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## Ecologic™ Hydraulic Lime (3.5) *Platinum*

### PRODUCT DESCRIPTION:

Ecologic™ Hydraulic Lime (3.5) *Platinum* is an environmentally-friendly pozzolanic hydraulic lime (PHL) binder using only the highest quality high calcium hydrated lime and natural pozzolans sourced in the USA comparable to foreign natural hydraulic limes (NHL) such as Saint-Astier® NHL 3.5. Add appropriate sand to create a breathable lime mortar or stucco/plaster with an excellent modulus of elasticity for interior or exterior use. Ecologic™ Hydraulic Lime (3.5) *Platinum* contain NO damaging Portland cement, discoloring ground granulated blast furnace slag (GGBS), or unreliable fly ash found in substandard PHLs making it healthy to use with no “runaway strength” while maintaining self-healing, resistance to salt and sulfates, and the accommodation of slight movement.

Ecologic™ Hydraulic Lime (3.5) *Platinum* meets or exceeds ASTM C1707-18 (Pozzolanic Hydraulic Lime for Structural Purposes), and is perfect for making historically appropriate mortars according to ASTM C1713-17 (Mortars for the Repair of Historic Masonry).

### BENEFITS:

- Comparable to NHL 3.5 when mixed with appropriate sand.
- Made in America! *Platinum* means over 90% of all ingredients and labor come from the United States, saving money, lowering carbon footprints, and protecting American jobs and industry!
- Quicker strength gain than equivalent NHL 3.5.
- No harmful chemicals or additives, only natural lime and pozzolans.
- Safe and sympathetic to most historic masonry
- High vapor permeability (“breathable”) compared to modern cement binders.

- 80% less carbon emissions than Portland cement
- Naturally resistant to biological growth
- Accommodates slight building movements
- Reabsorbs CO<sub>2</sub> as it cures
- No VOCs or modern petrochemicals/plastics

### LIMITATIONS:

Use with caution in high salt and persistent high humidity locations. Consider Saint-Astier® Natural Hydraulic Lime (NHL) for these locations.

### MAKING MORTARS OR RENDERS:

Ecologic™ Hydraulic Lime (3.5) *Platinum* must be combined with a graded natural or manufactured sand with at least four different particle sizes spread across a bell-shaped curve. For best results, limit the size of particles below a #200 mesh (0.075 mm) to 3% or less and avoid sands with high amounts of silts or clays. Proportion dry ingredients to desired ratio using identically sized containers. Mix for five minutes with clean, potable water. Water amounts will vary depending on amount of sand and specific application but in general start with one-half (1/2) gallon of water per 40 lbs of combined lime and sand and slowly add more water until the mix contains the minimum amount of water to become workable. Keep water ratios consistent between batches to ensure consistent material performance and appearance. Judge workability only after five minutes of continual mixing.

***Do not add anything else to the mix such as Portland cement, additional lime, pozzolans, accelerators, or retarders. Only use LimeWorks.us additives or color packs to change color or modify material properties.***

**GENERAL APPLICATION:**

Mist the substrate and any previous lime product application with water immediately before a new application but only as a slight dampening to control absorption. No standing water should remain during a new application. If substrate is retaining inordinate amounts of moisture due to rising damp, poor flashing or moisture from a roof or chimney cavity, faulty plumbing, or other sources; this must be corrected before new work begins.

When making a stucco/plaster: Wait a minimum of 3-5 days between coats of stucco (render). Within 24 hours of an installation rub closed any cracks that form before the next coat is installed. Renders made with Ecologic™ Hydraulic Lime (3.5) *Platinum* can be reworked within 24 hours depending on weather conditions. Do not apply at temperatures below 40°F (4°C) or above 85°F (29°C).

**AIDING THE CURE:**

Protect the work by covering it with burlap or jute. Spring clamp fabric covers a few inches away from the work and wet the fabric covers a few times a day for the cure period of approximately three days. Fabric covers allows moisture to slowly escape and encourages a slow cure. Fabric covers should not come in contact with the wall to avoid staining. Tarps could be used on the outside of the scaffold to protect from driving rain and wind.

Do not apply unless minimum ambient temperature of 40°F (4°C) and a maximum of 85°F (29°C) continues to be maintained for a minimum of 24 hours prior to and 72 hours after the application of mixes made using Ecologic™ Hydraulic Lime (3.5) *Platinum*. No heavy rain should be allowed to flood the application until after proper curing has occurred. During hot weather, protect the work from an uneven and excessive evaporation of Ecologic™ Hydraulic Lime (3.5) *Platinum*'s moisture content during dry, hot weather. It is suggested to provide a humidifier in the room during the curing process in dry indoor conditions.

**SUGGESTIONS FOR COMMON MIXES:**

Please note that depending on the application, and aggregate size and density, specific mixes may require variation from these suggestions.

**Laying/Pointing:**

- **Joints 3/8”+:** 1 part lime to 2-3 parts coarse sand

conforming to ASTM C144.

- **Joints 3/8”-1/4”:** 1 part lime to 1.5-2 parts fine sand (particles between #30-#200 sieve).
- **Joints below 1/4”:** 1 part lime to 1.5-2 parts extra fine sand (particles between #50-#200 sieve).

**Stuccoing/Plastering**

- **Scratch Coat:** 1 part lime to 2-2.5 parts coarse sand conforming to ASTM C144.
- **Brown Coat:** 1 part lime to 2-2.5 parts coarse sand conforming to ASTM C144. For fine or extra fine finishes, consider a finer sand (particles between #30-#200 sieve).
- **Finish Coat:** 1 part lime to 1.5-2 parts sand. Sand size will depend on finish goals and so may be coarse, fine, or extra fine.

**TECHNICAL DATA**

Product meets or exceed ASTM Standards C144, C1707, & C1713.

Property*:	28 Days	6 Mo.	12 Mo.
<b>Compressive Strength</b>	593 psi	749 psi	908 psi
<b>Flexural Strength</b>	206 psi	109 psi	96 psi
<b>Water Vapor Transmission</b>	19 perms	22 perms	22 perms
<b>Porosity</b>	20%	25%	28%

**Other Properties:**

**Drying Shrinkage\*:** 0.07%

**Density (Powder):** 28.9 lbs/ft3 (loose)

**Reworking Time:** 24 hours

**Cure Time:** 72 hours (initial), 28 days (full)

**Shelf Life:** 24 months if kept in original package and in a cool, dry place.

**Packaging:** 16.67lbs bags

**Coverage (16.67lbs bag)†:**

- Repoint an average of 89 ft² of standard brick joints @ 3/8” wide, 3/4” deep
- Repoint an average of 32 ft² of rubble stonework joints @ 1” wide, 1-1/4” deep
- Lay approximately 87 standard brick
- Lay approximately 7 ft² of field stone
- Stucco/Plaster 24 ft² @ 3/8” thick

\* When mixed with ASTM C144 compliant coarse sand in a ratio of 1:2.5 (lime:sand)

† One full 16.67 lb bag of binder combined with 64 lbs of ASTM C144 compliant coarse sand (approx. ratio of 1:2.5)

**Safety:**

Wear adequate protective clothing to avoid prolonged contact with the powder or mortar/render. To avoid dust contact with eyes and possible inhalation wear glasses and the appropriate dusk mask especially in areas not properly ventilated. For additional safety information, please see product SDS.

**Disposal:**

Sweep and place bulk material in containers and properly remove for disposal. The final, cured product is not hazardous. Dispose of discarded material in a landfill in accordance with all local, state and federal regulations.

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