NEOTEX®

ESTABLISHED IN 1959 CONSTRUCTION CHEMICALS

N-Thermon®

CE

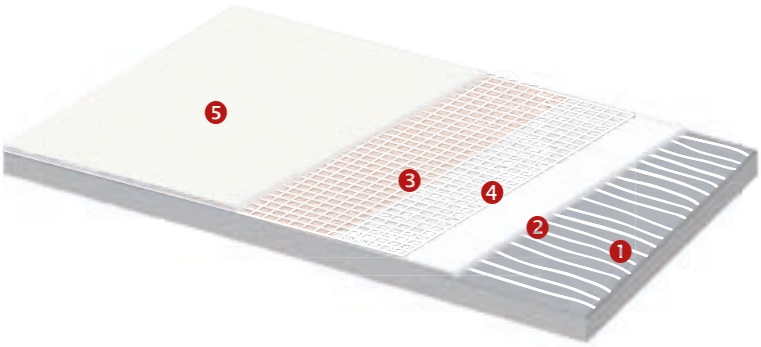
Thin, innovative insulation system

Certified by:

UNIVERSITY
OF ATHENS

N-Thermon® System

Innovative thermal insulation system, space saving, ideal for interior surfaces, such as cold and moist walls, ceilings, basements, closets, as well as behind radiators and furniture. Also suitable for exterior thermal insulation installations.



The system consists of the following layers:

1. **N-Thermon® Glue:** Specially developed mold repellent (consumption: 0,4-0,5 Kg/m^2)
2. **N-Thermon®**: Extruded polystyrene boards of 6mm and 9mm thickness
3. **N-Thermon® Primer:** Strong adhesive primer with quartz-sand (consumption: 0,33 Kg/m^2)
4. **N-Thermon® Mesh 90gr:** White alkali-resistant fiberglass-mesh
5. **Deplast®:** Off-white, elastic, polymer reinforced plaster (consumption: 3 Kg/m^2).

PROPERTIES – ADVANTAGES

- Minimizes the thermal losses and the expenses for heating and cooling
- Total energy saving up to 28,3%
- Combined with the cool roof coatings **Silatex® Reflect** & **Neoroof®** the energy saving may rise up to 37,4%
- Provides quicker heating of rooms
- Due to its thickness, it contributes to the saving of valuable space, which is essential, especially in refurbishment projects of existing constructions
- Ideal system for repairs and renovations in existing buildings, such as detached houses, apartments, cottages, neo-classic buildings, hotels, public buildings, etc.
- Blocks the formation of moisture and the growth of fungi
- Easy and quick installation without loss of space, demolitions or bureaucratic procedures
- Fire resistance for N-Thermon® System with Class B,s1,do
- High impact resistance, due to the specially developed resinous fire-resistant plaster **Deplast®**
- Certified according to CE (EN 998-1).
- Ecological, reduces the emissions of CO_2
- With zero gas emissions (no VOCs)
- Prevents the formation of shadings in thermal bridges
- Resistance to chemical compounds that exist in construction materials (cement, lime, gypsum, etc.) as well as to alkalis and salts
- Exhibits low water absorption (only 0,1% vol.), due to its density and its closed-cell structure. Thus, it maintains its insulation properties for an extensive period of time.
- The boards do not rot or decompose

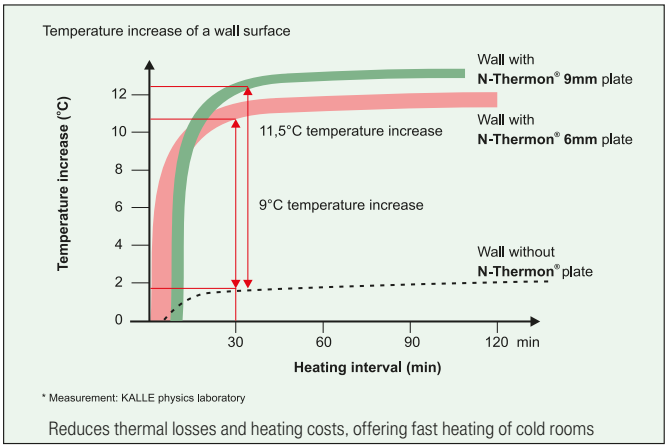
For more information, please refer to the charts in pages 3 & 4

TECHNICAL CHARACTERISTICS	N-Thermon®	
	6mm	9mm
Foam Density (s) (EN ISO 845)	33 kg/m^3	35 kg/m^3
Thermal Conductivity Value (λ) (DIN 52612)	0,0306 W/mK	0,0307 W/mK
Thermal Resistance Value (R or 1/Λ)	0,1961 m^{2}k/W	0,293 m^{2}k/W
Heat Penetration Value (b)	2,4 KJ/ m^{2}h$^{1/2}$K	2,4 KJ/ m^{2}h$^{1/2}$K
Water Absorption (DIN 53434)	<0,1% vol.	<0,1% vol.
Water vapour permeability resistance factor (μ) (DIN 52615)	450	300
Water vapour diffusions - equivalents of air-layer thickness (s_d = μ*s/1000) (DIN 52615)	2,7 m	2,7 m
Impact noise improvement measure (in combination with parquet) Δ/W (DIN 52210)	+16dB	
Energy saving *	17,7%	28,3%
Board dimensions	1,25x0,80 m	

