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Water-based, Special Thermal Insulation Coating External Wall and Roof

# COOL TIGHT LIGHT W



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(032-020) Environmentally Friendly Low VOC Paint Water-based, special thermal insulation coating for external wall and roof

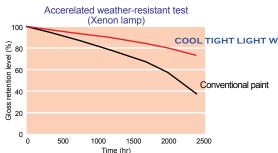
# **COOL TIGET LIGHT W**

**COOL TIGHT LIGHT W**, thermal insulation coating, delivers high performance in thermal insulation on exterior wall and roof. It helps improve indoor environment and saves air conditioning costs.

# FEATURES

### Weather resistance/ High durability

With its high durable resin, it provides excellent weatherproof / high durable performance.



## Anti-mildew / Anti- algae

With special specification, it provides high resistance to microorganism such as mildew and algae.

## Substrate degradation control

Controlling temperature difference leads to resistance to substrate degradation caused by metal shrinkage and expansion.

HEAT REFLECTION MECHANISUM

## Environmentally friendly

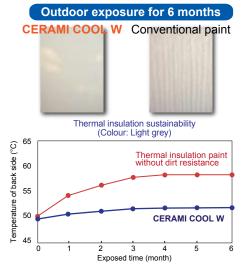
VOC content less than 50g/L : Passed \*This product was evaluated by PSB Singapore as qualify product to pass the green label requirement.



Environmentally Friendly Low VOC Paint

## Super dirt & dust resistance

Its dirt resistant property provides not only beautiful surface but also long lasting heat reflective function as dirt and dust cause the decrease of heat reflection effect.



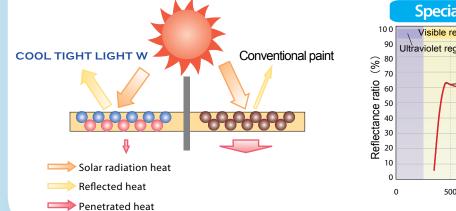
#### Test method

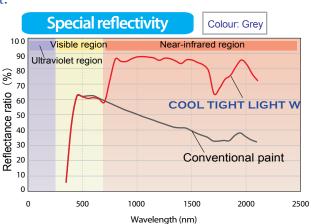
After outdoor exposure, expose a specimen to infrared ray lamp and check the temperature of the back of the specimen.

#### Result

The temperature of the specimen with heat reflective paint without dirt resistant property gradually increases due to dirt accumlation whereas CERAMI COOL W specimen keeps its heat reflection property.

It provides thermal insulation performance by reflecting infrared ray that emit strong radiation to reduce amount of absorption heat and penetration heat.





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## HEAT REFLECTION PROPERTIES

# **16%** per annum of electric power will be saved

**Energy saving effect of** thermal insulation

Conventional paint

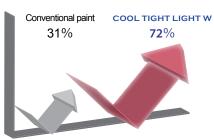
COOL TIGHT LIGHT W

519 poplars per annum !

Wall substrate: Concrete (thickness=150mm) K-Value: 4.2W/m<sup>2</sup> \*K Colour: Grey Room temperature: 25°C Application area: 1000m<sup>2</sup>

Electric power consumption (Wh/h)

40000 50000 Near Infrared Radiation (NIR) Reflectance (Colour: Grey)



Convert to difference in cooling load (Wh) to Amount of CO<sub>2</sub> discharge, and convert this to trees of poplar.\*

Power consumption per hour has been measured on conditions that room temperature was kept at 25°C, and that the above samples had been applied to external wall (1000m<sup>2</sup>). From the result,

we can expect that approximately 16% of electric power will be saved in case of COOL TIGHT LIGHT W unlike regular coating.

\* Calculation is done under assumption as below;

- The amount of discharge of CO<sub>2</sub>: 0.555kg-CO<sub>2</sub>/ kWh Working time of air conditioner: 15 hrs/day × 30 days/month × 12 months/year = 5,400 hrs/year Amount of CO<sub>2</sub> that poplar of 10m tall would absorb per year: 52kg-CO<sub>2</sub>



Cold storage warehouses, refrigerated storages, shipping storages, food-processing plants, buildings, schools, gym houses, rearing facilities, etc.

## SUITABLE SUBSTRATES



Cement rendering, concrete, various type boards, repainting of old films



| COOL TIGHT LIGHT W (30% Gloss)                     | 16  | kg / can  |   |
|--|-----|-----------|---|
| SK WHITE SEALER W                                  |     | kg / can  |   |
| LENALUCK   | 26  | kg / can  |   |
| *MIRAC #100 PRIMER Base                            | 16  | kg / can  |   |
| *MIRAC #100 PRIMER Hardener                        |     | kg / can  |   |
| *MIRAC BOSEI Base                                  | 16  | kg / can  |   |
| *MIRAC BOSEI Hardener                              | 4   | kg / can  |   |
| *EH THINNER  | 16  | ltr / can |   |
| (Products indicated by * requires careful handling | g.) |           | ~ |

