

NewPro Termo Ceram

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NewPro Termo Ceram is the leading product in the field of surfaces technology; the new criteria to fight the heat transmit and transfer is not any more based on the insulating capacity of the specific materials.

The most advanced researches have proved and confirmed the validity of the reflection of the heat instead of insulation from the heat.

Buildings, Villas, Industrial Structures, Shelters, Containers, etc... can be now protected from the Solar Irradiation, so their indoor temperature will be kept in admissible level without the use of air conditioning system.

For those who are familiar with physical parameters and related numbers, it has to be noted that the approach – design that starts considering the lambda value of the material is not applicable in the case of **NewPro Termo Ceram**.

Materials that are normally used for thermal insulation and play a role in thermal conductivity of a wall, do not stop the thermal flux: those materials just slow it down, while NewProTermo Ceram NewProtexx (for exteriors) and NewPro-well (for interiors)

while **NewProTermo Ceram NewPro-texx (for exteriors) and NewPro-well (for interiors) blocks the** heat flux by reflection.



NewPro Termo Ceram is an high-tech coating consisting of microscopic hollow ceramic spheres (micro-bubbles) in water acrylic support (latex). The ceramic micro-bubbles contain partial vacuum (i.e. they contain nearly no air and no other gas (fig. 1) and their diameter ranges from 20 to 120 micron circa (from 2 to 12 hundredths of millimeter).





NewPro Termo Ceram has been used extensively in several conditions and typology of construction from North Europe to Middle East and becoming a problem solving in heat transfer topics (fig. 2 - 3).



Delta T = 35C - 24C (*) is equal to **11C**.

So the cooling system shall work starting from this value to keep the operational internal temperature of the shelter within the threshold limits (*) Delta T = 28C - 24C (*) is equal to **4C**.

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From the previous slides (page. 4), the following data are to be considered as a sound operation of the shelter in terms of heat protection and conditioning, compared with Energy Saving.

The use of **NewPro**Termo Ceram reduced the delta interior temperature to a value between **1C to 4C**, which ranges from 90.91% to 63.64% as reduction from the original 11C.

The Energy Saving, when the electricity is supplied by Generating Sets, can be seen in the following table.

BTU (one A/C unit)	Equivalent kWh	Fuel Consumption (200gr/hrs per kWh produced)	12 Months Fuel cost (USD) (without NP Termo Ceram)	12 Months Fuel cost (USD) (with NP Termo Ceram	5 Years Saving (USD)
5,000	1.4653556	3.17 Liter (12 hours)	1,141.00 liters = USD 570.60	399.42.00	1,997.10

The above calculations are based on one A/C unit in operation for 12 hours per day. Assuming the total of A/C units in operation equal to 500 Nos. so the total saving on 5 years basis is USD 9,985.50, which is the equivalent cost of a new brand 40kVA Generator.



The parameters related to the calculations and projections shown in the former slides, are based on the experience already conducted, which confirms the reliability of **NewPro Termo Ceram** in all those applications where the protection from the heating is vital for the proper balance in the operational costs.

NewPro Termo Ceram is can be used on different and various surfaces as concrete, wood, steel, aluminum, glass, plastic, GRP, etc.

For additional details please refer to the enclosed pamphlet or contact us at the followings:

Lutz-Henning Robitzsch e-mail: <u>news@newpro.de</u>

We will be pleased to assist for the enquiry you wish to place to our organization.





NewPro - Neue Produkte & innovative Ideen für Oberflächen

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