

# PERFECT COOL

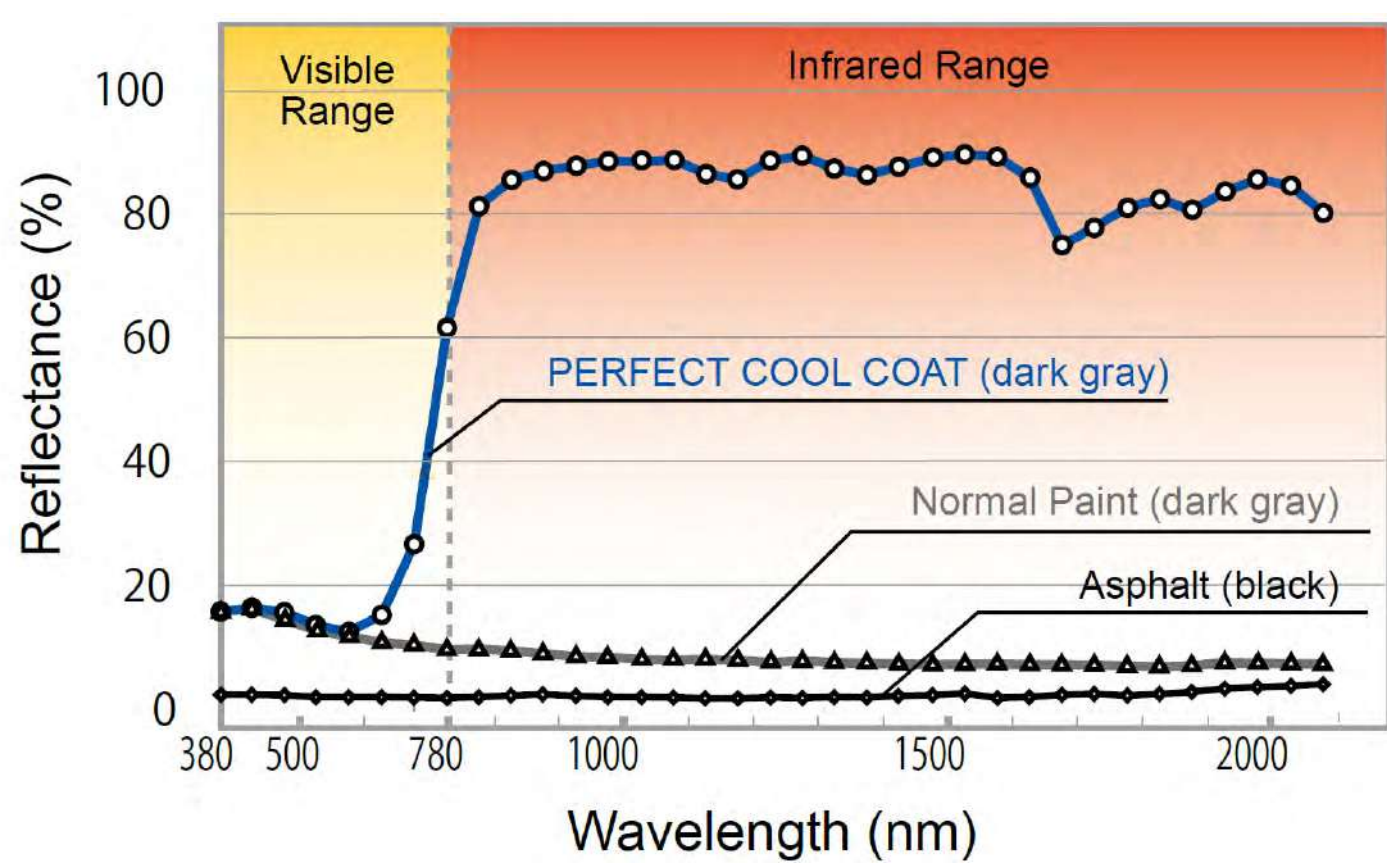
**Solar Heat-Blocking Pavement**  
Mitigation of the Heat Island Phenomenon  
and improvement of pavement durability

طرق معبدة مضادة للحرارة الناتجة عن التعر  
تخفيف آثار ظاهرة جزيرة الحرارة وتحسين متانة الطرق المعبدة

