



**So long as spreading a layer of HOTSHIELD membrane on the windowpane, you can cut off ultraviolet ray and infrared ray in the sunlight.**

Because carbon dioxide increases in the atmosphere and the Earth changes more warm, which also true for building without exception, energy saving instruction and limit are continuously in implementation. As the countermeasure for energy saving in building, there are various products and commodities in the market. In the aspects of energy saving effect, operation cost and performance, the product "HOTSHIELD plus" of our company is lying at the extreme top position.

The products and commodity grow rapidly. The demand for them is predicted in continual growth. Nowadays, aim at the essential things, "HOTSHIELD plus" can make life comfortable (reducing the expenditure on air conditioning), and play the function of reducing carbon dioxide. It is the product benefit for protecting world environment.



Building

Supermarket

**Large-scale glass and curved surface glass can also be conveniently constructed equally. Furthermore, they can also be completed in a short time.**



Special Detergency Spreading



Basic construction method includes thoroughly eliminating oil film and dirt on glass surface and spreading. Project can be finished in a short time. Large-scale glass and curved surface glass can also be constructed conveniently.

**"HOTSHIELD plus" qualified construction system**

In order to fully put the performance of "HOTSHIELD plus" into action, excellent construction technology is requested for workers.

In regard to the construction of "HOTSHIELD plus", we request customer implement specific construction system. According to this construction system, construction must be carried out by qualified employees who have received solid technology training.

**Attention for using "HOTSHIELD plus"**

1. Fully stir before using. In application process also need remind.
2. High temperature weather. Condensation weather like cold afternoon.
3. Hot day in summer. Cold weather below 0 °C. Windy place with much dust.

**Construction object of "HOTSHIELD plus"**

Office building, supermarket, hotel, factory, show hall, public facility, school, hospital, senior apartment, golf field and so on.



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お問い合わせ

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So long as spreading a layer of HOTSHIELD membrane on the windowpane, you can maintain the transparency of glass, which is high performance film-forming agent for glass to isolate harmful ultraviolet ray and infrared ray.



Film-forming agent for glass to cut off ultraviolet ray and infrared ray and increases the transparency of the glass.

**HOT-SHIELD.PLUS**  
ホットシールド.PLUS



**In order to prevent the Earth from becoming warmer, reducing the withdrawal of carbon dioxide is the main topic for environment protection.**

"HOTSHIELD plus" can effectively cut off ultraviolet ray and infrared ray in sunlight. Compared with the film-forming agent before, it is tinier and more transparent, with high hardness and good durability. As the countermeasure to prevent the rise of windowpane temperature before, we used high performance glass stick by heat insulation thin film. But these means have some problems, such as price, durability, visible light transmissibility and maintenance. "HOTSHIELD plus" can reduce the withdrawal of carbon dioxide. It is also very cheap and with good performance. It is the product meeting environmental protection demand.

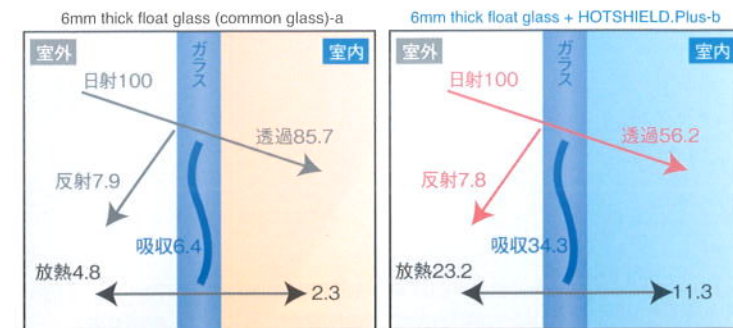
**▶ FEATURE**

- So long as spreading on existing common glass, you can produce heat insulation glass in short time.
- Adsorb infrared ray in sunlight and effectively cut off the heat energy entering room.
- Save 2-5 °C of set temperature for air conditioner.
- Save 20-30% of electric power consumption.
- Excellent heat insulation performance and spreading durability.
- Light taste type. Security after construction.
- Cut off 96% above of harmful ultraviolet ray.
- Construction with special spray gun. No joint. Beautiful construction surface.

