## NANOTECHNOLOGIC MICRO-COATING SYSTEM



#### THERMAL INSULATING TREATMENT REPORT



C-COAT ITALIA, AUGUST 2023

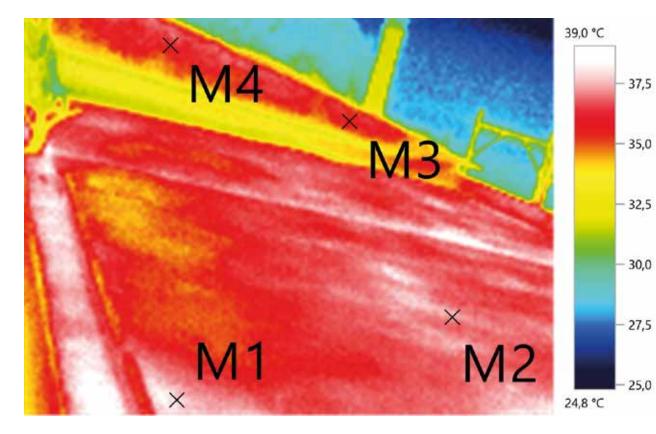
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### THERMAL INSULATING TREATMENT REPORT



The measurements in this report were conducted in the month of August and concern the trend of the external temperatures of the roof and walls of a residential structure facing the sea located in the marina of Sorso (SS) before during and after the application of the nanotechnological microcapping C-COAT Facade. The external temperature on the days of the measurements measured an average of 30 degrees. *The product was applied using the AIRLESS system following the instructions in the application manual.* 





Img O. Roof surface, thermal detection.

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The roof surface is a **rough concrete screed**. The surface temperatures are **between or 35 and 40 degrees** before the start of the intervention.

Structure diagram, point of interest

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COAT

Temp. [°C]

Ν.

M1

M2

**M**3

M4

Temperature ratings Img 0.

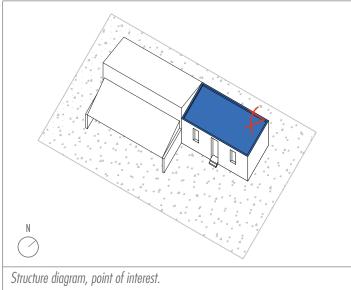
38,0

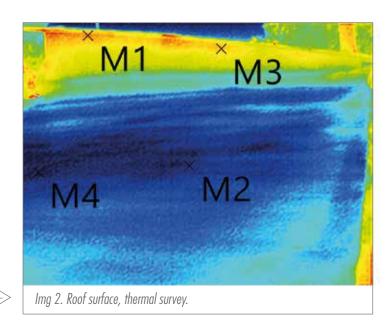
37,2

35,6

36,0

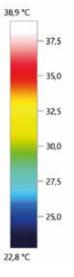






N.	Temp. [°C]
M1	33,6
M2	23,9
M3	32,8
M4	23,8

Temperature ratings Img 2.



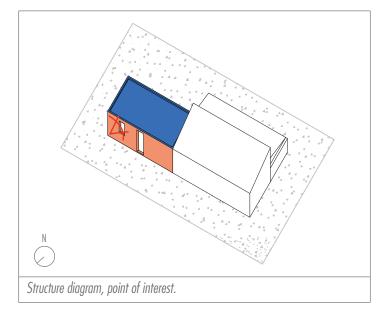
It is noteworthy that already after the application of a layer of only **0.5 mm**, the first visible results emerged. However, the performance does not yet show complete homogeneity.

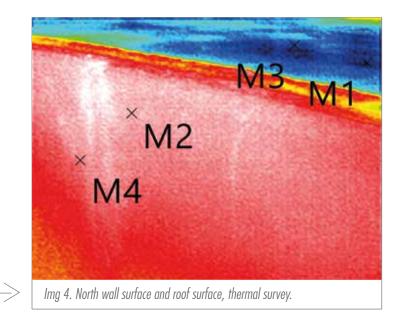


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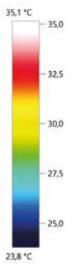
Img 3. North wall surface and roof surface, photographic survey.





