NANOCOAT

THE NEW GENERATION OF **LIQUID INSULATING COATINGS** MADE WITH **NANOTECHNOLOGY**

THE THERMIE-S® PROFESSIONAL

Innovative Insulation for a Sustainable Future

THERMIE-S® sets a new benchmark in insulation, offering superior thermal performance compared to conventional materials. Its advanced design ensures versatility and provides an innovative solution for diverse applications.

Developed in Hungary, the THERMIE-S® product line is proudly brought to you by Nanocoat VL LLC, reflecting a dedication to conserving natural resources and promoting sustainable development.
Our mission is to optimize energy efficiency and foster healthier, more comfortable living environments. With THERMIE-S®, sustainability and excellence come together to redefine modern insulation.

ATTRIBUTES OF INSULATION COATING

THERMIE-S® PROFESSIONAL

HEAT REFLECTION

THERMIE-S® has the ability to reflect heat, preventing thermal energy from entering during summer, and stopping accumulated heat from escaping during winter, thereby maintaining a comfortable temperature inside the coated structure year-round.

WEATHER RESISTANCE

The new-generation coatings are highly resistant to the effects of weather, ensuring long-term durability and protection for the surfaces they cover.

HUMIDITY TRANSFER

The coating helps prevent the appearance of mold on humid surfaces, promoting a healthier and safer environment. It also keeps walls warmer and reduces temperature differences across the surfaces.

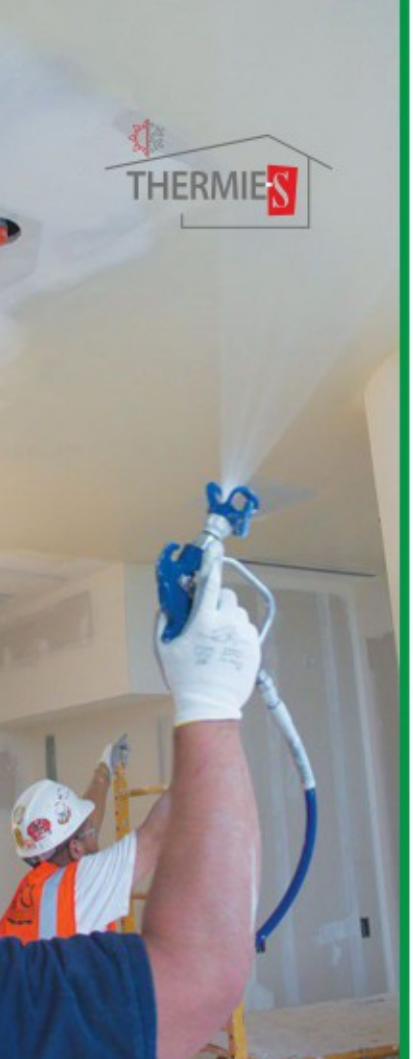
BENEFITS OF INSULATION WITH THERMIE-S® PROFESSIONAL

Using this product adds minimal structural load, making it suitable for a wide range of applications. It meets the A2-s1, d0 fire classification (Euroclass) with a 1 mm layer - an exceptional rating for such a thin coating.

Thanks to its higher ceramic sphere content by weight, the insulation properties of the THERMIE-S® product family surpass those of competing products. It is exceptionally durable, with a minimum lifespan of 10 years and an expected lifespan of up to 25 years.

The coating's flexibility allows humidity to pass through, withstands high temperatures, reflects and blocks UV radiation, and prevents metal surfaces from corroding.

Additionally, the insulation coating preserves the original appearance of the building. Adding color directly to the coating simplifies the process, saving both time and money.



SUITABLE INSULATION FOR AREAS WITH HIGH HUMIDITY AND SIGNIFICANT TEMPERATURE VARIATIONS

- Prevents mold formation on walls
- Does not alter the exterior appearance of buildings
- Can be applied using a brush, putty tool, or airless spray painter
- Lightweight, with a specific weight of approximately 0.5 kg/l
- Made in the EU, offering flexible and fast worldwide delivery
- Available in nearly any custom color specified by the user
- Easy and quick application process
- Also available in smaller, customized production runs tailored to specific use conditions
- Saves energy, reducing your expenses
- CE-certified in compliance with EU standards

FUNGUS AND MOLD RESISTANT PRODUCT

THERMIE-S® Professional coating insulation is a key factor in achieving energy savings and maintaining a comfortable climate in your rooms or buildings. However, an often-overlooked threat comes from musty, moldy walls and environments, which pose risks to our families and children.
Every day, millions of spores are released from mold growths and enter our bodies through the air we breathe. These spores are a leading cause of respiratory illnesses and asthma. Moldy walls significantly impact our health and well-being.

Mold resistance tests confirm that **THERMIE-S®** insulating coating is not susceptible to fungal attack and does not provide nutrients that fungi can utilize. As a result, the **THERMIE-S®** thermal insulation coating is classified as fungi-resistant.

In bacterial resistance tests, it was demonstrated that the **THERMIE-S®** insulation coating also lacks usable nutrients for bacteria. Consequently, the **THERMIE-S®** insulating coating is classified as resistant to bacteria.

