consists of portland cement-based materials and sand, mixed with water to form a workable plaster. Portland cement — the same material that is the basis for the hardened properties of concrete used to build super-highways, bridges, and skyscrapers — provides strength, durability, and toughness in portland cement plaster.

Portland cement plaster is applied either by hand or machine to exterior and interior wall surfaces in two or three coats. It may be applied directly to a solid base such as masonry or concrete walls, or it can be applied to metal lath attached to frame construction, solid masonry, or concrete construction.

Applied directly to concrete masonry, portland cement plaster provides a tough 1/2-in. thick facing that is integrally bonded with the masonry substrate. When applied to metal lath, three coats of plaster form a 7/8-in. total thickness. A vapor-permeable, water-resistant building paper separates the plaster and lath from water-sensitive sheathing or framing. Portland cement plaster has high impact resistance and sheds water, but breaths, allowing water vapor to escape. It’s a proven system that works in all climates.

STRENGTH AND BEAUTY

Traditional portland cement stucco provides a tough exterior that resists attack – from woodpeckers to weed wackers, to grocery carts. That inherent toughness is beautifully complemented by the variety of colors and textures available. Whether it’s your business or your home, appearance is an important consideration in selecting a wall cladding. You can select a color and texture consistent with the message and image you wish to convey.

Color is determined by selecting cement and aggregate color, and quite often modified by adding mineral oxide pigments to the plaster mix. In many areas, factory-prepared finish-coat products are available. Pre-pigmented packaged cements also can be used to achieve the desired stucco color, or pre-weighed mineral oxide pigments can be added to the finish coat stucco during mixing.

“It’s Not the Same as Synthetic Stucco”

Portland cement plaster (sometimes called “traditional stucco”) should not be confused with the exterior insulation and finish systems (EIFS) or “synthetic stucco systems” that have become popular but more recently have been the subject of controversy as a result of performance problems, including water leakage and low impact resistance.

Synthetic stucco consists of a polymer-based laminate that is wet-applied, usually in two coats, to rigid insulation board that is fastened to the wall with adhesive, mechanical fasteners, or both. Polymer based (PB) systems, sometimes known as thin coat, soft coat, or flexible finishes, are the most common. The basecoat for PB systems is usually only 1/16 in. thick and finish coat thickness is typically no thicker than the maximum sand particle size in the finish coat.

While the PB skin repels water very effectively, problems arise when moisture gets behind the synthetic stucco and is trapped inside the wall. Trapped moisture eventually rots insulation, sheathing, and wood framing. It also corrodes metal framing and metal attachments. There have been fewer problems with EIFS used over solid bases such as concrete or masonry because these substrates are very stable and are not subject to rot or corrosion.
Texture is achieved by selecting aggregate size, controlling finish mix consistency, and using special treatment techniques during and after application of the finish coat plaster. Texture gives substance and character to the plaster surface. It can be used to provide highlights, depth, continuity, segmentation, and even achieve the look of a completely different construction material such as wood timbers, brick, or stone masonry construction. Explore the dimensions color and texture add to your project. To confirm the suitability of a desired color and texture, be sure to ask your plasterer to provide a sample panel for evaluation prior to starting work.

**DURABILITY AND VERSATILITY**

Portland cement plaster has a well-documented history of proven performance in extreme climates from the desert southwest of Arizona, to the severe winters of Minnesota, to the hot-humid Florida summers. It performs in all climates.

That durability is complemented by its versatility. Portland cement plaster provides an ideal finish or cladding for any building construction system – concrete, concrete masonry, brick masonry, wood frame, or steel frame. Portland cement stucco can be applied to any flat or curved surface either inside or outside of any structure or building. More exotic uses include simulated mountains, trees, and rocks in amusement parks and zoos.

STUCCO’S FINE FOR FRAME

Portland cement plaster has been used over frame construction in the United States since the before the turn of the century – long enough to develop proven procedures for installation.

When portland cement plaster is selected as the exterior surface for frame construction, metal lath is attached to framing members. Vapor-permeable, water-resistant paper is applied over sheathing before attachment of the lath. The paper protects the sheathing and interior of the wall from outside moisture intrusion without trapping moisture vapor in the wall.

From the desert southwest of Arizona (above), to the severe winters of Minnesota (above right), to the steamy Florida summers (right), portland cement plaster performs in all climates.
for other concrete building systems including concrete panels, insulating concrete forming systems (ICFs), and autoclaved aerated concrete. Depending on the condition of the concrete surface, portland cement plaster may be directly bonded to the concrete or applied to metal lath attached to the wall.

When directly bonded to the concrete, a dash bond coat or surface applied bonding agent is typically needed to enhance the bond between the plaster and the concrete. When concrete surfaces are extremely smooth or contaminated with excessive form oil, metal lath is used as a plaster base. Metal lath can be mechanically attached to concrete, ICF, or autoclaved aerated concrete walls to provide a base for durable, traditional three-coat portland cement plaster exterior.

STUCCO'S BIG ON BLOCK

Concrete masonry provides an excellent base for direct application of portland cement plaster in 2 or 3 coats, consisting of basecoat(s) and a finish coat. The use of open-textured concrete masonry units promotes mechanical keying between the plaster and base masonry wall. Because plaster and concrete masonry undergo similar volume changes, they are inherently compatible.

For the right planning and preparation in the construction of portland cement plaster over frame, concrete or block, the first step is to follow the requirements of ASTM C 926, the Standard Specification for Application of Portland Cement Plaster, and the guidelines given in the Portland Cement Plaster (Stucco) Manual in applying the plaster. The result will be popular attractive stucco finish having the toughness and durability of concrete.

For unlimited design possibilities in a tough, durable, and beautiful exterior cladding, remember traditional portland cement plaster.

STUCCO COMPLEMENTS CONCRETE CONCEPTS

The durability and versatility of traditional portland cement stucco provide a great finish