



## BioLime<sup>®</sup> Natural Hydraulic Lime - NHL 3.5



**BioLime<sup>®</sup> Natural Hydraulic Lime (NHL) 3.5** is designed for use in mortars and plasters for historical building restoration, quality building/construction and green building.

The product has a CE Certification and is in full compliance with UNI EN 459 1:2010, obtaining a registration mark as **NHL 3.5 (Natural Hydraulic Lime 3.5)**.

### CHARACTERISTICS AND USE



Vignola Castello, Italy, restored with BioLime<sup>®</sup> NHL 3.5

This Natural Hydraulic Lime (NHL) 3.5 is produced by low-temperature (1100<sup>o</sup>C) calcination of calcareous marls. The traditional process involves firing, slaking, aging, and then grinding prior to final packaging. No extraneous materials or additives that would modify the natural composition of the original stone are used in production.

This authentically processed Natural Hydraulic Lime NHL 3.5 is used in the preparation of mortar for masonry, stucco and plaster. For architectural and historical applications, mechanical characteristics such as excellent porosity and low soluble salts ensure full compatibility with traditionally produced building materials (stone, solid brick, etc.). A high permeability to water vapor, ability to prevent bacteria and mold and optimal hygrothermal function

ensures the achievement of high performance and durability, making this authentic Natural Hydraulic Lime NHL 3.5 an ideal binder for quality restoration work and Green Building.

### PACKAGING AND STORAGE

The product is available in 25 kg (55-lb) Bags. Storage is intended to be in a protected, dry place.

### AGGREGATE BLEND

Natural Hydraulic Lime 3.5 will typically be blended at a volume ratio of between 2 and 3 parts aggregate to 1 part NHL 3.5, depending on the desired strength and the granulometry of the aggregate. Pre-blended, color-matched, ready-to-use mortars, plasters and stuccos (requiring water addition only) are also available from Edison Coatings, Inc.

**IMPORTANT:** In order to preserve the unique characteristics of this material, there should be no added artificial hydraulic binders, particularly cementitious additives.

### APPLICATION

- **Temperature:** Both the ambient air and the substrate should be between 5°C (40°F) and 35°C (95°F).

- **Surface Preparation:** Surfaces must be clean and free of any dust, oils, residues, bacteria, mildew, mold or other organic matter, salt efflorescence, or any other loose material.
- **Pre-Dampening:** Before applying, moisten absorbent surfaces to reduce suction, but avoid ponding or complete saturation.
- **Pre-Hydration:** To enhance the plasticity characteristics of the product, let the freshly mixed material stand for approximately 10-15 minutes prior to application.
- **Application:** Recommended maximum thickness per application is not to exceed 2 cm (7/8" inch). Successive applications, for installations requiring additional thickness, should be made once the previous application has reached thumb-print hardness, following the same procedure.
- **Finishes:** NHL 3.5 plasters may remain exposed directly to weather, or may be coated with compatible finishes. In order not to compromise water vapor permeability and natural appearance, use breathable finishes such as [EverKote 300 Mineral Coatings](#).
- **Protection & Curing:** Once applied, the product should be protected up to 48 hours from rain, frost and rapid drying due to direct sun or forced ventilation. Light periodic misting should be performed several times a day for the first 2-3 days.

## TECHNICAL CHARACTERISTICS \*

	Natural Hydraulic Lime NHL 3.5	Standard UNI-EN 459-1:2010
Density	0.7g/cm (~40 lb./cu.ft.)	
Color & Appearance	Fine powder, light brown/tan color	
Compressive Strength, 28 days	3.8 MPa (530 psi)	3.5 MPa (490 psi)
Residual at 0.20 mm	< 1%	≤2%
Residual at 0.09 mm	< 5%	≤15%
Stability	< 0.50 mm	≤2 mm
Content of free building lime	25%	≥25%
Content SO <sub>3</sub>	< 1%	≤2%
Set time	8 h	≥1 h
pH (saturated sol. at 20°C)	12.3	
Flammability	Non-combustible	

\*The above data were derived from laboratory measurements. This document is intended as a Technical Data Sheet for a specific product.

## SAFETY

For complete information regarding correct storage, use and disposal methods and, please see **MSDS**. Lime is a naturally caustic (rapid absorption) material due to its high pH origin and creates an alkaline reaction when combined with water. Protect the eyes and skin from exposure. Keep out of reach of children. Dust may cause irritation to eyes, skin, nose, throat and upper respiratory tract. Avoid irritation by reducing exposure to dust. Use in a well-ventilated area or provide sufficient local ventilation. Do not ingest. If dusty, wear a NIOSH/MSHA- approved dust respirator. Wear eye protection. If eye contact occurs, flush thoroughly with water for 15 minutes. If irritation persists, call a physician.

## FOR COMMERCIAL AND INDUSTRIAL USE ONLY

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