

UNI Cool

Transparent paint for **heat dissipation**

UNI Cool is paint for heat dissipation using heat radiation. It increases the thermal emissivity of base materials.

(Example: Aluminum 0.02 to 0.9 after coating)

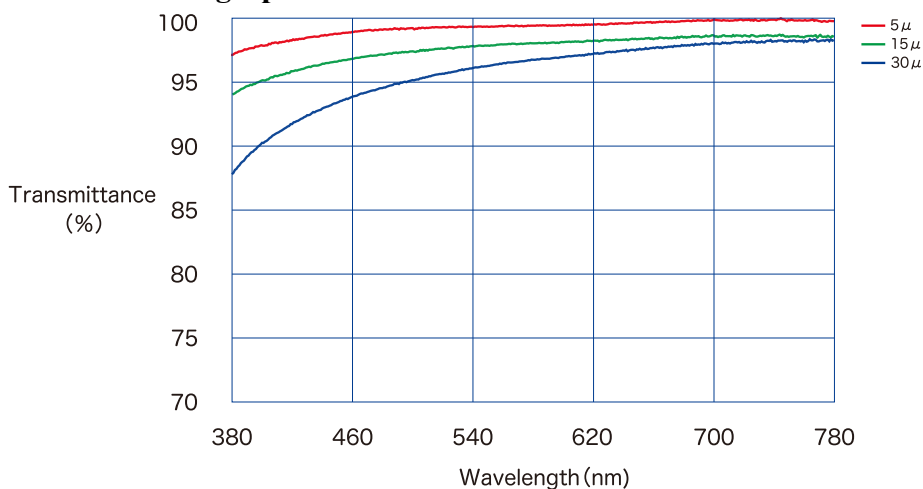
As a result, it is possible to decrease the base material and ambient temperature.

In addition, because it is transparent paint with total light transmittance no less than 90%, it may not impair the design of the base preparation.

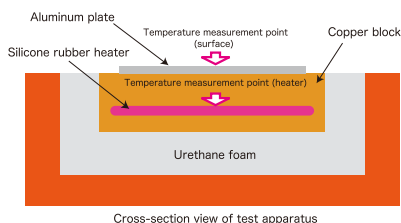
<Features of UNI Cool>

1. It is paint for heat dissipation using heat radiation. It has a characteristic to radiate heat to the lower environmental temperature side.
It has also a characteristic to absorb infrared rays; therefore, it is possible to absorb heat by applying it inside an enclosure. Thermal emissivity is about 0.9.
2. There are 10 different types of paint according to the application. Heat dissipation performance is the same for all.
3. Because it is transparent paint, it can be applied to reflectors and transparent materials.
* Coating on resin does not have as much of a heat dissipation effect as coating on metal.
4. Because it is paint, it can be applied to any portion.
5. Air drying type paint is also available for different types of base materials.
6. It has a heat radiation characteristic equivalent to alumite's.
7. Paint made of non-hazardous materials is also available.
8. It is non-conductive (volume resist: 10^{11} to 10^{13}).
9. Complies with RoHS Directive and REACH Regulation.

Transmittance graph



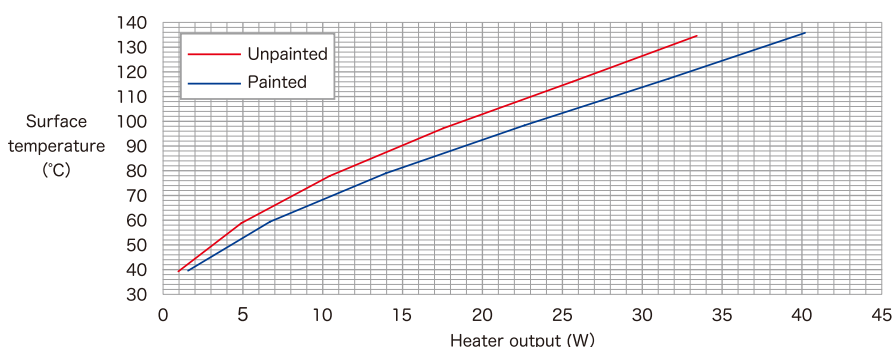
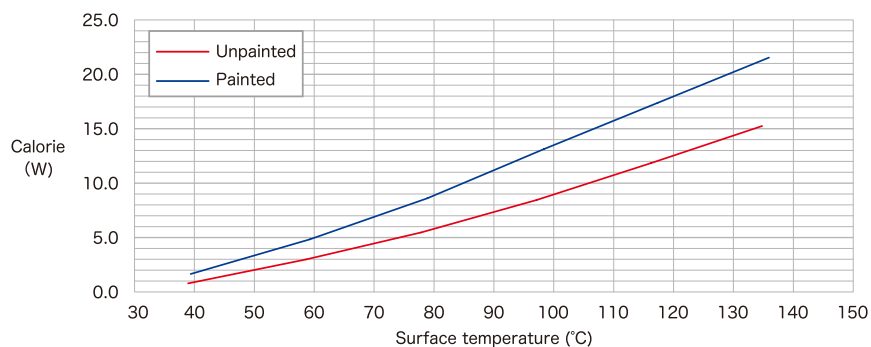
<Example of UNI Cool test>



An aluminum plate (100 mm x 100 mm, 0.5 mm in thickness) was attached to a heater block, and the heater temperature and aluminum plate surface temperature were measured when putting a load over the heater (at room temperature of 24°C, humidity of 55%).

The following aluminum plate was used.

(Virgin, coated with paint for heat dissipation: lacquer type)



* The above values are for reference only, but not normative.

The effect may change according to the size and type of base material used, and the environment of use.

<List of paint type>

Product No.	Description
UC-001	Lacquer type: air drying (pencil hardness: B)
UC-011	TX free type: air drying (opaque) (pencil hardness: 3B to 2B)
UC-002	Baking type: baking at 160°C for 20 minutes (pencil hardness: B)
UC-012	Heat and weather resistant type: baking at 180°C for 30 minutes (pencil hardness: H)
UC-022	Heat and weather resistant type 2: baking at 200°C for 30 minutes (pencil hardness: HB to F)
UC-032	Heat and weather resistant type 3: baking at 180°C for 30 minutes (pencil hardness: B)
UC-003	Water-based type 2: air drying (pencil hardness: B)
UC-013	Water-based urethane type: air drying (pencil hardness: HB), Non-hazardous material
UC-023	Water-based acrylic silicone type: forced drying at 180°C for 30 minutes (pencil hardness: 2B), Non-hazardous material
UC-005	UV-curing type: UV curing (pencil hardness: 2H), Primer is required separately.

- Information in this document is subject to change without notice due to continual improvements.
- Be sure to read the material safety data sheet (MSDS) before using this product.