



LimeStrong

A PRODUCT OF HESS PUMICE

POZZOLAN LIME PLASTER & MORTAR

A New Product Based on Ancient Savvy

Anciently, the Romans used a mixture of hydrated lime and fine-grained pumice to form strong and incredibly durable concrete, mortar and plaster—and the evidence of that cementitious wisdom still stands some 2000 years later.

The Romans didn't have a quick setting cement like we do today. They used hydrated lime—a cementitious product made from limestone which was heated to drive off the carbon dioxide and transform the Calcium Carbonate into Calcium Oxide (lime) + H₂O. Lime does not act like a hydraulic cement on its own, and will only form Calcium Silicate Hydrate (CSH)—the all-important cementitious binder that makes concrete work—in the presence of water and pumice (pozzolan).

The Romans discovered that when lime and water are mixed with a finely graded amorphous silica (known to the Romans as *pulvis puteolanus*; referred to today as volcanic ash or pumice pozzolan), nearly 100% of the lime is converted to the cementitious binder CSH. This simple lime + pozzolan + water combination spawns none of the deleterious by-products that make modern plaster, mortar and concrete—made using Portland cement—so problematic and short-lived. Thus, Roman methods produce densified, flexible, self-healing mortars and plasters that are not nearly as susceptible to the chemical attacks and other problems that plague modern cement products.

Old World Strength and Beauty for Modern Structures

Under the guidance of Stan Petersen, the renowned expert in old-world masonry and lime plastering, Hess Pumice has formulated natural mortar and plaster products that put the strength, durability and beauty of the old-world masters in the capable hands of today's masons and plasterers.



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LimeStrong pozzolan lime plaster and mortar products are safe to use and simple to mix, handle and apply. They are ideal for both outside and inside finishes, and creativity with color and texture is unlimited: LimeStrong plaster can be worked down to a glass-smooth finish or left rustically rough. Naturally white in color, LimeStrong products are easily tinted and colored using natural oxide color pigments.

LimeStrong products are impressively-enduring, are flexible and autogenously heal, give off no volatile organic compounds, are easily repaired, can be mixed and applied in a wide range of weather conditions, and result in unique and beautiful finishes—a medley limited only by the creativity and skill of the hand that applies it.

“Withstanding the test of time” is a common cliché, but is honestly applicable when considering the physical body of evidence on and in countless structures world-wide—lime pozzolan plasters and mortars last and last and last.

Sustainable and Green

Simple water + lime + pumice pozzolan cementitious finishes not only out-perform modern equivalents, they stand as environmentally sound alternatives to synthetic stucco and other Portland cement-based products.

Unlike the energy-intensive process to produce Portland cement, hydrated lime is obtained by low-temperature firing. As for the pozzolan component, our pozzolan is made by mining and crushing a clean, pure pumice—an amorphous white silica, created by volcanic events millennia ago. Pumice pozzolan is not a by-product of a pollution control processes and contains no hazardous materials. Recent studies corroborated previous test data indicating that natural pumice pozzolans are free of Crystalline Silica and other hazardous materials.

As a matter of interest, promising research is currently being conducted using our lime pozzolan plaster to mitigate the serious VOC issues encountered in many modern structures.

Contact us for more information, availability, and training in the use of our LimeStrong products.