

FHP 221WR

WATER-REPELLENT FINAL COAT PLASTER WITH QUARTZ SAND

CS II-W2-A1

**ACCORDING TO
EN 998-1**

DESCRIPTION

FHP 221 WR is a ready-to-use, water-repellent, white cement-based top coat plaster. It contains cement, lime hydrate, limestone fillers (marble) and improvement additives. It is produced in two types: FHP 221-2 WR with 0.5mm max. grain and FHP 221-3 WR with 1.4 mm max. grain. FHP 221 WR has very strong adhesion on previous

plaster coats and gives a perfect finish. A surface that has been plastered with FHP 221 WR may breathe, won't retain any rain water and will not develop mildew and grain stains. In addition, they prevent swelling caused from careless extinguishing of lime used in traditional coatings. Produced and inspected as per the European standard EN 998-1.

FIELDS OF APPLICATION

It is appropriate for both interior and exterior applications

FHP 221 WR is used as a final coat plaster in the 3-coat plastering system by THRAKON. It is applied on GHP 210 basic render. Appropriate for use indoors and outdoors .

The application thickness per coat is:

- 3-5 mm for FHP 225-2 WR and
- 5-7 mm for FHP 225-3 WR

ADVANTAGES - FEATURES

- Produced with ultra-white limestone aggregates
- Water-repellent
- Perfect grains distribution
- Allows the surfaces to "breathe"
- Strong adhesion on the substrate
- Excellent workability
- 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. Before plastering it is important to prepare the substrate right, to smooth and align the walls and edges, corners, jambs and beams so that a good finish may be achieved without waste of material. For the above-mentioned preparation of the substrate we suggest that you use THRAKON SHP 205 (rough cast) and GHP 210 (basic render). Leave the basic render for at least 3 weeks so that it dries completely. Then rinse the basic render slightly and apply a thin coat of FHP 221 WR. It is important though not to allow any running or standing water in the area. Absorbing as well as 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).

In case you want to use FHP221 WR on polystyrene surfaces (such as ceilings) the substrate preparation requires:

- First, you must apply the product straight on polystyrene using the adhesive-grid-adhesive system with THRAKON THC 405 or 409.
- Then you must apply FHP 221 WR with the suggested thickness (see. FIELDS OF APPLICATION)
- In case the polystyrene surface has to be aligned (posts and beams) this will be performed as follows:
- First, you must apply the product on polystyrene using the adhesive-grid-adhesive system with THRAKON THC 405 or 409 (see. the product's specifications sheet)
- Then apply the SHP 205 rough cast followed by the GHP 210 basic render (see product specifications).
- Finally, work on the surface finish using the FHP 221 WR plaster in the suggested coat (see. FIELDS OF APPLICATION).

PREPARATION METHODS

Preparation and application of the material 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 that you have the necessary water and power supply and 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. Start the machine without hose and adjust the water supply in the required level so that the material produced (plaster) may be easily applied, without running down or drooping. Then connect the hose and start working.

Hand-preparation of material in a container

In a clean container add:

- 8.0-8.8 lt clean water for FHP 221 -2 WR
 - 8.6-9.2 lt clean water for FHP 221 -3 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 the material with traditional piston machine

FHP 221 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. 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.

APPLICATION

Application is done on appropriately prepared surface. Immediately and while the plaster is still fresh, smooth the surface using a metal edge. 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 rubbing

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 obstruct fast evaporation to avoid cracks. For this reason, we suggest that you slightly rinse the wall every two days after plastering and cover it with protective sheets (e.g.

sackcloth), that will also help in better development of the plaster's resistance. Plastered surfaces, while still fresh, must be protected from rain and frost, for cracks prevention.

The technical information and instructions contained in the present brochure and referring to the application and end use of Thrakon products are based on the up to now know-how and experience of the Company with regards to the products and are provided in good faith as long as such products are stored, used and applied as per Thrakon recommendations. Due to the inability, on our part, to directly inspect the conditions prevailing at the worksite as well as the application procedures of the product, the Company does not provide any guarantee with regards to the adequacy of its products for specific purpose while the Company shall not bear any legal responsibility based on the information stated in the present brochure or any other written, oral, or otherwise provided recommendations and instructions. The users of the products are advised to perform a limited surface testing of the products adequacy for the eventual application and use intentions. Thrakon reserves the right to modify the features of its products without prior notification. All orders shall be approved only following

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FINAL SURFACE

Indoor surfaces on which the FHP 221WR 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

FHP 221-2 WR: 3-4 kg / m² for 3 mm plaster thickness.
FHP 221-3 WR: 5-6 kg / m² for 5 mm plaster thickness.

MODIFICATION

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

- greater elasticity
- impermeability
- Stronger adhesion on the substrate

- the possibility of applying it on thinner or
- thicker coats than suggested as well as straight on demanding substrates such as:
- polystyrene
- bear concrete and
- masonry areas that need repair.

PACKAGING - STORAGE

The product is available in 25, 40 Kg valve-sacks 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.

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APPLICATION IS NOT RECOMMENDED

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

PRECAUTIONS

FHP 221WR 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.



TYPE CS II – W2 - A1 OF EUROPEAN STANDARD EN 998 -1

TECHNICAL CHARACTERISTICS		UNITS	STANDARD	VALUE
Appearance				dry powder
Color				white
Application thickness		(mm)		3-5/5-7
Application temperature		(0C)		+5 to +35
Temperature resistance		(0C)		-30 to +90
Reaction to fire		(% organic)		≤ 1,0
Maximum grain size	FHP 221-2 WR	(mm)		0,5
	FHP 225-3 WR			1,4
Workable life		(h)	EN 1015-9	5
Dry bulk density	FHP 221-2 WR	(Kg/l)		1,55-1,65
	FHP 221-3 WR			1,40-1,50
Bulk density of fresh mortar	FHP 221-2 WR	(Kg/l)	EN 1015-6	1,50-1,60
	FHP 221-3 WR			1,55-1,65
Dry bulk density of hardened mortar	FHP 221-2 WR	(Kg/l)	EN 1015-10	1,25-1,35
	FHP 221-3 WR			1,15-1,25
Smoothing time		(h)		2-2,5
Strength development time		(days)		28
Compressive strength		(N/mm ²)	EN 1015-11	1,5-5,0
Flexural strength		(N/mm ²)	EN 1015-11	1,5-2,0
Adhesion strength	FHP 221-2 WR		EN 1015-12	≥0,26
	FHP 221-3 WR			≥0,28
Consistence of fresh mortar		(cm)		14,5-16,5
Air content		(%)	EN 1015-7	>10
	FHP 221-3 WR			>15
Water retention		(%)	EN 1015-8	>85
Water vapour permeability coefficient		(μ)	EN 1745	5/20
Water absorption coefficient		(kg/m ² *min ^{0,5})	EN 1015-18	≤0,20
Consumption per layer	FHP 221-2 WR	(Kg/m ² per 3mm)		3-4
	FHP 221-3 WR	(Kg/m ² per 5mm)		5-6
Water demand	FHP 221-2 WR	(ml water/100g of dry mortar)		20-22
	FHP 221-3 WR			21,5-23
PH of fresh mortar				>10

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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