RESISTANCE TO BACTERIA AND FUNGI WAS VERIFIED USING THE FOLLOWING TEST SAMPLES*:

- ASPERGILLUS NIGER
- PSEUDOMONAS AERUGINOSA
- PÉNICILLIUM FUNICULOSUM
- PAECILOMYCES VARIOTII
- GLIOCLADIUM VIRENS
- CHAETOMIUM GLOBOSUM

The EMI® (a non-profit organization for quality control and innovation in building) conducted bacterial and fungal resistance tests on THERMIE-S® products in accordance with the EN ISO 846:1999 standard.

FIRE-RESISTANT PRODUCT

THERMIE-S® PROFESSIONAL is classified in fire class „A2-S1, d0"

FIRE CLASSIFICATION NORMS OVERVIEW

THERMIE-S® PROFESSIONAL meets the **STN EN 13501-1 (Euroclass)** standard for fire classification of construction products. The system includes **39 classes** divided into **7 main levels** based on fire reaction: **A1, A2, B, C, D, E, F** (A1 being the highest). Materials classified as **F** are unclassified.

Additional classifications include smoke production **(s1, s2, s3)** and burning particle creation **(d0, d1, d2),** with **s1** and **d0** being the best. **THERMIE-S® PROFESSIONAL** is rated **A2-s1, d0,** offering high fire resistance, minimal smoke production, and no burning drops or particles.

Abilities of the **THERMIE-S® PROFESSIONAL**
interior and exterior insulation coating

THERMIE-S® insulation coating **SAVES MONEY**
and **ENERGY** both in summer and winter

The **THERMIE-S® PROFESSIONAL** insulation coating ensures exceptional comfort while delivering **30-40% ENERGY SAVINGS**

COMFORTABLE LIVING WITH MINIMAL ENERGY LOSS AND BALANCED TEMPERATURE, ALLOWING HUMIDITY TO PASS FREELY.

Before the application of insulation coating the temperature differences are between 17°C - 24°C

After the application of insulation coating the temperature differences are between 23°C - 24°C

TECHNICAL INFORMATION:

Appearance, Color:	white, viscous coating
Viscosity:	thick, viscous
Usability temperature:	from -60°C, to +140°C
Suspension density:	450-500 kg/m3
Hardened material density:	290-319 kg/m3 Base water
Colorability:	water-based colourants, up to a maximum of 0,5%
Dilution:	with water, up to a maximum of 8%
Fire protection class:	„A2-S1, d0"
pH:	pH 8,5-9,5
Thermal conductivity:	0,01265 W/m*K
Heat-reflection, white:	90% (+/-2%)
Adhesion plasters:	0,92 Mpa
Adhesion metals:	0,90 Mpa
Adhesion wood:	0,94 Mpa
Adhesion plastics:	0,92 Mpa
Water vapor:	0,2 Sd (Sd < 0,5 m permeability water vapor)
UVB stability:	UV stable
Life span:	15-25 years
Coverage:	1 liter/ 1 m2/ 1 mm
Drying time at 20 °C:	can be repainted after 1 hour, it takes 48 hours for a 1 mm layer to completely dry.

THERMIE-S® PROFESSIONAL Product Description

THERMIE-S® is a liquid thermal insulating coating that provides effective insulation in a thin layer (1-2 mm). This is achieved through its thermal conductivity properties, comparable to traditional insulation materials, combined with its ability to reflect radiant heat. The key component of its composition is hollow ceramic microspheres containing a vacuum. These microspheres are blended with various binders and additives, ensuring a sphere content of no less than 75%. The mixture is water-based and environmentally friendly.

THERMIE-S® PROFESSIONAL FRONT, FRONTPRESS – INDOOR/OUTDOOR SURFACES

The material composition and binders make this product ideal for both indoor and outdoor applications.
Recommended uses include the thermal insulation of interior wall surfaces, such as thermal bridges, concrete, gypsum, precast concrete panels, lime, cement or gypsum-based plasters, and apartment roofs. It is also suitable for wood and wood-based materials.
For exterior use, it is recommended for insulating thermal bridges, facades of historic buildings, and wall surfaces made of concrete, gypsum, lime, cement, or gypsum-based plasters, as well as wood and wood-based materials.
The product can be applied using a paintbrush, roller, trowel, airless sprayer or spray plastering machine.

THERMIE-S® PROFESSIONAL METAL, METALPRESS - METAL SURFACES

This product is designed for the thermal insulation of metal surfaces both indoors and outdoors.
Recommended applications include metal surfaces, heating and cooling systems, cold storage, refrigerated containers, tanks, pipes, fittings, flat roofs (bitumen, steel, or sheet surfaces), and industrial buildings.
It can be applied using a paintbrush, roller, trowel, airless sprayer or spray plastering machine.

Our colorful world with **THERMIE-S® PROFESSIONAL**

SOME REFERENCES FOR THE INDUSTRIAL USE OF **THERMIE-S®**

THERMAL WELL - BARCS

Coating of metal pipes and thermal wells
using **THERMIE-S®**

SOLTVADKERT

Eliminating ice condensation on liquefied
natural gas pipelines with **THERMIE-S®** coating

NANOCOAT

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WE CREATE A HEALTHY ENVIRONMENT!