SECIL NATURAL LIME NHL 3.5

NHL 3.5 – NATURAL HYDRAULIC LIME

1. DESCRIPTION

SECIL NATURAL LIME NHL 3,5 is a natural hydraulic lime, hydraulic binder consisting of silicates and calcium aluminates and calcium hydroxide. It is obtained by cooking marly limestone followed by milling. *SECIL NATURAL LIME NHL 3,5* is rated as NHL 3.5 according to NP EN 459-1.

SECIL NATURAL LIME NHL 3,5 is a unique binder because in addition to hydraulic setting it also has aerial setting, obtained by carbonation with atmospheric CO2.

2. FIELD OF USE

In the manufacture of mortars as a single binder or mixed with other hydraulic or aerial binders, giving them workability and flexibility, significantly reducing retraction of hydraulic mortars (eg plaster mortar, finishes or grounting of old masonry).

In the manufacture of rehabilitation mortars, as sole binder, in the execution of exterior and interior renders on old supports.

3.PRODUCT CHARACTERISTICS

Chemical Characteristics	Value	Standard
Lime available Ca(OH)2	≥ 25,0 %	EN 459-1
Sulphate	≤ 2,0 %	EN 459-1
Physical Characteristics	**Value**	**Standard**
Colour	Beige	-
Free water	≤ 1,0 %	EN 459-1
Loose bulk density	0,60 ± 0,05 kg/dm3	-
Density	2,7 g/cm3	-
Fineness	90 µm ≤ 15,0 % 200 µm ≤ 5,0 %	EN 459-1

Expandability	≤ 2,0 mm	EN 459-1
Penetration	>10 mm and < 50 mm	EN 459-1
Air content	≤ 5,0 %	EN 459-1
Setting time Beginning End	 >1 h ≤ 30 h	EN 459-1
Mechanical Characteristics	**Value**	**Standard**
Compressive strength (28 days)	≥ 3,5 and ≤ 10,0 MPa	EN 459-1

4. APPLICATION

a) Manufacture of mortars

The dosage of *SECIL NATURAL LIME NHL 3,5* in a mortar shall be suitable for the purpose for which it is intended. In plaster and masonry mortars, *SECIL NATURAL LIME NHL 3,5*, has a fundamental role as sole binder, see examples in number 5. Pre-mix *SECIL NATURAL LIME NHL 3,5* with the aggregate and subsequently add water in the appropriate quantity in
order to obtain good workability.

b) Restrictions

Do not apply mortars at temperatures below 5°C and above 30 C, avoiding the application in situations of high sun exposure and / or under strong winds.

Do not use softened mortars or which have started their setting process.

Avoid fast drying of mortars by watering the support 1 to 2 hours before application and by watering again as soon as the mortar is sufficiently resistant. Repeat the watering process 1, 2 and 7 days later.

c) Complementary Advices

- Excess mixing water is detrimental to the physical characteristics of the mortar;
- The minimum amount of water that allows good workability must always be used;
- The mixing water must be free of any impurities (clays, organic matter), and drinking water should be preferably used;

Once the ratio to be used for the desired mortar has been determined, keep both the dosages and the kneading time constant.

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5. RECOMMENDED RATIOS

Mortar Recommended Ratios	RAW MATERIALS (VOLUME)		WATER	COMPRESSIVE STRENGTH (MPa)			MODULUS OF ELASTICITY (MPa)
	NHL 3,5	Well Graded Clean Silica Sand ASTM C33 or equivalent	% weight of the total	7 days	28 days	90 days	28 days
Bedding/pointing mortar (binder:aggregate) = 1:2.5	1	2,5	15,0	0,3	0,9	1,5	3300

6. PACKAGING AND VALIDITY

Packaging

Paper bags of 25 kg in plasticized pallets; Bulk for use in silo system.

7. HEALTH AND SAFETY

(DOES NOT REPLACE CONSULTATION OF THE PRODUCT SAFETY DATA SHEET)

- Irritating to skin;
- Causes serious eye damage;
- May irritate the respiratory system;
- Keep out of children's reach;
- Use protective gloves / protective clothing / eye protection / face protection;
- Avoid breathing dust/ vapours.

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SECIL NATURAL LIME NHL 3.5
EN 459-1:2011
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Certification: 1328-CPR-0215
Natural Hydraulic Lime– NHL 3,5
Declaration of performance DOP.14002

Being the conditions of applying our products out of our reach we do not take responsibility for its misuse. It is the customer's duty to verify the suitability of the product for the intended purpose. In any case, our responsibility is limited to the value of the goods supplied by us. The information contained in the present data sheet may be altered without prior notice. In case of doubt and if you need any further advice please contact our Technical Services.
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