VAST JOB RECORDS IN JAPAN AND ASIAN COUNTRIES

Miracool was coated on corrugated steel roof of a school gymnasium. Temperature of the coated roof surface records only 25.3 degree C whereas temperature of the uncoated roof surface was 53.2 degree C.

MIRACOOL SW200

SILICON ACRYLIC EMULSION PAINT

COLOR: COOL WHITE & PASTEL BLUE

Japan Environmental Technology Verification
ETV Ministry of the Environment
http://www.env.go.jp/policy/etv/
MIRACOOL SW200 NO. 051-0966

CRRC COOL ROOF RATING COUNCIL ® RATED PRODUCT

ENERGY STAR

CRRC COOL ROOF RATING COUNCIL ®

	Initial	Weathered
Solar Reflectance	0.89	0.83
Thermal Emittance	0.89	0.90

Rated Product ID Number	0001
Licensed Seller ID Number	0020
Classification	Production Line

Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.

Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.

Just coat it and save energy!

MIRACOOL™

High Reflective Coating

MIRACOOL CO., LTD.

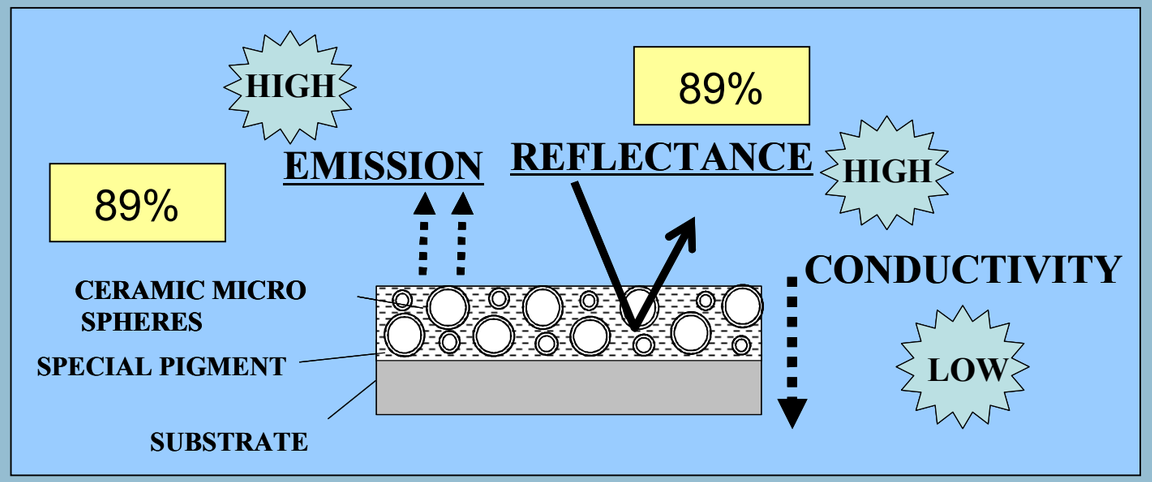
TOKYO, JAPAN

URL http://www.miracool.jp

What is ENERGY STAR®?

ENERGY STAR qualified products and practices help you save money and reduce greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

MIRACOOL CAN REDUCE SURFACE TEMPERATURE OF BUILDINGS AND FACILITIES THAT ARE EXPOSED TO SOLAR RADIATION.



Sectional view of dry film of MIRACOOL coating

How does solar radiation affect the surface temperature and heat flow through the roof?

When the roof surface is exposed to the sunlight, part of the solar radiation is reflected away by the surface substrate and the rest is absorbed. The absorbed solar radiation heats the roof surface, and the heated surface partially emits radiation in the far infrared part of the spectrum. The rest of the absorbed energy passes through the roofing material into the room, which increases the room temperature consequently. MIRACOOL is designed through the state-of-art technology to have very high reflectance and extremely high emission of solar radiation, and low heat conductivity in order to minimize the heat flow into the room.

We have vast experiences and job records with regards to High Reflective Coating i.e. MIRACOOL Series in Japan. Now, we are very pleased to introduce MIRACOOL to other countries.

BENEFITS

Reduction of surface temperature

Reduce cooling load and cost of air-conditioning systems up to 40 % in hot seasons. In a room without air-conditioning systems, the room temperature can drop by up to 10 degree C. It makes working inside the building become comfortable or improves the quality of the goods stored inside the building.

Protection of surface material

Extend the life of existing roofing materials.