## What is PERFECT COOL?

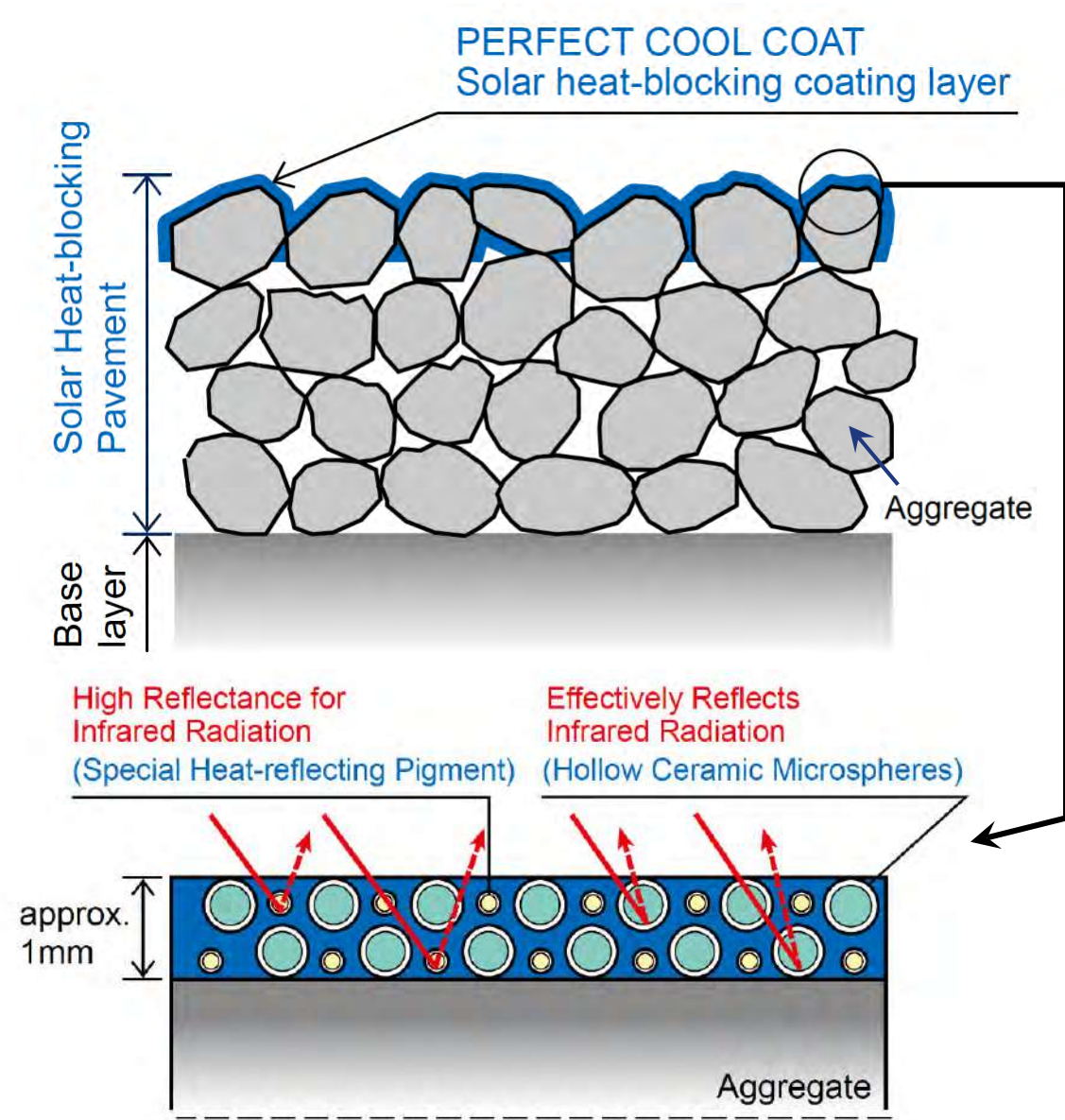
PERFECT COOL is the pavement which can reduce the surface temperature by applying PERFECT COOL COAT. The coating can reflect infrared radiation, the portion of the solar radiation with strong heating effects, through a combination of special heat reflecting pigment that offers high reflectance and hollow ceramic microspheres that effectively reflect infrared radiation. It reduces the increase in road surface temperatures during the day and suppresses radiant heat at night.