* According to tests conducted by a German Laboratory, the energy savings of **N-Thermon® 6mm & 9mm** are 30% & 38%, respectively

Annual consumption of primary energy, as well as its % reduction after the application of N-Thermon® 6mm and 9mm (according to a study by the University of Athens)

	A' Climate Zone		B' Climate Zone		C' Climate Zone		D' Climate Zone	
	Primary Energy KWh/m²	% change in primary energy	Primary Energy KWh/m²	% change in primary energy	Primary Energy KWh/m²	% change in primary energy	Primary Energy KWh/m²	% change in primary energy
Reference building	213,6		340,4		362,5		572,3	
N-Thermon® 6mm	181,2	-15,2%	292,1	-14,2%	298,2	-17,7%	491,0	-14,2%
N-Thermon® 9mm	160,2	-25,0%	262,9	-22,8%	260,0	-28,3%	447,4	-21,8%



Reduces thermal losses and heating costs, offering fast heating of cold rooms

INSTALLATION INSTRUCTIONS

Application of N-Thermon® Glue
After cleaning any possible black spots on the wall, caused by mold and repairing its probable unevenness, **N-Thermon® Glue** is spread equally over the surface with a roller, a brush or a notched trowel. Waiting time 5 minutes

Installation of N-Thermon® Board
The board is installed on the fresh glue by pressing it against the wall with a cylinder or even with the hands. The air comes out while pressing the sides of the board. It is important to start from the middle of the board and work towards the edges, to avoid air entrapment. The boards must be cut according to the height of the wall so that they can fit precisely.

Successive bondings
The boards are adjusted on the wall with two ways: the one next to the other without leaving any space between them by joining their sides, or the one overlapping the other by cutting their sides and removing the cut strips.

Ideal bonding
The cylinder must be pressed to the cut sides. The joints are smoothed with fine sandpaper or if it is necessary they are covered by using again **N-Thermon® Glue**.

Drying time
The glue obtains its final properties 24 hours after the application. Before any additional applications, it is considered necessary to check the bonding of the **N-Thermon®** board on the substrate.

Priming the surface of the **N-Thermon®** board with **N-Thermon® Primer** will create a surface of high adhesion.

After 24 hours
Application of the 1st layer of the resinous plaster Deplast

Impregnation of the fiberglass mesh **N-Thermon® Mesh 90gr** in the first layer of the fresh plaster (to act as reinforcement).

After 12 hours
Application of the 2nd layer of the resinous plaster **Deplast®**

After 2 hours
Smooth over the surface (using a flat-bladed trowel)

After 24 hours
The surface is ready to be painted with **Neotherm® AC**.

ALTERNATIVE MATERIALS

Gavatex®

Woven fiberglass fabric with a special network structure. It covers the imperfections of the substrate and it can be painted. As an alternative to **Deplast®**, it offers fire-resistance, decoration and impact resistance to **N-Thermon®**.

ENERGY SAVING WITH N-Thermon®					
	CLIMATE ZONE A	CLIMATE ZONE B	CLIMATE ZONE c	CLIMATE ZONE D	
	32,4 KWh	48,3 KWh	64,3 KWh	81,3 KWh	Annual Primary Energy Saving
	272,10 €	**415,50 €**	**579,80 €**	**775,80 €**	Annual Money Saving (N-thermon® 6mm)
	53,4 KWh	77,5 KWh	102,5 KWh	124,9 KWh	Annual Primary Energy Saving
	438,40 €	**653,80 €**	**915,70 €**	**1.186,20 €**	Annual Money Saving (N-thermon® 9mm)

1. The above energy saving results are the conclusion of a study conducted by the University of Athens (School of Physics, Division of Applied Physics), which set various parameters concerning the total area of a building, weather conditions, ventilation, thermal comfort, method of cooling-heating, shading, construction elements of the model building
2. The annual money saving due to the use of **N-Thermon® System** has been calculated taking into account the cost of the heating oil and the electric energy in Greece at the time of printing this manual.
   The saving in time and money which comes out of the reduced use of the conventional heating-cooling systems has not been taken into consideration. This may lead to lower maintenance costs and reduces the need for their constant use.
3. Installing only the **N-Thermon®** boards is a sufficient solution for non-exposed areas of a building such as on ceilings, behind closets, libraries, radiators. In the rest of the areas the appropriate solution is the installation of the full **N-Thermon® system**.

Your confidence...
is not a coincidence!

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