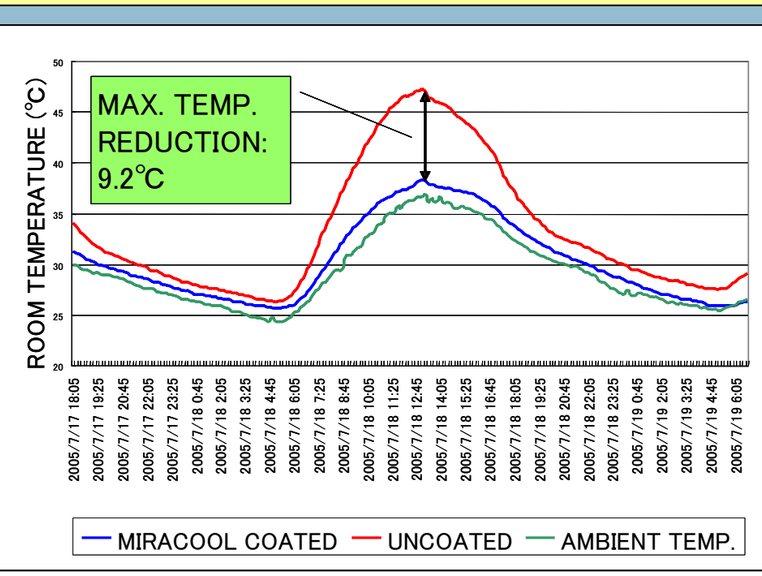
Reduction of thermal shock

Reduce heat expansion of roofing materials that may cause loud noises.

Extraordinary weathering resistance

Reduce the maintenance cost of the buildings.

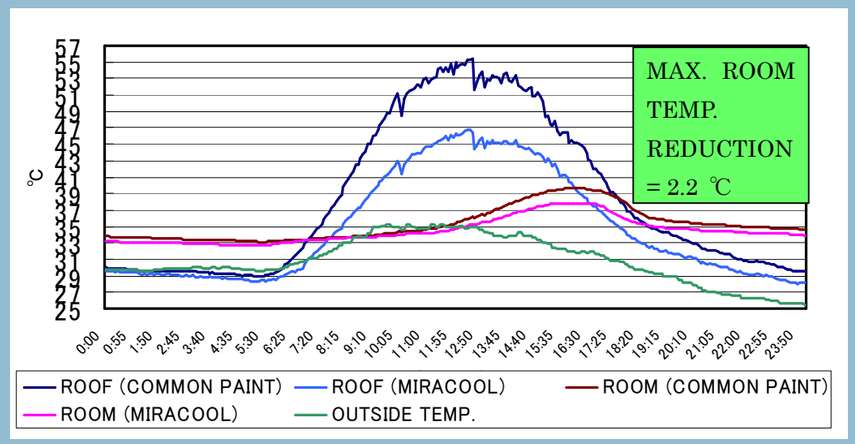
FIELD RECORDS OF ROOM TEMPERATURE IN TWO WAREHOUSES. (STEEL ROOF)

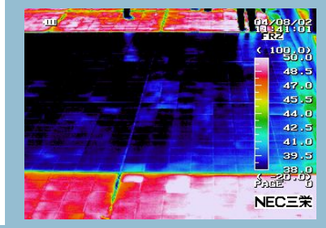


There are two steel roofed warehouses located next to each other.
One is coated with MIRACOOL and the other is uncoated. The room temperature of the coated one is only a few degrees higher than the outside air temperature while the uncoated warehouse recorded over 45 ℃, which is hotter than the outside air temperature by 10℃ as shown in the graph.

MIRACOOL (COOL WHITE) HAS EXCELLENT CHARACTERISTICS.
SOLAR REFLECTANCE: 89% EMISSIVITY: 89% (ASTM C1549 & C1371)

FIELD RECORD OF ROOM TEMPERATURE IN TWO SCHOOL ROOMS. (CONCRETE ROOF)





(JIS R 3106)	SOLAR REFLECTANCE (%)		
	TOTAL SOLAR (300-2500nm)	VISIBLE (300-780nm)	INFRARED (780-2500nm)
MIRACOOL (GRAY: N6)	58.7	31.6	77.9
COMMON PAINT (GRAY: N6)	26.8	32.0	23.1

SOLAR REFLECTANCE OF MIRACOOL AND COMMON PAINT (N6)

The concrete roof of a school is coated with MIRACOOL and normal paint respectively with the same color, N6 grey color. There are suspended ceiling above the rooms that serves as thermal barrier from the concrete roof. The temperature difference recorded between the two rooms in the afternoon is 2.2℃.