## Reflective properties



PERFECT COOL features low reflectance in the visible range but has much higher reflectance properties than normal paint or asphalt in the infrared range. Thus, while it may appear the same to the human eye, it is capable of suppressing increases in road surface temperature.

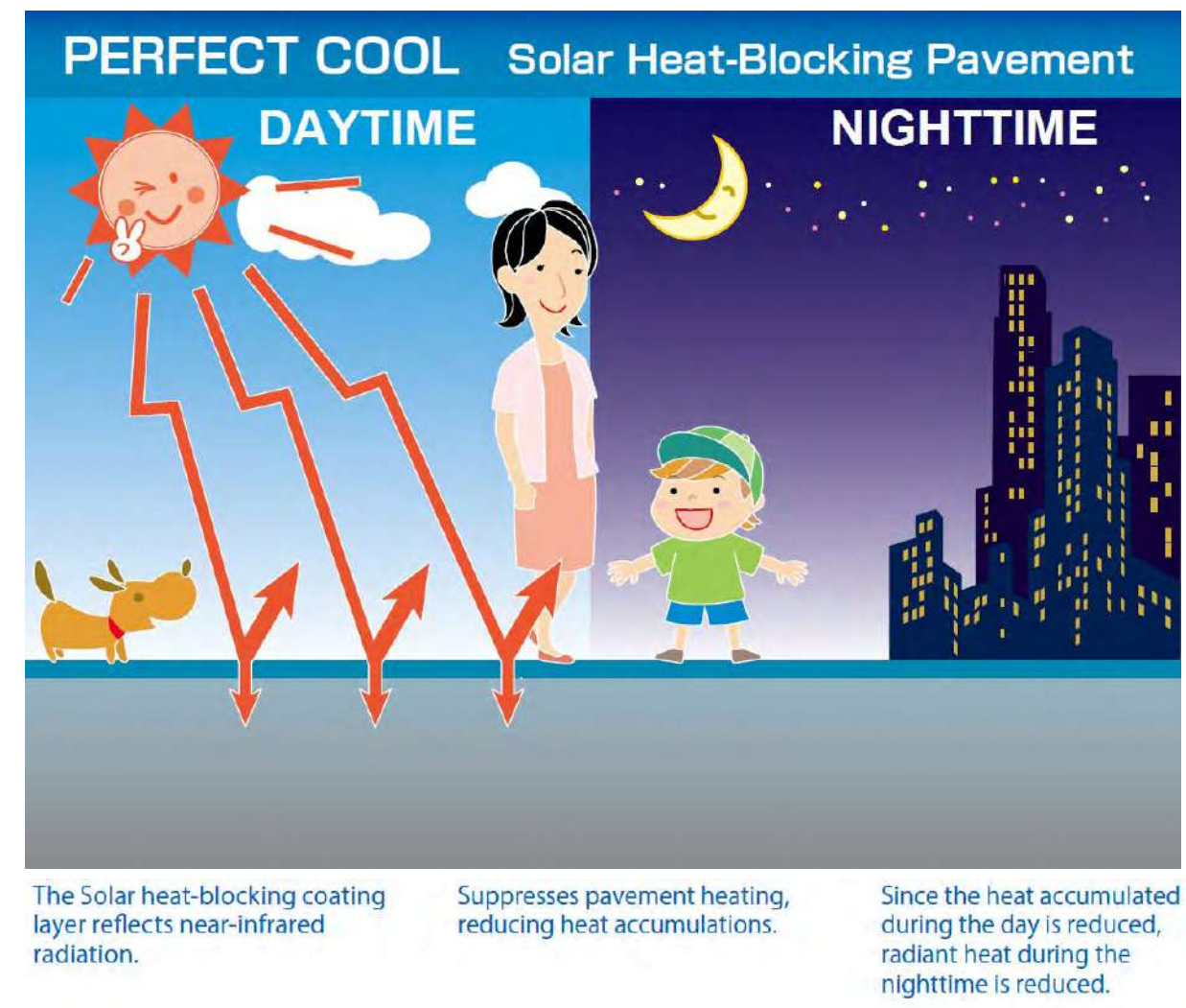
## Schematic diagram of PERFECT COOL



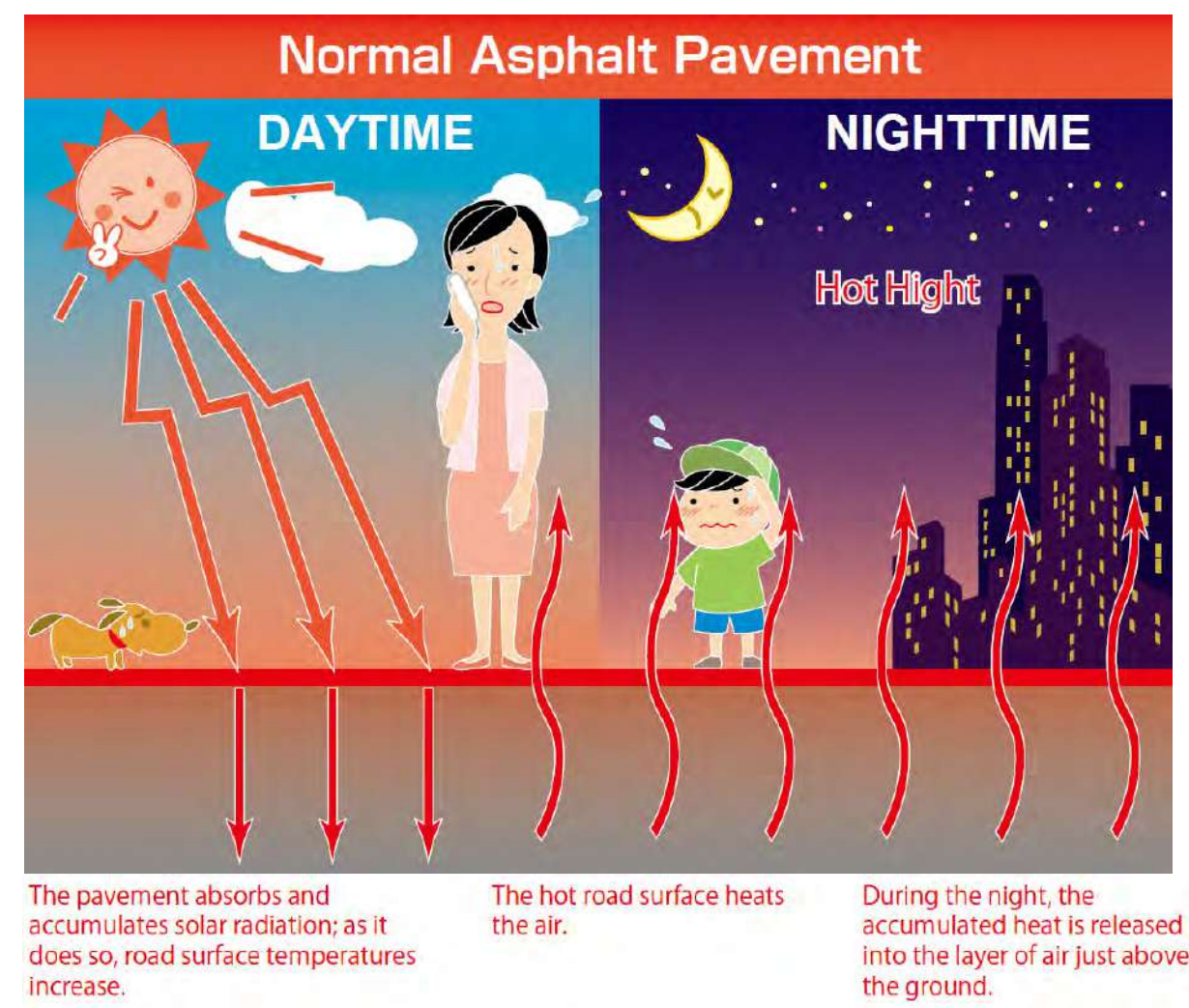
- Temp. Increase Suppression**: NIPPO's unique heat-blocking technology suppresses increases in road surface temperature by about 10°C or more.
- Comfort**: Improve ambient conditions in summer time.
- Durability Improvement**: Reduces road wear by traffic by 50%, thereby doubling pavement life. Suppresses loss of aggregate from permeable pavement. (PERFECT COOL M/ML)
- Low Cost**: Requires no additional costs after the initial investment.
- Maintenance-free**: Requires no maintenance, such as water spraying.
- Color Variation**: Increases visibility and improves safety. Suits the surrounding environment or a specific purpose, with different versions of the product to choose from.
- Multifunctional**: Compatible with a wide range of pavement types, including permeable pavement.

