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THESSALONIKI: Ionias Str., GR 57009 Kalochori, Thessaloniki, Greece, Tel.: +30 2310 467275, Fax: +30 2310 463442

## N-Thermon®

### Thin, innovative insulation system

#### Uses

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. Suitable also for exterior thermal insulation installations.

#### Properties/ Advantages

- Minimizes the thermal losses and the expenses for heating and cooling
- Combined with the cool roof coatings **Silatex® Reflect** & **Neorooft®** the energy saving may rise up to 37,4%
- **N-Thermon®** boards are certified according to CE
- 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 Bs1do EN 13501-1
- 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<sub>2</sub>
- 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

#### System Information

#### System Structure

The system consists of the following layers:

- **N-Thermon® Glue:** Specially developed mold repellent (consumption: 500-700gr/m<sup>2</sup>)
- **N-Thermon®:** Extruded polystyrene boards of 6mm and 9mm thickness

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## N-Thermon<sup>®</sup>

- **N-Thermon<sup>®</sup> Primer:** Strong adhesive primer with quartz sand (consumption: 330-400gr/m<sup>2</sup>)
- **N-Thermon<sup>®</sup> Mesh 90gr:** White alkali-resistant fiberglassmesh
- **Deplast<sup>®</sup>:** Off-white, elastic, polymer reinforced plaster (consumption: 1,5Kg/m<sup>2</sup>/mm ).

### Technical Characteristics Boards N Thermon

	6mm	9mm
Total energy saving (University of Athens, Dept of Environmental, Physics & meteorology, faculty of physics)	17,7%	28,3%
Foam Density (s) (EN ISO 845)	33kg/m <sup>3</sup>	35kg/m <sup>3</sup>
Thermal Conductivity Value ( $\lambda$ ) (DIN 52612)	0,0306 W/mK	0,0307 W/mK
Thermal Resistance Value (R or 1/ $\lambda$ )	0,1961 m <sup>2</sup> k/W	0,293 m <sup>2</sup> k/W
Heat Penetration Value (b)	2,4 KJ/m <sup>2</sup> h <sup>1/2</sup> K	2,4 KJ/m <sup>2</sup> h <sup>1/2</sup> K
Water Absorption (DIN 53434)	<0,1 % vol.	<0,1 % vol.
Water vapour permeability resistance factor ( $\mu$ ) (DIN 52615)	450	300
Water vapour diffusions – equivalents of air-layer thickness (sd = $\mu*s/1000$ ) (DIN 52615)	2,7 m	2,7 m
Impact noise improvement measure (in combination with parquet) $\Delta/W$ (DIN 52210)	+16dB	
Energy saving	17,7%	28,3%
Temperature range for applications	-60 / +70°C	-60 / +70°C
Melting temperature	> 160°C	> 160°C
Thermal decomposition	> 250°C	> 250°C
Ignition temperature	with flame influence 350-400°C without flame influence 450-500°C	with flame influence 350-400°C without flame influence 450-500°C
Board dimensions	1,25 x 0,80m	

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## N-Thermon<sup>®</sup>

### Application of N-Thermon<sup>®</sup> Glue

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

### Installation of N-Thermon<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup>** board on the substrate. Priming the surface of the N-Thermon<sup>®</sup> board with **N-Thermon<sup>®</sup> Primer** will create a surface of high adhesion.

### After 24 hours

Application of the 1st layer of the resinous plaster **Deplast<sup>®</sup>**. Impregnation of the fiberglass mesh **N-Thermon<sup>®</sup> 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<sup>®</sup>**.

### After 2 hours

Smooth over the surface (using a flat-bladed trowel).

### After 24 hours

The use of the innovative **Neotherm<sup>®</sup> AC** Anti-condensation paint with thermal insulating properties recommended.

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## N-Thermon<sup>®</sup>

Alternative Materials	Gavatex <sup>®</sup>
	Woven fiberglass fabric with a special network structure. It covers the imperfections of the substrate and it can be painted. As an alternative to <b>Deplast<sup>®</sup></b> , it offers fire-resistance, decoration and impact resistance to <b>N-Thermon<sup>®</sup></b> .



The information supplied in this datasheet, concerning the uses and the applications of the product, is based on the experience and knowledge of NEOTEX<sup>®</sup> SA. It is offered as a service to designers and contractors in order to help them find potential solutions. However, as a supplier, NEOTEX<sup>®</sup> SA does not control the actual use of the product and therefore cannot be held responsible for the results of its use. As a result of continual technical evolution, it is up to our clients to check with our technical department that this present data sheet has not been modified by a more recent edition.