



## GROVE 30 NHL

A thixotropic, fibre-reinforced mortar formulated with hydraulic limes for structural interventions with FRCM systems



CE Mark:

- EN 998-1 - Classification: GP-CSIV
- EN 998-2 - Classification: G-M15
- EN 998-1+2 - Class: A1
- EN 1504-3 - Classe: R1-A1



### TECHNICAL SPECIFICATIONS



### FIELD OF APPLICATION



### APPLICATIONS



### Description

GROVE 30 NHL is a pre-mixed, single-component, fibre-reinforced powdered product formulated with hydraulic limes and natural aggregates that, with the sole addition of water, forms a highly thixotropic mix suitable for refurbishing and regularising brick, stone and mixed walls.

### CE Mark

#### ► EN 998-1

GROVE 30 NHL complies with the principles defined in the EN 998-1 standard ("Specifications for mortars for masonry works - Part 1: Mortars for interior and exterior plasters") with the following designation:

→ GP-CS IV

- General-purpose masonry mortar (GP)
- Compressive strength > 6 MPa (CS IV)

#### ► EN 998-2

GROVE 30 NHL complies with the principles defined in the EN 998-2 standard ("Specification for mortar for masonry - Part 2: Masonry mortar") with designation:

→ G-M15

- General-purpose masonry mortar (G)
- Compressive strength class > 15 MPa (M15)

#### ► EN 1504-3

GROVE 30 NHL complies with the principles defined in the EN 1504-9 standard ("Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity. General principles for the use of products and systems") and to the requirements of the EN 1504-3 European standard ("Structural and non-structural repair") for structural mortars of the following class:

→ R1

### Field of application

GROVE 30 NHL is used:

- In FRCM systems, as an inorganic matrix, for repairing buildings that need to be reconstructed, consolidated and adapted to operating stress, following deterioration due to overloads, collapse, earthquakes and other detrimental events.
- As a bedding mortar and as a plastering mortar to a thickness of up to 3 cm per coat.

GROVE 30 NHL can be floated with a fine two-coat plaster finish directly after application.

# GROVE 30 NHL

## Advantages

GROVE 30 NHL has the following properties:

- High adhesion power without adhesion primer.
- Mechanical resistance, elastic modulus values and other physical properties that make it suitable for treating brick, stone and mixed walls.
- It can be floated with a fine two-coat plaster finish directly after application.

## General preparation of the laying support

Clean the surface thoroughly and remove any loose parts.

Wet the application surface before applying GROVE 30 NHL

## Preparing the product

Pour into the mixer 5.5 l of clean water per bag of GROVE 30 NHL.

Slowly pour GROVE 30 NHL while mixing and check the mix after 2 minutes.

If necessary, adjust the consistency with water, by adding it up to a maximum total quantity of 6.0 l per bag then continue mixing for 2–3 minutes.

## Application of the product

Apply with a trowel or spatula up to the desired thickness.

Use the mix within 1 hour at 20°C.

If additional coats are required, reapply the product within 3–4 hours after the first coat, before the product has finished setting.

As soon as the GROVE 30 NHL mortar begins to set, proceed with float finishing.

### ► Curing of the product

During the hot season, carefully monitor the curing of GROVE 30 NHL once applied, by wetting the treated part for at least 48 hours 6–8 hours after application, especially when working with thin layers (below 5 mm).

## Consumption

TYPE OF APPLICATION	MINIMUM CONSUMPTION	MAXIMUM CONSUMPTION	UoM	notes
To create a 1 cm-thick layer	16	17	kg/m <sup>2</sup>	of the powdered product

## Cleaning of tools

- Wet product: clean with water (including a power wash).
- Hardened product: remove mechanically.

## Useful application tips

- Pay special attention to the indications on the product's curing in adverse weather (hot season and windy conditions).
- Do not apply GROVE 30 NHL on frosted supports.
- Do not apply GROVE 30 NHL under strong sunlight, when rain is forecast or in strong wind.
- Do not mix GROVE 30 NHL again during the setting phase by adding water.