## How PERFECT COOL works

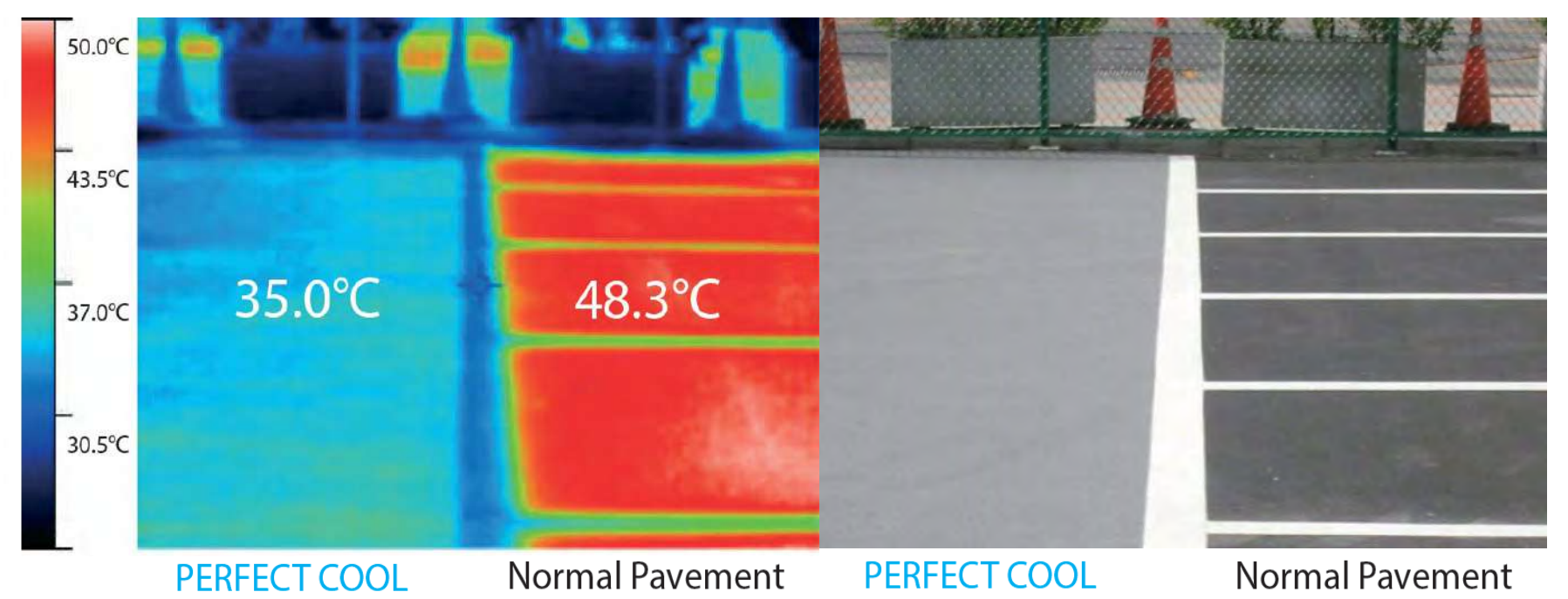
The Solar heat-blocking coating layer reflects near-infrared radiation, thereby suppressing pavement heating. This prevents rising temperatures and heat accumulation.



The pavement absorbs and accumulates solar radiation; as it does so, surface temperatures increase. The hot pavement heats the surrounding air and during the night, releases the accumulated heat and makes nights even warmer.