-VERY HOT -HOT -WARM -COOL COLD KEEP COOL



Cement tile, thin tile, metal roof, slate roof

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# STANDARD APPLICATION SPECIFICATION

| Exterior Wall Flat (smooth) finish  |           |                             |                           |                        |             |                |                 |              | 0℃、65%RH)      |
|---|-----------|-----------------------------|---------------------------|------------------------|-------------|----------------|-----------------|--------------|----------------|
|   |           | Material                    | Dilution ratio<br>(wt. %) | Consumption<br>(kg/m²) | No. of coat | Interval (hrs) |                 |              |                |
|   | Process   |                             |                           |                        |             | In<br>process  | In<br>Processes | Final curing | Remarks        |
| Surface treatment<br>Ory the surface thoroughly to bring water content to a maximum of 10% and pH to 10 or less.<br>Ocompletely remove any dirt, dust, and make good of unevenness, irregularities and scratches. |           |                             |                           |                        |             |                |                 | _            |                |
| 1   | Undercoat | Indercoat SK WHTIE SEALER W | 100                       | 0.12-0.15              | 1           | _              | 2 or more       | -            | Roller, brush, |
|   | Chacrobat | WATER                       | 0 - 15                    | -                      |             |                | 2 01 11010      |              | spray gun      |
| 2   | Top coat  | COOL TIGHT LIGHT W          | 100                       | 0.28-0.32              | 2           | 2 or more      | _               | 24 or more   | Roller, brush, |
|   |           | WATER                       | 0 - 20                    | -                      |             |                |                 |              | spray gun      |

#### Exterior Wall Spattered spray texture finish / Pressed finish

(20°C、65%RH)

| Process   | Material  | Dilution<br>ratio(wt.%)   | Consumption | No. of coat | Interval (hrs) |                 |  | Domorko    |  |
|---|-----------|---|-------------|-------------|----------------|-----------------|--|------------|--|
|   |           |   |             |             | In<br>process  | In<br>processes | Final curing                                     | Remarks    |  |
| Surface treatment     Ory the surface thoroughly to bring water content to a maximum of 10% and pH to 10 or less.       Ocompletely remove any dirt, dust, and make good of unevenness, irregularities and scratches. |           |   |             |             |                |                 | —  |            |  |
| 1   | Undercoat | SK WHITE SEALER W   | 100         | 0.12-0.15   | - 1            | -               | 2 or more  | -          | Roller, brush,                               |
|   |           | WATER   | 0 - 15      | -           |                |                 |  |            | spray gun                                    |
| 2   | Main coat | LENALUCK  | 100         | 1.3-1.7     | 1-2            | 2 or more       | Spray:<br>24 or more<br>Pressing:<br>0.5 or more | -          | Tile gu nozzle tip:<br>6.5-10mm<br>Pressure: |
|   |           | WATER   | 0 - 5       | -           |                | 2 of more       |  |            | 392-588kPa<br>(4-6kgf/cm <sup>2</sup> )      |
| 3   | Pressing  | Press the texture with a plastic roller dipped in PAINT THINNER A |             |             |                |                 |  | -          |  |
| 4   | Top coat  | COOL TIGHT LIGHT W  | 100         | 0.28-0.32   | 2              | 2 or more       | e -  | 24 or more | Roller, brush,                               |
|   |           | WATER   | 0 - 20      | -           |                | 2 0. 11010      |  |            | spray gun                                    |

#### (For cement tile, thin tile, slate roof) Roof (1)

(20°C, 65%RH)

(20°C、65%RH)

| Process   | Material    | Dilution<br>ratio(wt.%)    | Consumption | No.of<br>coat | Interval (hrs) |                 |                      |            |                             |
|---|-------------|----------------------------|-------------|---------------|----------------|-----------------|----------------------|------------|-----------------------------|
|   |             |                            |             |               | In<br>process  | In<br>processes | Final curing         | Remarks    |                             |
| Surface treatment*     ODry the surface thoroughly to bring water content to a maximum of 10% and pH to 10 or less.       Ocompletely remove any dirt, dust, and make good of unevenness, irregularities and scratches. |             |                            |             |               |                | _               |                      |            |                             |
|   |             | MIRAC #100 PRIMER Base     | 100         | 0.14-0.17     | 1              | -               | 6 hrs. to<br>14 days | -          |                             |
| 1   | Undercoat** | MIRAC #100 PRIMER Hardener | 25          | 0.14 0.17     |                |                 |                      |            | Roller, brush,<br>spray gun |
|   |             | EH THINNER                 | 0 - 30      | -             |                |                 |                      |            | Spidy guil                  |
| 2   | Top coat    | COOL TIGHT LIGHT W         | 100         | 0.28-0.32     | - 2            | 2 or more       |                      | 24 or more | Roller, brush,              |
| 2   |             | WATER                      | 0 - 20      | -             |                | 2 01 11016      |                      |            | spray gun                   |
| Edge cutting Cut edges of tiles, especially around underthroating, bonded by the materials.   |             |                            |             |               |                |                 |                      |            |                             |

#### (For metal roof, corrugated iron roof) Roof (2)

Interval (hrs) Dilution No.of Remarks Material Process Consumption Final curing ratio(wt.%) In process In coat processes Remove dirt, moss and debonding film, etc. with high-pressure jet washer (10-15MPa).
In case high-pressure jet washer is not available, remove dirt, moss and debonding film, etc. from the surface with scrub brush watering out of hose.
Remove rust completely if rust occurs partly. Surface treatment\* MIRAC BOSEI Base 100 0.14-0.17 6 hrs. to Roller, brush, MIRAC BOSEI Hardener 1 Undercoat\*\* 25 1 14 davs spray gun **EH THINNER** 0 - 30 COOL TIGHT LIGHT W 100 0.28-0.32 Roller brush 2 Top coat 2 2 or more 24 or more WATER 0 - 20 spray gun

\*Be sure to clean carefully the area where upper and lower roof tiles overlap with wire brush. Insufficient cleaning may result in finish without gloss and cause blister and peel-off in the future. \*\*Consumption varies depending on the condition of deterioration.

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