

# **NHP 250 WR**

## **WATER-REPELLENT ONE-COAT PLASTER WITH QUARTZ SAND**

**CS II-W1-A1**

**ACCORDING TO  
EN 998-1**

### **DESCRIPTION**

NHP 250 WR is a ready-to-use, water-repellent cement-based one-coat plaster. Contains cement, lime hydrate, quartz sand with 1.4 mm max. grain size, limestone fillers and improvement additives. Available in 2 colours:

- NHP 250-1WR – grey
- NHP 250-2 WR– white

It is appropriate for both interior and exterior applications and replaces the two coats of the traditional plastering method (rough cast-final). Ensures perfect adhesion on substrates and at the same time levelling and smoothing by a single pass. Produced and tested according to the European Standard EN 998-1.

### **FIELDS OF APPLICATION**

NHP 250 WR is used as a one-coat plaster on a thin coat

Of THRAKON SHP 205 rough cast.

### **ADVANTAGES - FEATURES**

- Produced with quartz sand.
- Replaces the 3 plastering coats
- Projects are quicker to complete
- Increased profit for subcontracted crews and contractors
- Perfect grain size distribution
- Good pumping properties
- Allows the surfaces to “breathe”
- Water-repellent
- Strong adhesion on the substrate
- Excellent workability and thixotropic behaviour
- Sticks to building surfaces without drooping
- High resistance – fast application
- Perfect finish; smooth surfaces
- Replaces traditional plasters
- CE-certified – according to the European Standard EN 998-1

### **SUBSTRATE PREPARATION**

Make sure that the substrate is dry, solid, fixed, free from brittle materials, dust, colours, wax and grease. Cut off and remove any projecting parts of metal support down to 1 cm from the surface and cover them with primer. Slightly spray the substrate and apply a thin coat of SHP 205 rough cast. Leave the rough cast for at least 10 days so that it dries completely. Before applying the basic plaster slightly spray the surface again. It is important though not to allow any running or standing water in the area. Concrete surfaces must also be completely dry otherwise there may be problems as to the plaster's adhesion to the substrate. Absorbing or old surfaces are stabilized with the use of acrylic primer. GLX 290 before rough cast. Dilute in water at a ratio of 4 parts water: 1 part primer. The surface is ready for plastering after the primer has dried completely (approx.2-6 hours).

Place a fiber glass mesh (see. mesh specifications) and bridge the connections of the different structural materials such as:

- beams and posts with bricks or YTONG blocks
- headsills and lintels with bricks or YTONG blocks
- thermal insulation plates (extruded or expanded polystyrene, rock wool) with brick or YTONG blocks
- polystyrene foam with YTONG blocks and concrete
- electrical and hydraulic installations channels

Moreover, the use of glass fibre mesh is imposed in cases where:

- you want to plaster on thermal insulation plates or
- you have YTONG wall seizures with polyurethane foam

If you want to apply plaster on plastic or metal surfaces or on top of projecting elements (cables, gutters, etc.) you must use a metal mesh (e.g. rib lath). At the corners of openings (doors, windows, etc) place a strip of glass fibre grid vertically towards the opening diagonal. Also, place a glass fibre mesh strip along the lintel and one along the window apron.

The mesh should be embedded in the outer third of the thickness of the plaster. In practice, this is achieved if you first apply a coat of NHP 250 WR, and you then embed the mesh making sure that it remains stretched without folds. Finally, apply with one extra coat of plaster.

More specifically, for plastering on heat-distributing plates, you shall get the best result if, before applying the plaster, you apply a mesh on all surfaces using the THRAKON THC 405 or 409 adhesive, in such a way as to bridge all connections both between the plates themselves and between the plates and the walls.

Before plastering on thermal insulation surfaces (EPS, XPS) we suggest that you use a coat of THRAKON THC 405 adhesive with grid that will cover all plate surfaces and also bridge their joints and connections with the masonry. Plastering must follow after the adhesive has dried completely.

## CORNER BEADS-SHADOW JOINT BEADS

The use of stainless or galvanized corner beads, guides, shadow joint beads or grids to avoid corrosion. Alternatively, you may use corner beads or shadow beds made of PVC. Installation must be performed one day before

plastering (depending on the size of the structure). For support, we suggest that you use the same material that is to be used for plastering. Corner beads are aligned so that they ensure vertical and horizontal edges on walls.

## PREPARATION METHODS

### Preparation and application of mortar with continuous mixer

This is the suggested method of production and application of plaster, since it ensures correct proportion of water as well as the necessary mixing time. Make sure before you start that you have the necessary water and power supply and then connect the machine. Take care so that the pressure of the water supply is not less than 2 bar. Fill the machine bucket with the material. Operate the machine without hose first and adjust the water supply in the required level so that the fresh mortar produced (plaster) may be easily applied, without running down or dropping from the wall. Then connect the hose and start working.

### Manual preparation of mortar in a container

In a clean container add:

- 9.2-9.6 lt clean water for FHP 250 -1 WR
- 8.8-9.2 lt clean water for FHP 250 -2 WR

and gradually empty the content of a 40 Kg product bag mixing continuously with an electric mixer, in order to acquire a uniform mortar mass.

Let the resulting mixture age for 5 minutes and mix again. The mixture is ready to be used within the next 5 hours. Following the preparation of the mixture do not add more water in order to correct the workability of the mortar. This would lead to the reduction of its tolerances and the increase of its shrinkage.