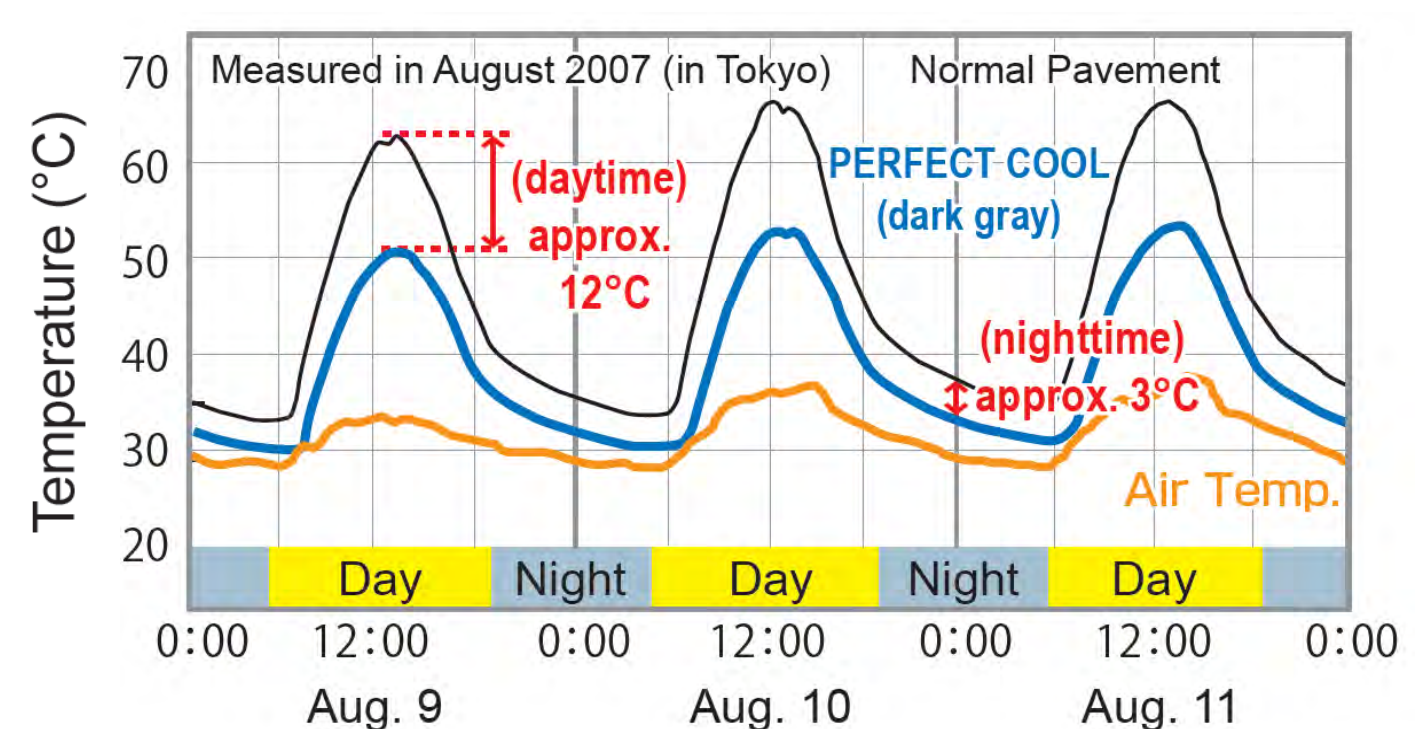


## Comparison of road surface temperature via Thermography



The effects of PERFECT COOL are obvious when you compare thermographic images of PERFECT COOL pavement (left) and normal pavement (right).

## Example of road surface temperature



Compared to normal pavement, road surface temperatures are approximately 12°C lower during the day and 3°C at night.