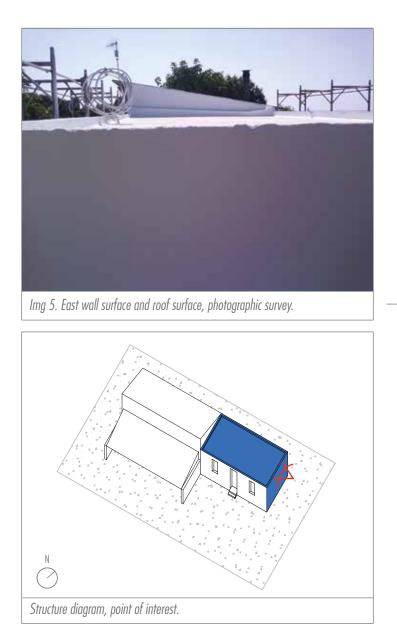
N.	Temp. [°C]
M1	24,4
M2	34,0
M3	24,8
M4	33,5

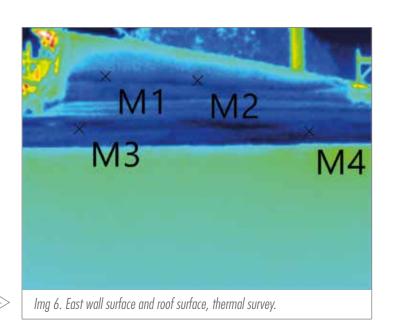
Temperature ratings Img 4.



In this survey, the difference in temperature **between two surfaces exposed to the same degree of solar irradiation** can be seen most clearly. M4 and M2 refer to the north wall, which has not yet been treated; M1 and M3 refer to the roof surface: **only treated with 0.5 mm for the time being**.

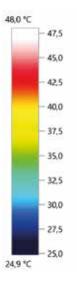






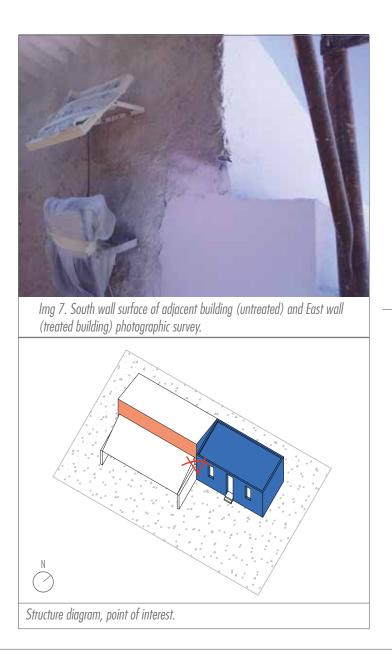
N.	Temp. [°C]	i
M1	28,1	1
M2	28,0	)
M3	28,0	)
M4	27,2	2

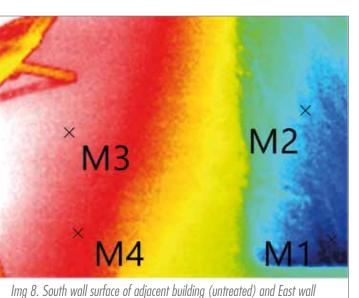
Temperature ratings Img 6.



Having reached **a thickness of 1.00 mm**, all treated surfaces reached homogeneity in a stable temperature of around 30 degrees the day after the application ended.



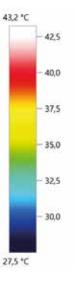




Img 8. South wall surface of adjacent building (untreated) and East wall (treated building) thermal survey.