**▶ PERFORMANCE**

- 45% of energy in sunlight is heat energy of infrared ray. By cutting off infrared ray, we can break the heat energy from glass window. Depending on spreading function, the indoor temperature may drop about 4°C.
- Raise the set temperature of air conditioner in 2-3 °C, you can save 20-30% of electric power consumption. While obtain the energy saving effect, you can also contribute to prevent the Earth from changing warmer and reduce the withdrawal of carbon dioxide, and play an effect to protect earth environment.

**■ Comparison of heat radiation transmissibility for 6mm thick float glass**



**Seven characteristics of "HOTSHIELD. Plus" Provide comfortable indoor space.**

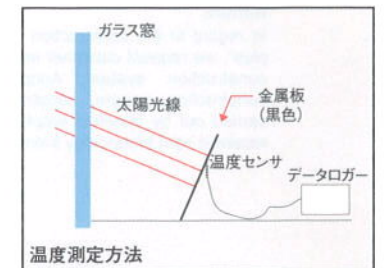
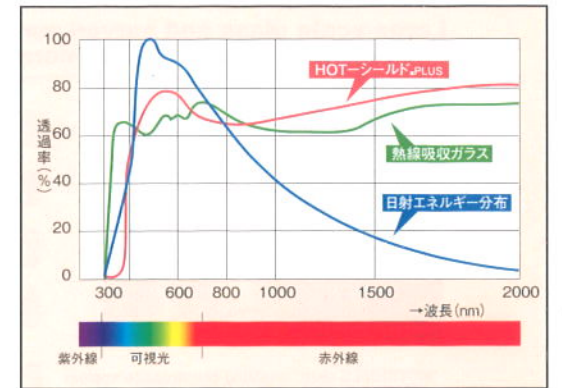
- 1 Keep heat energy out**  
 Near-infrared ray is the hottest wave length light make human feel. "HOTSHIELD.Plus" reflects and adsorbs approximately 40% of near-infrared ray. Because of this effect, it can suppress the rise of temperature indoors. The effect of air conditioning is extremely good.
- 2 Effective electricity saving (energy saving)**  
 According to the experimental data of "HOTSHIELD.Plus", the temperature difference indoors after and before construction is 3-5 °C. It is especially effective to reduce the load of air conditioner in summer. Through saving power energy, it also reduces the withdrawal of carbon dioxide, which contributes to protect the earth environment.
- 3 Prevent violent irritation of sunlight**  
 Because it will cut off approximately 96% of harmful ultraviolet ray, "HOTSHIELD.Plus" can protect the human body from skin cancer, skin spot, freckle and so on. Moreover, it also can prevent curtain, ornament, rug and so on from aging due to violent irritation of sunlight.
- 4 Prevent the approach of insect**  
 Insects like moth and turtle have the habit toward ultraviolet ray. Because "HOTSHIELD.Plus" can cut off ultraviolet ray emitted from light in room at night, insect won't approach.
- 5 Outstanding visible light transmissibility**  
 Won't affect the view out of the hotel or family living room. Won't affect the beauty of demonstration hall and display window looked exterior. The window on the car will not become dark. Visible light transmissibility is 60% approximately, basically has no effect on color change.
- 6 Non-inflammability**  
 The experiment has proved that it has the most important non-inflammability as an environmental material.
- 7 Excellent durability**  
 After spread on glass and dried for nearly 40 minutes, it is hardened. The hardness of pencil is 4H-5H, exhibiting high degree of hardness. Won't deteriorate because of changed climatic. Won't be scratched by general cleaning. The durable life is approximately ten years.

Additional data from diagram: 日射 約40% カット, 紫外線 約96% カット, 可視光線 透過率 85.3%

**■ Comparison of "HOTSHIELD.Plus" with other products**

Item	HOTSHIELD.PLUS	6mmガラス
Visible light transmissibility (%)	80	90
Sunlight transmissibility (%)	60	85
Sunlight reflectivity (%)	7.0	9.3
Sunlight obtaining rate (%)	0.71	0.88
Ultraviolet ray transmissibility (%)	4.0	67.8
	0.80	1
	4.8	5.1

\*フロントガラス(6mm/m)+HOT-シールド,PLUS



**■ Light splitting graph of "HOTSHIELD.Plus"**

