GREEN INNOVATIONS
JETRO PARTNERSHIPS

Product Datasheet

Ecology "e" Thermo-Shield

Shimadakogyo Engineering Works Co.,LTD

1. **Excellent Heat Shield and Heat Insulation**
2. **Exceptionally Long Life (maintenance-free for more than 10 years), Requiring Zero Running Costs**
3. **Requires Only a Short Period of Time to Apply (3000 m²/work day)**
4. **Lightweight (2 kg/m²)**
5. **Affordable Life Cycle Costs**
6. **Reduces Electric Power for Air Conditioning and Carbon Dioxide by 25%**
7. **Solventless Agent**

Overview of Product / Technology

Having a water-based fluorine resin as the topcoat, Ecology "e" Thermo-Shield is a coating method that provides an excellent heat shield and heat insulation, equivalent to a 100 millimeter thick glass wool heat insulator.

The effect of this technology will reduce the temperature of a roof surface by 40 degrees Celsius, that of an attic by 20 degrees Celsius, and that of an indoor air environment by 4 to 5 degrees Celsius. Thus, air conditioning can be turned off, and this reduction of power consumption will significantly help save energy and reduce carbon dioxide emission.

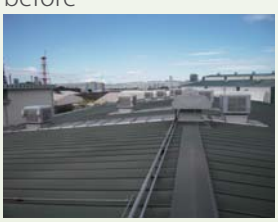
Compared to the lowering of room temperature by regular air conditioning, Ecology "e" Thermo-Shield requires zero running costs. Moreover, the coating is lightweight (2 kilograms/square meter), making the cost for application affordable, and is strong and long-lasting, making the life cycle costs significantly low. By reducing electric consumption buildings can net significant savings.

In addition, retailers can sell roofing or wall materials coated with Ecology "e" Thermo-Shield as materials that provide a heat shield and heat insulation.

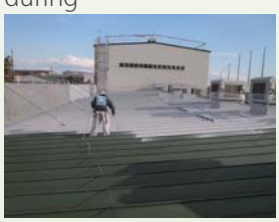
Other benefits of Ecology "e" Thermo-Shield include: securing asbestos on slate roofs to prevent its dispersal; increasing the strength of slates and the durability of metal surfaces; providing an elastic thick film with a sound-proofing effect that reduces noise levels by 10 decibels; an alkaline coating as the base material that provides long-term corrosion protection (prevention of neutralization); and much more.

Ecology "e" Thermo-Shield is primarily used for building roofs, walls (especially effective for metal and concrete), and metal tanks, but it can be applied to almost anything that needs to be protected from temperature rise.

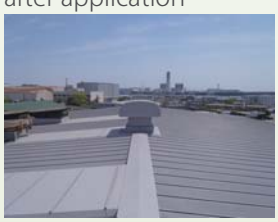
before



during



after application

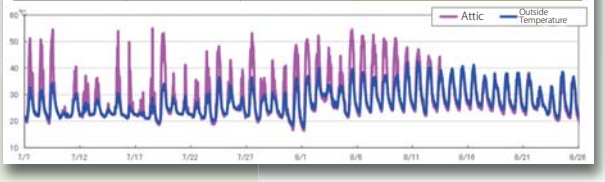


JETRO
Japan External Trade Organization

Detailed Information on Product / Technology

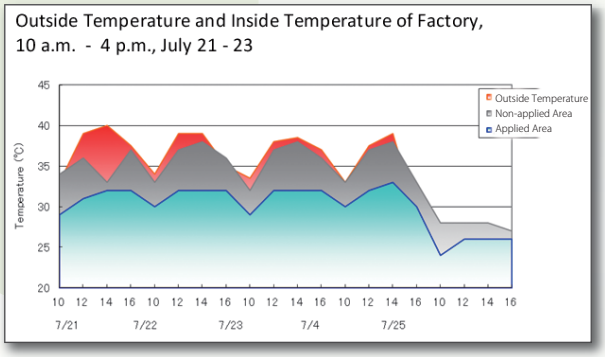
Comparison Example of Electric Power Used for Cooling in Summer

Actual Temperature (°C)			Difference from Outside Temp. (°C)
Attic	Ceiling Space	Outside Temp.	Attic
39.7	28.6	29.7	10.0
54.5	32.1	34.4	20.1
26.5	22.7	24.9	1.6
31.3	29.2	32.4	−1.1
38.2	33.0	38.2	0.0
23.0	24.9	23.8	−0.8



The attic temperature was 54.5 degrees Celsius before applying Ecology "e" Thermo-Shield, but dropped to 38.2 degrees Celsius after application. In a simple calculation, the heat shield effect provided a 16.3-degree-Celsius drop in temperature.

When taking account of the impact of the outside temperature, it rose by 3.8 degrees Celsius on average after the application of Ecology "e" Thermo -Shield, so the overall heat shield effect provided a 20.1-degree-Celsius drop in temperature.



When taking a look at the temperature differences after the Ecology "e" Thermo-Shield application, most measured values were lower than the outside temperature. This shows that air conditioning load became unquestionably smaller after the Ecology "e" Thermo-Shield application.

Patent Information

- Patent pending in Japan
- Currently preparing for overseas patent application

Company Overview

Business Summary, Overview
Waterproof coating and painting contractor; Major renovation contractor for buildings, condominiums, etc.
Flagship Product Lines
Ecology "e" Thermo-Shield
Ecology "e" Coat (an aphotic catalyst that provides odor elimination, decomposition, and antibacterial performance and does not require light [ultraviolet radiation])
Achievements in Japanese the Market
Setagaya City Hall (steep roof of gymnasium: 1500 m²);
JFE (roof of factory : 3000 m²)

Contact

Shimadakogyo Engineering Works Co.,LTD
URL : http://www.shimadakogyo.co.jp
Contact Person: Susumu Shimada E-mail: shimada@shimadakogyo.co.jp
Address: 2-1326 Kamimarukosannoutyou, Nakahara-ku, Kawasaki-City, Kanagawa, 211-0002 JAPAN