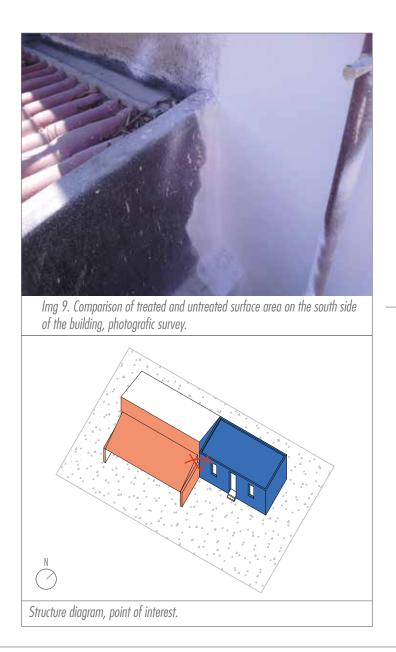
N.	Temp. [°C]
M1	29,0
M2	30,8
M3	41,0
M4	39,7

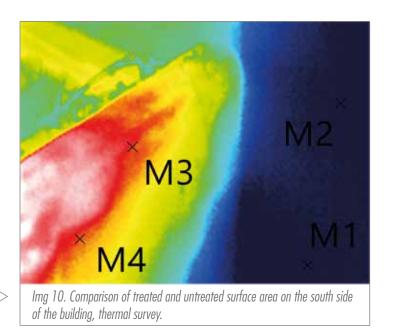
Temperature ratings Img 8.



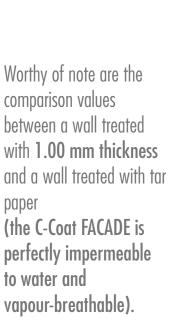
After application, we can clearly see the difference between an untreated surface and the surface treated with **1.00 mm of nanocoat**, both exposed to the same degree of solar radiation.







N.	Temp. [°C]
M1	33,3
M2	33,4
M3	47,2
M4	46,8
Temperature ratings	Img 8.



52,6 °C

52,5

50,0

47,5

45,0

42,5

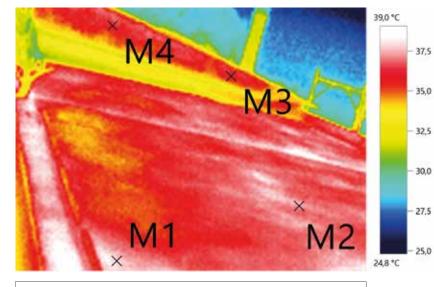
40,0

37.5

35,0

32,7 °C

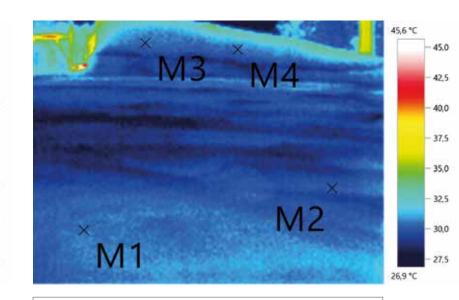




Img 11. Roof surface, thermal survey PRE-INTERVENTION

M1 M2	38,0
M2	0 7 0
	37,2
M3	35,6
M4	36,0

Temperature ratings Img 11.



Img 12. Roof surface, POST-INTERVENTION thermal survey.

Temperature ratings Img 12.

N.	Temp. [°C]	
M1		28,2
M2		28,5
M3		28,3
M4		28,5

At the end of the job, once the microcoat has dried completely, comparisons between PRE and POST intervention show a thermal **gap of about 10 degrees on the surface temperatures** of the roof.



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#### **CONCLUSIONS**

The thermo-insulating properties of C-Coat FACADE **will block up to 70% of heat loss**, allowing users to maintain a stable temperature in inhabited areas with a significant energy saving on heating and cooling air systems.

# The **1.00 mm** performance of C-Coat FACADE achieves a level of **thermal resistance R4**

[4.02 m<sup>2</sup>K/W according to ISO 6946] (value achievable with approximately **20cm of EPS**), with the

advantage that thanks to its water-repellent properties, C-Coat FACADE made the roof and the walls of the house perfectly waterproof while guaranteeing the breathability that will prevent the development of fungi and mould.



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Application and reporting by team

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C-COAT ITALIA, AUGUST 2023

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