## Technical data

► PRODUCT IDENTIFICATION DATA	UoM	value
Consistency	-	powder
Colour	-	White-beige
Maximum grain size	mm	2,5
Solid residue	-	100%

► APPLICATION DATA AND FINAL PERFORMANCES	UoM	Value
---	-----	-------

# GROVE 30 NHL

Colour of the mix	-	White-beige
Density of the mix, EN 1015-6	kg/L	1,99 ± 0,05
Mix water	-	(23-24)%
Consistency of the wet mortar (spreading on flow table), EN 1015-3	mm	160
Duration of the mix	min	90
Application temperature (ambient)	°C	From +5 to +30
Maximum applicable thickness with a single coat	mm	30
Full curing time (at +23°C, 50% R.H.)	days	28

► TECHNICAL DATA IN COMPLIANCE WITH EN 1504-3	UoM	value
Compressive strength (at 28 days), EN 1015-11	MPa	>15
Adhesion to the support (brick) FP=C (cohesion break of the support), EN 1015-12	MPa	1,4
Water absorption due to capillaries of the hardened mortar, after 24 hours, EN 1015-18	-	Category Wc2
Permeability to water vapour of the hardened mortar ( $\mu$ ), EN 1015-19	-	10
Thermal conductivity ( $\lambda_{10}$ , dry) (Table A.12 P=50%), EN 1745	-	0,83

TECHNICAL DATA IN COMPLIANCE WITH EN 998-1	UoM	value
Compressive strength (at 28 days), EN 1015-11	MPa	>15
Adhesion to the support (brick) FP=C (cohesion break of the support), EN 1015-12	MPa	0,67 ± 0,07
Adhesion expressed as flexural strength perpendicularly to the mortar bed, EN 1052-2	MPa	1,8 ± 0,2
Soluble chloride content, EN 1015-17	-	0,01%
Water absorption due to capillaries of the hardened mortar, after 24 hours, EN 1015-18	kg/(m <sup>2</sup> ·√min)	0,10
Permeability to water vapour of the hardened mortar ( $\mu$ ), EN 1015-19	-	10
Thermal conductivity ( $\lambda_{10}$ , dry) (Table A.12 P=50%), EN 1745	W/(m·K)	0,83

TECHNICAL DATA IN COMPLIANCE WITH EN 998-2	UoM	value
Compressive strength (at 28 days), EN12190	MPa	24 ± 2
Soluble chloride content, EN 1015-17	-	0,01%
Adhesion on concrete, EN 1542	MPa	2,5 ± 0,3
Resistance to freeze-thaw cycles with immersion in deicing salts (measurement of adhesion), EN 13687-1	MPa	> 1,1
Fire reaction (Euroclass), EN 13501-1	MPa	A1
Flexural strength (at 28 days), EN 12190	MPa	4,7 ± 0,2
Elastic modulus (method 2), EN 13412	GPa	16,24 ± 0,09

## Storage of the product

- 12 months in the closed original packaging, in a dry and covered place away from direct sunlight, at a temperature between +5°C and +35°C.
- Protect the product against humidity.

## Packages

VARIANT	PACKAGING	ADR	UNITS PER PALLET	COMPONENTS
	bag - 25 kg	NO	48 – bag	

legend

NO = NON DANGEROUS goods

## LEGAL NOTES

Advice on how to use our products corresponds to the current state of our knowledge and does not involve the assumption of any guarantee and / or responsibility for the final result of the work. They do not refore exempt the customer from the responsibility of verifying the suitability of the products for the use and the prefixed purposes through preventive tests. The website [www.nordresine.com](http://www.nordresine.com) contains the latest revision of this datasheet.

# GROVE 30 NHL

## EDITION

Release date: 09.10.2017

Revisione: 08.03.2021