

Line up



Energy-Saving Heat Insulation Paint

FARM BARRIER Tio

<16kg> set
Part A 14kg
Part B 2kg



Energy-Saving Heat Insulation Paint

FARM BARRIER

<16kg> Set
Part A 14kg
Part B 2kg



**FARM BARRIER
Heat Insulation Primer W**

<16kg> Set
Part A 14.4kg
Part B 1.6kg

■ Related Products

FARM BARRIER Thinner
FARM BARRIER Primer S

16L
28kg Set



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Energy-Saving Heat Insulation Paint
FARM BARRIER Tio



Miyabo Co., Ltd.

Outstandingly Effective for Power Saving and Energy Saving!

FARM BARRIER is a high reflectivity paint that has combined heat reflective pigments and special ceramics. Due to the global warming, temperatures in summer are rising every year. As a result, most buildings are exposed to high heat, and indoor temperatures are also rising. However, each of us is required to save energy and power in our everyday lives, and it is inevitable that we set the temperature control of the air conditioner low. In these circumstances, more and more people are having heatstroke inside the building, and our working environment is getting worse. When FARM BARRIER is applied, near infrared ray from the solar beam is effectively reflected and scattered, and the heat once absorbed is radiated through the function of the special ceramic. With the combination of these effects, front/rear surface temperatures can be kept low, the heat permeated to the inside of the building can be minimized, and the performance of the air conditioner is optimized to run effectively.

Features of FARM BARRIER

1. Superior heat insulation effect

Exceptional heat insulation effect with the color pigment (high reflectivity) and special ceramic (high heat emissivity). Significant energy and power saving effects for air conditioning facilities.

2. Corresponds to most colors by color matching

A wide range of color selection is possible while maintaining the heat insulation effect. Customers can select their favorite colors or colors that match the surroundings.

3. Glossy exterior and high durability

The strong urethane bond realizes high durability against acid rain, preventing thermal deterioration. The finish is glossy and shiny.

4. FARM BARRIER Tio

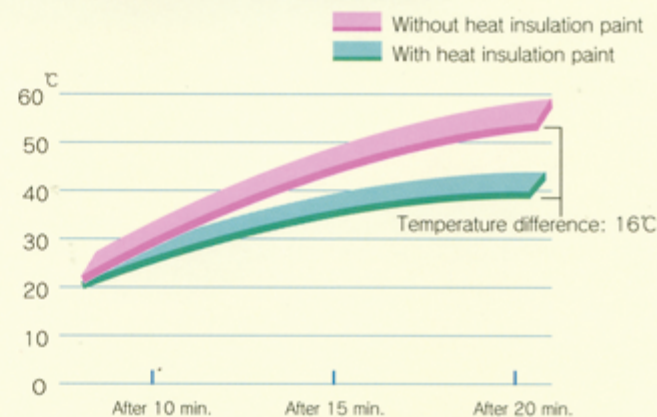
Reflectivity in light-color system is greatly improved with FARM BARRIER Tio. The effects are more significant with white, ivory, and gray toned colors.

Energy and Power Saving Effects Simulation in a food plant

In a simulation to observe temperature change and cooling load change in a food plant (size of approx. 6,000m²), application of FARM BARRIER Tio lead achieved approx. 15% reduction in the cooling load and approx. 2.4°C reduction in the indoor temperatures. In addition, annual CO₂ reduction of approx. 71,000 kg was also achieved.

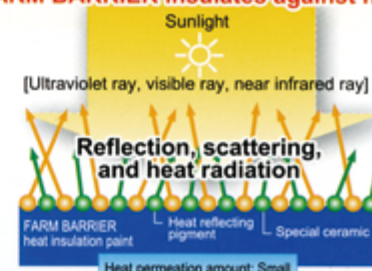
*The cooling load amount is calculated as the load required for cooling the indoor temperature from a temperature higher than the set temperature to the set temperature.

