





# **Building Lime Products**

# NIAGARA® PHL 3.5

- NIAGARA® PHL 3.5 is a high-purity Blended Hydraulic Lime using a high purity dolomitic limestone like our NIAGARA Mature Lime Putty.
- NIAGARA PHL 3.5 Blended Hydraulic Lime complies with ASTM 1707-09 (Pozzolanic Hydraulic Lime for Structural Purposes).

#### Uses

Authentic restoration applications and designed to duplicate the original mortar, plaster, and stuccos used on many prestigious and historic buildings.

Sustainable Construction such as Strawbale and Hempcrete. PHL provides breathability, flexibility and durability to these types of sustainable applications.

## Preparation

Control of water absorption is important to success of material. Substrate should not have standing water nor should it be too dry that water is rapidly absorbed. A fine mist may be used to control the rate of absorption. Any issues that may attribute to the substrate retaining moisture must be repaired prior to work being done.

# Advantages

#### **NO PORTLAND**

NIAGARA PHL 3.5 contains absolutely no Portland Cement, which helps reduce potential damage in historic applications where it was not originally used.

### **HIGH PLASTICITY**

NIAGARA PHL 3.5 develops exceptional plasticity and workability.

## **EXCELLENT WATER RETENTION**

Increased water retention allows for better bond strengths, also there is less retempering required during use.

## MODERATE TARGET STRENGTH

The designed strength is 350-500 PSI in 28 days, suitable for historical, sustainable or any application where weaker material is desired.

# WATER VAPOR PERMEABILITY

As a lime based mortar this product provides excellent water vapor transference. This is especially important in non-portland cement based applications such as historic restoration or sustainable building.

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# Mixing Directions

- The typical mix ratio for PHL 3.5 is 1:3 (lime vs. sand) based on volume.
- The use of clean water and sand meeting ASTM C144 is recommended.
- The lime and sand should be mixed prior to adding any water.
  This will help ensure that too much water is not added initially.
- Once dry materials are mixed, water may be added in order to reach the right consistency, however keep in mind that too much water will cause the finished material to shrink and potentially be weaker than desired.

#### **CURING**

Material must be protected from drying wind, frost, direct sun and rain for a minimum 7 days. The use of wet burlap, plastic and fine misting may be needed in conditions that require it. Freezing conditions will require special care be taken so that material does not freeze during curing.

#### **COVERAGE**

When mixing at a 1:3 ratio:

- 50lb. bag will repoint approximately 400 sq. ft. (estimate based on 3/8" x 3/8" joint size).
- 50lb. bag will repoint 1200 linear feet of stonework (estimate based on 3/8" x 3/8" joint size).
- 50lb. bag will plaster or stucco approximately 100 sq. ft. (estimate based on 1/4" thick).

#### WARNING

## MAY CAUSE EYE OR SKIN BURNS, HARMFUL IF SWALLOWED.

- CONTAINS: Hydrated Lime (calcium magnesium hydroxide)
- · Avoid contact with eyes or skin. Do not take internally.
- · Avoid breathing lime dust.

Always wear NIOSH approved eye goggles when handling lime, in case of eye contact, flush eyes thoroughly, including under eyelids, with water for fifteen minutes. **CALL PHYSICIAN IMMEDIATELY.** 

Wear protective clothing to prevent skin contact. If skin contact occurs wash with water. Should skin irritation continue, **SEE PHYSICIAN.** 

If swallowed CALL PHYSICIAN IMMEDIATELY.

Ventilate or use dust collector to prevent airborne lime dust. If there is airborne lime dust use a NIOSH approved dust respirator.

#### KEEP OUT OF REACH OF CHILDREN.

Hazardous ingredient info: 419.855.8336 | 1.800.537.4489

**NOTICE:** There are no warranties which extend beyond the description contained herein. We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within 30 days from the earlier of the date it was or reasonably should have been discovered.



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