



Carrefour Hypermarket Italy - Milano

Rising energy costs, pronounced urban heat-island effect and global warming increase the need for intelligent solar heat management solutions like Abolin Co, Cool Barrier[®] coatings technology.



About Cool Barrier Roof

Cool Roof is a roofing system able to reflect solar heat and keep roof surfaces cool under the sun. Abolin Co, Cool Barrier is a high solar reflective Cool Coatings Technology, which noticeably combines thermal comfort conditions with the reduction of energy and money consumption. This is due to the properties of the materials used which reflect solar radiation back into the atmosphere. As the roof stays cooler, this reduces the amount of heat transferred to the building below, keeping cooler and more constant temperature in the interior.

“COOL BARRIER ROOF IS A PROMINENT COATING ECHNOLOGY BRINGING A RANGE OF SUSTAINABILITY BENEFITS”

SSC Italia Carrefour after extensive evaluation process, comparing different energy efficient roofing solutions, announced Cool Barrier Roof as the most effective product for the needs of the project. The roofing area was approximately 17,000 Sqm, sheathed by a grey PVC

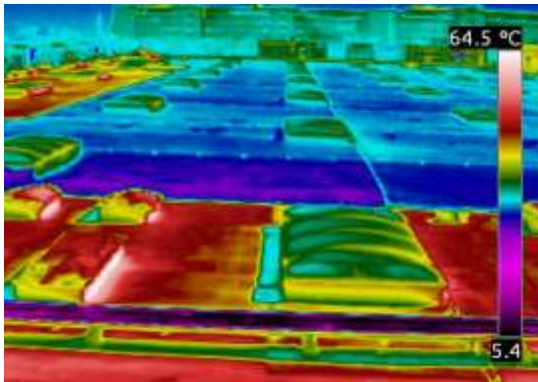
Application of Cool Barrier Roof



Thorough cleaned roofing area with the use of a special detergent



Application of Cool Barrier Reflective Coat using an airless spray



Visible and infrared images of the roof surface during the restoration works. Thermal depiction of the surface temperature prior and after the Cool Barrier Roof application: untreated areas are in red and the treated ones in blue,. On the right there is a temperature scale.

**The surface temperature
has been decreased up
to 50%!**



ENERGY CONSUMPTION DATA AND SAVINGS

Consumption (weekly average for the period July-August)

BEFORE COOL BARRIER ROOF

YEAR (July-August)	
2007	44.573 kWh
2008	46.783 kWh
2009	46.627 kWh
2010	45.259 kWh
Average 2007 -2010	45.810 kWh

WITH COOL BARRIER ROOF

YEAR (July-August)	
2011	33.500 kWh

“We are about 25% reductions in electricity consumption for air conditioning “

“Around 65.000€ savings per year”

“Payback period: 2.5 Years”

Energy Manager: Mr. Giovanni Piano



COOL BARRIER TECHNOLOGY BENEFITS

Creates Indoor thermal comfort conditions:
By degreasing the indoor temperature Up to 5-6 °C

Extend the lifespan of the building envelop:
By reflecting the UV and IR radiation

Contributes to atmospheric pollution reduction:
*100 m² of a surface with “cool-materials”, replacing a dark ones,
offsets the emission of 10 tonnes of CO₂*

Saves Energy – Saves Your Money:
By degreasing Cooling load Up to 40 %

Contributes to reduction of “Heat Island Effect” in Urban Level:
The surrounding air temperature lowers 1.5-2 °C.