Radiation Test (Indoor)



Heat Insulation Mechanism of Farm Barrier

FARM BARRIER insulates against heat



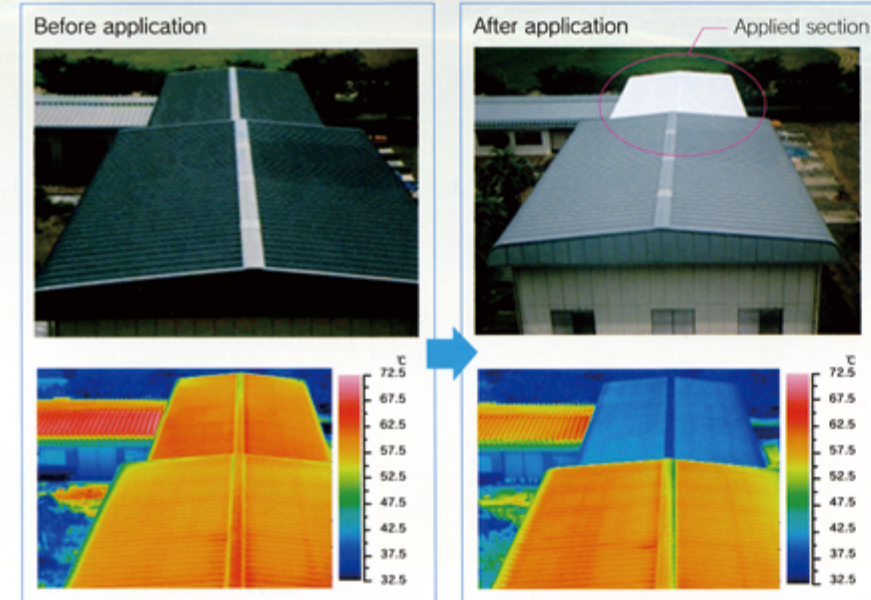
Standard coating films absorb near infrared ray, which has the highest heat effect within the sunlight spectrum, resulting in a high amount of absorbed heat. On the other hand, FARM BARRIER effectively reflects and scatters "near infrared ray" with high heat effects with the combined functions of heat reflectivity pigment and special ceramic. In addition the heat once absorbed in the painted film is radiated with the function of the special ceramic. With the combination of these functions, a high heat insulation performance is achieved by FARM BARRIER.

FARM BARRIER Tio

Heat Insulation Experiment Data

University of Miyazaki, Department of Engineering

Thermographic images before and after application of the heat insulation paint

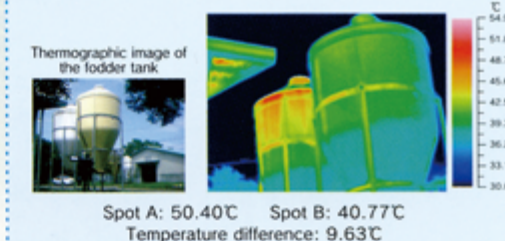


Validation of temperature reduction effect of the experiment room by FARM BARRIER Tio

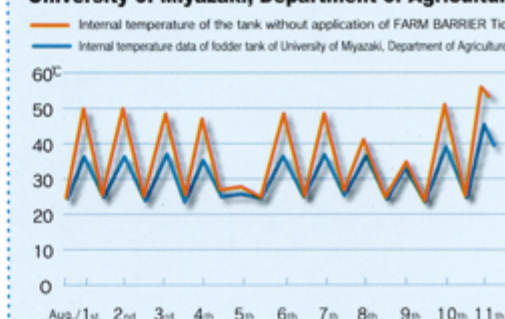
The temperature was uniformly measured by using an infrared ray camera. Before application of the heat insulation paint, the roof temperature at the near side (Electrical and electric laboratory) and the far side (Structure and materials laboratory) are almost the same. After application of the heat insulation paint, the roof temperature of the Structure and materials laboratory, where the paint is applied, is definitely lower, realizing a temperature decrease effect of approx. 15 to 20°C.

Joint Research

with University of Miyazaki, Department of Agriculture



Internal temperature data of fodder tank of University of Miyazaki, Department of Agriculture



Even when the internal temperature of the fodder tank without application of FARM BARRIER Tio exceeds 50°C, a tank with application of Farm Barrier mostly retains the lower temperature of less than 40°C.

Application

It is broadly used for locations and objects that need heat insulation, such as roofs and outside walls of general residence, roofs and walls of stores and factories, roof terraces of buildings, barns, fodder tanks, mixing trucks, etc.



Barn roof



Fodder tank



Mixing truck



Factory roof



Store roof



Residence roof



Residence roof and outside walls