### Preparation of mortar with traditional piston machine

NHP 250 WR can also be used with traditional (piston) machines, if you have the relevant experience and after you consider some significant parameters such as proportion and mixing time. An extended mixing time will lead to dropping and flake off of the plaster. After the preparation of the mixture do not add more water in order to correct the workability of the mortar. This would lead to the reduction of its strengths and the increase of its shrinkage.

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**CS IV-W1-**  
**A1**

**ACCORDING TO**  
**EN 998-1**

## APPLICATION

Application is done on appropriately prepared surface. Lay an even coat of plaster up to 2cm. Immediately and while the plaster is still fresh, smooth the surface using a float, passing over the metal guides and the corner beads. After smoothing the plaster, remove the guides and fill in the gaps with plaster. Homogenise the material with which you filled in the gap, with the rest of the plaster so that the entire masonry will dry evenly and no cracks will appear. For plastering coats over 2cm you need to use two coats. Therefore, The second coat is applied on top of the first after

the latter has dried so that it want drop (fresh on fresh).As soon as the plaster begins to dry you must rub it with a hard float and apply the final coat on wall edges etc. If you wish to get a fine finish (smoother surface) let the plaster dry a little more before smoothing with a soft float - sponge. You must avoid smoothing the plaster by pressing it while the plaster is still fresh, because plaster condensates and the possibility of flaking-off increases. The time needed for a plaster to dry may be affected by the prevailing weather conditions and the state of the building structure.

## AFTER PLASTERING

After plastering and particularly during summer months and also on walls exposed to extreme sun, you must protect the wall from fast evaporation to avoid cracks. For this reason, we suggest that you slightly rinse the wall for the first two days after plastering and cover it with protective sheets (e.g. sackcloth), that

(will also help in better development of the plaster's strengths. Plastered surfaces, while still fresh, must be protected from rain and frost.

## FINAL SURFACE

Indoor surfaces on which the NHP 250 WR plaster has been applied may also be:

- a) finished with trowelling DEC 470 or DEC 480
- b) finished with trowelling DEC 470 or DEC 480 and then painted
- c) left as such

Outdoor surfaces, as above:

- a) painted straightaway
- b) finished with trowelling DEC 480 and painted

## CONSUMPTION

Approximately 14 Kg / m<sup>2</sup> for 1 cm thickness.

## MODIFICATION

If while preparing the mixture you add 40-80g of GLX 296 emulsion per kg and the necessary quantity of water, you will enhance the product which will gain:

- greater elasticity
- impermeability
- stronger adhesion to the substrate

- the ability of application it on thinner or thicker coats as well as on demanding substrates such as:
- polystyrene
- bear concrete and
- masonry areas that need repair.



## PACKAGING - STORAGE

The product is packaged in valve-sacks of 40Kg and big-bags for THRAKON silo. Stored on wooden pallets in dry

environment at temperatures above 0°C for 12 months after production.

## TOOL AND MACHINERY CLEANING

Rinse with water immediately after use.

## APPLICATION IS NOT RECOMMENDED

- In case of frost forecast for the next 24 hours from plaster application.
- In case of masonries directly exposed to intense solar radiation or hot substrates.
- In wet conditions (such as rain).

## PRECAUTIONS

NHP 250 WR contains cement and reacts with water, creating an alkaline solution. For this reason protect your eyes and skin. In case of contact wash with plenty of water. In case of contact with the eyes seek immediately medical advice. Read the

Information contained on the label and the Technical Sheet of the product before use. Use adequate protective clothing and gloves. The Safety Sheet of the product is availed to professionals upon request.

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## CS II- W0 - A1 TYPE OF EUROPEAN STANDARD EN 998 -1

TECHNICAL CHARACTERISTICS		UNITS	STANDARD	VALUE
Form				dry powder
Color				grey
Application thickness		(mm)		5-20
Application temperature		(0C)		+5 to +35
Temperature resistance		(0C)		-30 to +90
Reaction to fire		(% organic)		≤ 1,0
Maximum grain size		(mm)		1,25
Workable lifr		(h)	EN 1015-9	5
Dry bulk density		(Kg/l)		1,50-1,70
Bulk density of fresh mortar		(Kg/l)	EN 1015-6	1,55-1,75
Dry bulk density of hardened mortar		(Kg/l)	EN 1015-10	1,40-1,55
Setting time		(h)	EN 196-3	4,0-10,0
Smoothing time		(h)		2-2,5
Strengths development time		(days)		28
Compressive strength		(N/mm2)	EN 1015-11	1,5-2,0
Flexural strength		(N/mm2)	EN 1015-11	1,5-2,0
Adhesive strength	NHP 250-1 WR		EN 1015-12	≥0,25
	NHP 250-2 WR			≥0,30
Air content		(%)	EN 1015-7	>10
Water vapour permeability coefficient		(μ)	EN 1745	5/20
Water absorption coefficient		(kg/mB*min0,5)	EN 1015-18	≤0,40
PH of fresh mortar				>10
Consumption per 1cm coat		(Kg/m2)		14
Water demand	NHP 250-1 WR	(ml water/ 100g of dry mortar)		23-24
	NHP 250-2 WR			22-23

**Note:** The measurements were taken in laboratory environment under a temperature of +23°C, Relative humidity 50 % and without ventilation. It is possible for them to vary depending on the conditions prevailing at the worksite, such as temperature, humidity, ventilation, absorability of the substrate.

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