

deGruchy's

LIME



WORKS.usTM

Makers of

ecologic[®]

Brand
Mortar & Plaster
For Historic Restoration
and Green Building

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What is Natural Hydraulic Lime?

Lime comes basically in two forms: Hydrated and Hydraulic

Hydrated Lime (or calcium lime, air lime, high calcium lime):

This is the most commonly used and known lime. It comes in powder form, like Type N, NA, S or SA, or in a paste form, known as Lime Putty. Although it has wonderful physical and aesthetic qualities, hydrated lime has very strong limitations in the construction industry. Hydrated Lime sets only by carbonation (the re-absorption of CO₂) and thus, thicknesses are very limited. It is not suitable or practical for scratch or brown coats in a plaster, but can do wonders as a finish coat but requires blending most of the time. The application requires very highly skilled labor and that special care must be taken to avoid physical harm, such as burns when in the form of quicklime. Consequently, it becomes a specialty with associated costs.

Hydraulic Lime:

Although basically of the same chemical composition as hydrated lime, hydraulic lime has its initial set with water, much like cement, and a second set by absorption of CO₂. This allows for simplicity of application although basic care is required, such as minimizing the amount of water, good sand and tamping. The cost of labor is comparable to normal stucco installation. Hydraulicity for St. Astier lime is achieved by the nature of the raw material.

Hydraulicity of Hydrated lime may be obtained by the addition of cement, pozzolanes, etc. in such a case, the introduction of foreign chemical elements may have immediate or long range inauspicious consequences and the sensitive user should stay away from these hybrid products.

PROPERTIES OF BINDERS	OPC Ordinary Portland Cement	Hydrated Lime	Lime Putties	St. Astier Natural Hydraulic Lime
Purity (Blended Material)	NO	NO	YES NO	YES
Elasticity	NO	YES	YES	YES
Permeability (Vapor Exchange Quality)	NO	YES	YES	YES
Resistance to Salt	NO	YES	YES	YES
Suitable Compressive Strength	NO	YES	YES	YES
Self Healing	NO	YES	YES	YES
Reworkable	NO	YES	YES	YES
Economic	YES	YES	NO	YES
Proficiency of Application	YES	NO	NO	YES
Resistance to Sulfate	NO	YES	YES	YES
Absence of Detrimental Chemicals	NO	YES NO	YES	YES
Slow Final Setting	NO	YES	YES	YES
Quick Initial Setting	YES	NO	NO	YES
Low Density	NO	YES	NO	YES