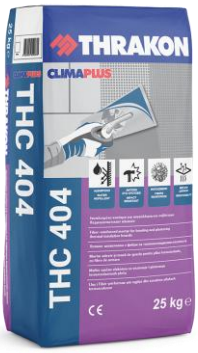
CLIMAPLUS

PRO THC 404

Fiber-reinforced adhesive for thermal insulation boards

PRO THC 404 is a one-component, fiber reinforced, cement-based mortar modified with polymer additives. It is a specialized product recommended for bonding thermal insulating plates from extruded or expanded polystyrene (EPS, XPS) and rock wool on any type of building surfaces. It consists of cement, quartz sand, limestone fillers and special additives. PRO THC 404 presents a very strong attachment on all the usual substrates, high elasticity, resistance to frost and humidity. It is suitable to use both indoors and outdoors. PRO THC 404 adhesive is a CS IV category mortar that complies with EN 998-1 European standard. PRO THC 404 has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts.



Advantages:

- Attachment and plastering of thermal insulating plates with a single product
- Local reinforcement of surfaces that develop cracking tensions.
- Strong resistance to elastic deformation.
- Strong adhesion.
- Strong resistance – rapid application.
- Resistance to humidity and frost.
- Excellent workability.

EN 998-1

CE

LOW VOC

ISO 14001

ISO 9001

EPD

INTERNATIONAL EPD SYSTEM

TECHNICAL CHARACTERISTICS

Packaging:

Valve paper bags
• 25kg

Application:

Adhesive and basic layer for thermal insulating plates for ETICS systems. On substrates of concrete, lightweight concrete, bricks, cement blocks, aerated concrete, mortars etc.

Shades:

Available in white and grey.

Storage:

Store in sealed bags in a dry environment at temperatures above 0° C for 12 months from the production date.

Consumption:

The consumption of THC 404 is approximately 3.5-4.0 kg/m² for application as an adhesive and 3.5-4.0 kg/m² for application as a coat. It depends on the type of thermal insulating plates, the tools and the method of application.

Tools cleaning:

With water immediately after the application.

FIELDS OF APPLICATION

PRO THC 404 is used as an adhesive as well as a basic layer for thermal insulating plates for the outdoor thermal façade system (ETICS) of THRAKON.
For strong bonding of:
- Extruded polystyrene (XPS)
- Expanded polystyrene (EPS)
- Hard glass wool
- Cork

On substrates of:
- Concrete
- Lightweight concrete
- Bricks
- Cement blocks
- Aerated concrete (YTONG)
- Self-levelling floors
- Mortars
- Level masonry with filled joints

PRO THC 404 adhesive can be used in combination with glass fiber mesh in order to cover the joints of different types of masonry and the conduits made by electricians and plumbers, to reinforce the edges of the openings (in doors and windows) in order to avoid future cracking.

SUBSTRATE PREPARATION

The application substrate must be even, free from frail and foreign parts, like residues of mud, plaster, color, oils and free from large crevices. Additionally, the substrate must be stable and free from shrinkage and deformation tensions. It also must not accept any vibrations. Place the plates' guides and supports wherever it is necessary.

APPLICATION TEMPERATURE

During the application and also during the following 24 hours the ambient and the substrate temperature must be between +5° C and +35° C. the adhesive can be cleaned with water while it is still moist. After it hardens, it is removed mechanically. Application is not recommended when there is a frost forecast for the following 24 hours, under wet conditions (rain) or on masonries directly exposed to intense solar radiation or warm substrates. After the mortar dries completely, we apply the final decorative plaster using one of the decorative coats of THRAKON.

APPLICATION

In a clean container we add 6.0-6.1 litres of clean water and we gradually empty the content of a 25 kg of the PRO THC 404 product while mixing continuously with an electrical agitator, in order to produce a homogenous mortar mass. Allow the produced mixture to mature for 5 minutes and briefly reagitate. The mixture is ready to use within the next 4 hours. After the preparation of the mixture, do not add additional water to correct the workability of the mortar. This shall lead to a decrease of its resistances and to an increase of its shrinkage.

Application as adhesive

Application on level surfaces
PRO THC 404 is spread on the thermal insulating plate using the even side of the spatula and the adhesive layer is then combed evenly with its toothed side.
Application on uneven surfaces
PRO THC 404 is spread with a towel around the perimeter of the thermal insulating plate and on the center point. We press the thermal insulating plate firmly on the wall in order to ensure the uniform contact of the adhesive. The final surface must be completely levelled.
The open time is 15 minutes after the adhesive is applied. Any surplus adhesive must be removed from the joints. If the adhesive dries before the thermal insulating plate is applied, remove it and apply a fresh layer.

Application as coating

After the adhesive has dried, we add the mechanical supports (plastic or metallic plugs) wherever it is necessary. We putty the plug holes, the plates' joints and we install the corner beads and parts of the mesh in order to reinforce the edges of the openings. Then, we spread a uniform 2-4 mm thick layer of the PRO THC 404 mortar on the thermal insulating plates using the "American Style Spatula" and we immediately install the glass fiber mesh, in a way that it covers the plates connections and overlaps the previous mesh by 10-15 cm. We press it using the spatula in order to integrate it in the adhesive layer and using the spatula, we add another thin layer of mortar 0.5-4 mm, in a way that it completely covers the mesh and provides an even surface.

PRECAUTIONS

The PRO THC 404 product contains cement and reacts with water to produce an alkaline solution. For this reason, protect your eyes and skin. In case of contact rinse with plenty of water. In case of contact with eyes seek medical advice immediately. Read the information on the label and in the product's Technical Brochure before use. Wear appropriate protective clothing and gloves. The product's Safety Sheet is available to professionals upon request.

Technical characteristics		Units	Standard	Value
Appearance				Dry powder
Color				Grey/White
Application thickness		mm		10
Temperature resistance		^{o}C		-30 to +90
Density of fresh mortar		kg/L	EN	1.6 ± 0.1
Maximum grain size		mm	EN 1015-1	0.8
Maturing time		min		5
Workable time		h	EN 1015-9	1.5
Correction time		min	EN 1015-9	>15
Open time		min	EN 1015-9	15
Compressive strength		N/mm^2	EN 1015-11	>14
Flexural strength		N/mm^2	EN 1015-12	>1,5
Resistance to the detachment of the adhesive from the EPS plate		N/mm^2	EN 13494	>0.08
Resistance to the detachment of the adhesive from the substrate		N/mm^2	EN 13494	>0.25
Resistance to impact		2 J	EN 13497	I2
		10 J		I10
Resistance to perforation		>200 N	EN13498	PE200
		>500 N		PE500
Ready to use		h		15-20
Behavior in frost-heat cycles				Optimum
Ready to use	as adhesive	h		15-20
	as base coat	days		5-7
Consumption		kg/m^2		3.0-4.0

*Note: The measurements were taken in laboratory environment under a temperature of +23^{0}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, absorbability of the substrate.

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 acceptance of the above and under the eventual Commercial Policy terms of the Company. The issuance of the present brochure voids any prior version.

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