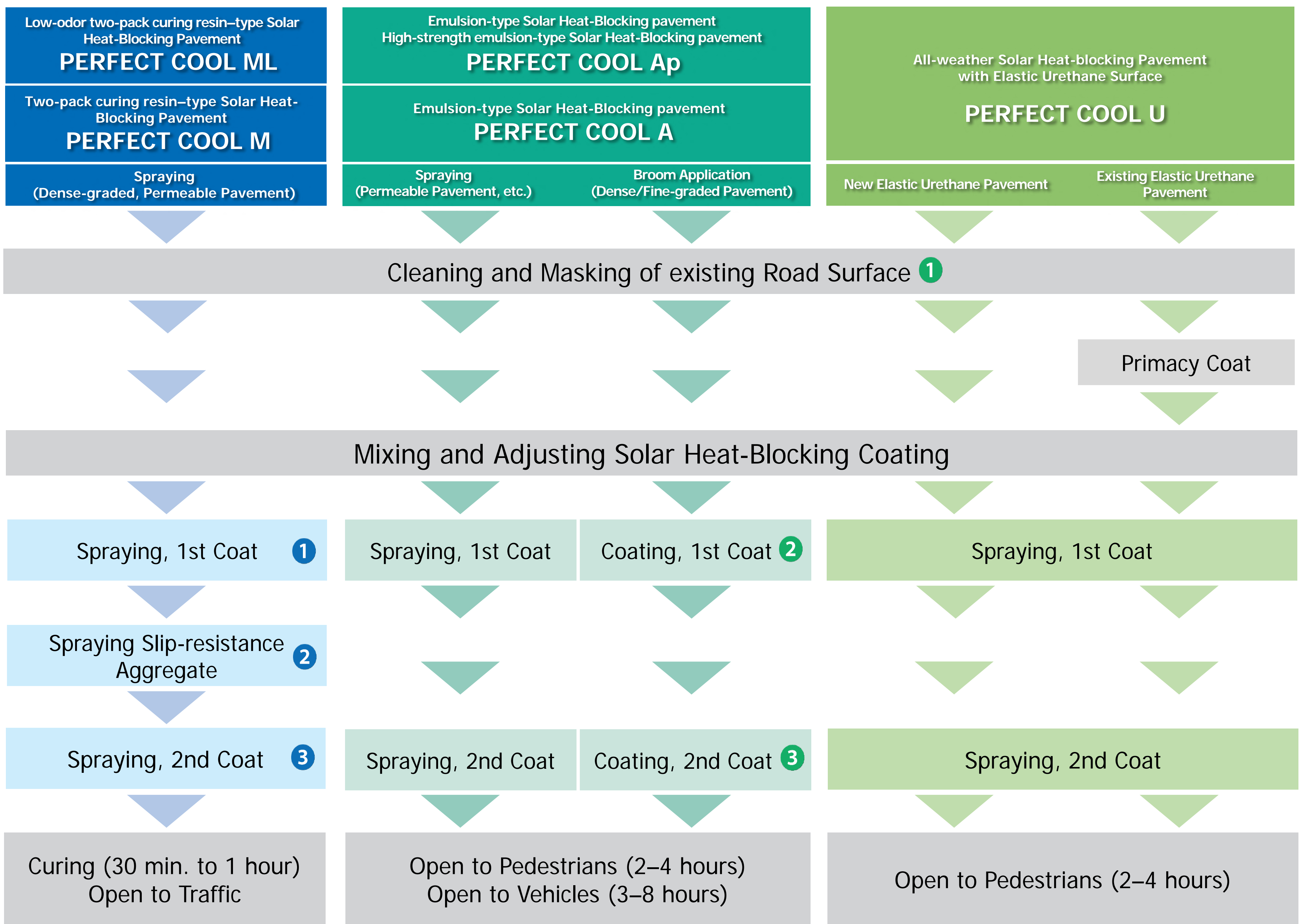
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## Application Procedure

PERFECT COOL will perform its core function just by applying PERFECT COOL COAT to the existing road surface.



① Spraying 1st Coat with specialized Sprayer



② Spraying Slip-resistance Aggregate



③ Spraying 2nd Coat



① Cleaning and Masking of existing Road Surface



② Coating 1st Coat using Universal Broom (Roller Application also an option)



③ Coating 2nd Coat



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Creating comfortable environments throughout Japan

Applicable in various places for various purposes



For Roads with Heavy to  
Light Traffic Including Sidewalks

Low-odor two-pack curing resin-type  
Solar Heat-Blocking Pavement

**PERFECT COOL ML**

Two-pack curing resin-type  
Solar Heat-Blocking Pavement

**PERFECT COOL M**

Street  
Stadium-dori (Chofu, Tokyo, Japan)

For Roads with Moderate to  
Light Traffic including Sidewalks

Emulsion-type Solar Heat-Blocking pavement  
High-strength emulsion-type  
Solar Heat-Blocking pavement

**PERFECT COOL Ap**

Road  
Yosakoi Festival (Kochi, Japan)



For Roads with Moderate to  
Light Traffic including Sidewalks

Emulsion-type  
Solar Heat-Blocking pavement

**PERFECT COOL A**

Parks and Squares  
Outer Garden of the Imperial Palace (Tokyo, Japan)

