
Natural Hydraulic Lime - **NHL 3.5**

Natural Hydraulic Lime NHL 3.5 designed for the realization of mortar and plaster, specific for historical buildings restoration, quality buildings and green building.

Product that is according to UNI EN 459-1:2015, classified as NHL 3.5 (Natural Hydraulic Lime 3.5) and marked CE, with certification number **0925 CPD 167/2008**

CHARACTERISTICS AND USE

The natural Hydraulic Lime NHL 3.5 of **Calce Raffinata** is produced by calcination of calcareous marls extracted in local quarries, near our kiln. The productive cycle, traditional at all, does not require the addition of any extraneous material that could modify the natural composition of original rocks. After burning there are the slaking and the aging before grinding and, at least, packaging.

The **natural Hydraulic Lime NHL 3.5** is used in the preparation of mortar for masonry and plaster. In the architectural and historical, mechanical characteristics, the porosity and the low quantity of soluble salts, ensure a full compatibility of Natural Hydraulic Lime NHL 3.5 with traditional building materials (stone, solid brick, etc.). High permeability to water vapor, capacity to prevent fungi and molds, optimal regulatory hygrometrical function of environments, ensure the execution of building with high living standards and make of the **natural hydraulic lime NHL 3.5** the preferred binder for a quality architecture and for green building.

PACKAGING AND STORAGE

The product is available in tank, bags (25 kg/each). Storage in a covered and dry place.

DOSAGES

Natural Hydraulic Lime NHL 3.5 dosage changes from 350 to 450 kilograms per cubic metre of aggregate (sands, marble powder, earthenware, etc.) depending on the granulometry of the aggregate. The water slurry has to be determined in the building site, depending on the type of action and the type of the aggregate. In order to preserve the peculiar characteristics of Natural Hydraulic Lime NHL 3.5, it should not be added artificial hydraulic binders to mixtures, in particular if cementitious.

The use of the plaster holder net is recommended.

INFORMATIONS FOR THE LAYING

- Application temperature between 5° C and 35° C of the support and air. Once applied, the product should be protected for 48 hours from rain, plaster mining, frost and quick-drying due to the sun or strong ventilation.
- Before the laying, wet the particularly absorbent surfaces, avoiding water stagnation.
- Use only on cleaned surfaces, compact and resistant, doing a careful cleaning of the walls and removing friable and inconsistent parts. On smooth or slightly absorbent surfaces treat with primer latex and lay the mortar with the technique 'wet on wet'.



- To enhance the plastic characteristics of the product, let the mixture rest for 10-15 minutes before applying.
- The mortar must be laid avoiding more than 2 cm thick in a same application; higher tick can be realized in upcoming applications.
- On masonry with many interstices, level out the foundation with a suitable rough coat 24-48 hours before the plaster execution.
- On mixed masonry, level out the foundation with a suitable rough coat 24-48 hours before the plaster execution.
- Prepare the link of structural elements (beams, pillars and bearing masonry) applying an appropriate plaster-caddy network.
- Does not apply on gypsum foundations, on painted supports, on wood, metallic or plastic elements.
- In order not to compromise the permeability to water vapor, use breathable finishes.

TECHNICAL CHARACTERISTICS *

	Natural Hydraulic Lime NHL 3.5	Standard UNI-EN 459-1:2015
Apparent density	0,7g/cm ³	
Physical condition and color	Powder light brown, hazel	
Resistance to compression (28 days)	4,0 MPa / 580,15 Psi	3,5 MPa / 507,63 Psi
Residual at 0,20 mm	≤2%	≤ 2%
Residual at 0,09 mm	≤5%	≤ 15%
Stability	< 0,50 mm	≤ 2 mm
Content of free building lime	25%	≥ 25%
Content SO ₃	< 1%	≤ 2%
Time of setting beginning	6 h	≥ 1 h
Reaction to fire	Non-combustible	

Resistance to compression (40 days)	5,0 Mpa / 725,18 Psi
Resistance to compression (60 days)	7,0 Mpa / 1015,26 Psi
Resistance to compression (90 days)	8,8 Mpa / 1276,33 Psi
Resistance to compression (120 days)	9,8 Mpa / 1421,36 Psi

SAFETY

For information about correct disposal, storage and use, please look through the Safety Data Sheet.

EDITION

October 2022 – This technical sheet writes off and replaces any prior edition.

** Data have been obtained from laboratory tests made during the regular control practices in the production cycle and in standard conditions according to the Law; therefore they should change and have to be considered approximates.
The applicative phase takes place in yards without our control, the society Calce Raffinata takes no responsibility for results of the products application.*