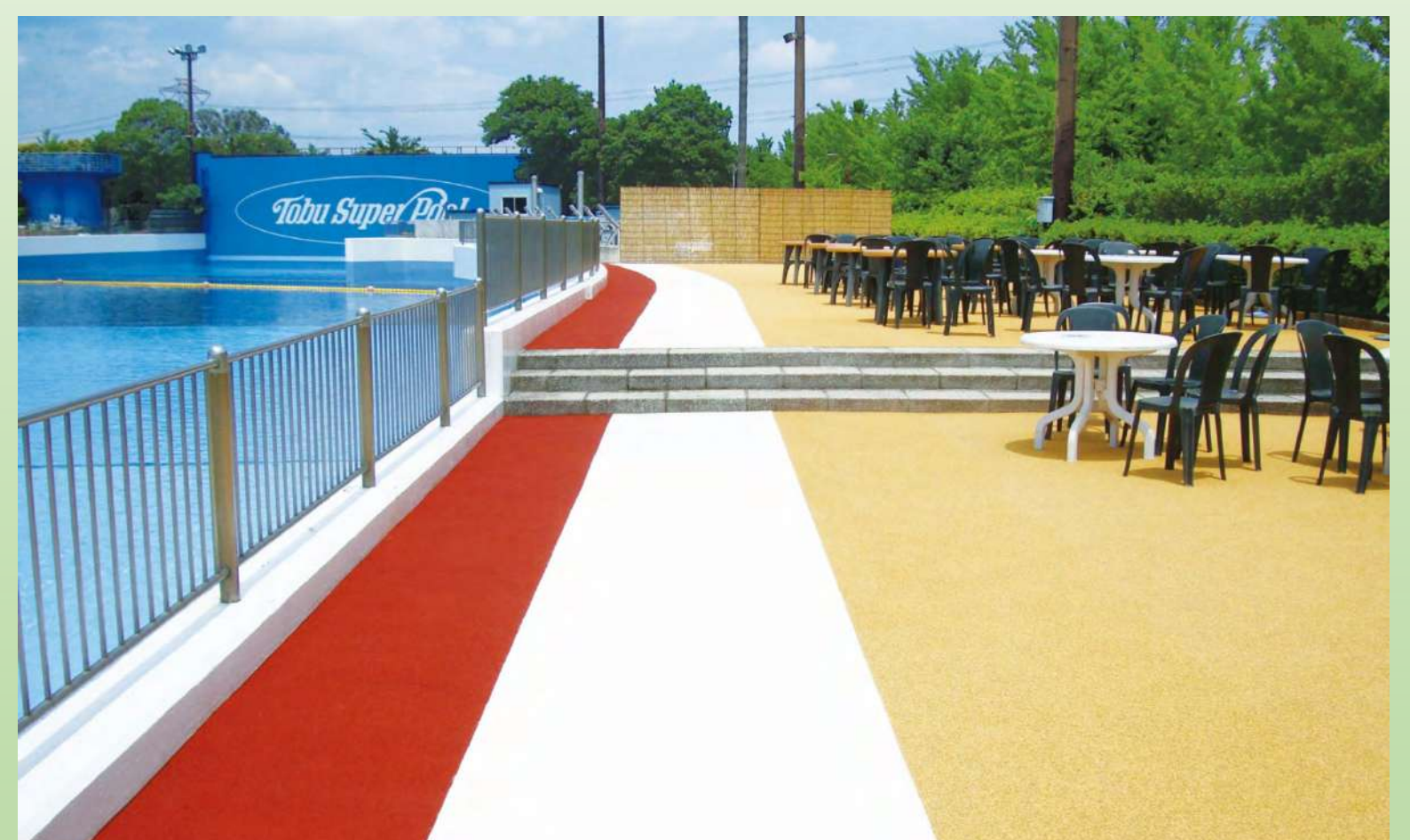


For Roads with Moderate to  
Light Traffic including Sidewalks

All-weather  
Solar Heat-blocking Pavement  
with Elastic Urethane Surface

**PERFECT COOL U**

Poolside  
(TOBU ZOO, Saitama, Japan)



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**Colorful, Comfortable and Environmentally-friendly pavements**

Please contact us regarding special colors besides the ones shown here.



Asahata green park (Shizuoka, Japan)



Hadano City Central athletic park (Kanagawa, Japan)



City Road (Kanagawa, Japan)



Michinoku Park (Miyagi, Japan)



Niihama Park (Ehime, Japan)



Tsujidou-Kaihin-Prefectural-Park (Kanagawa, Japan)

