Urban Cool (water retentive type) is a semi-flexible pavement, using a special pavement technology with improved water retentivity. It is a pavement of open graded asphalt compounds filled with water retentive cement milk. While soil type surfaces can consume a part of heat energy included in the sunrays as water evaporation, pavement road absorbs all the heat energy generated from the sunrays, which is a principal cause of urban heat island. Urban Cool (water retentive type) alleviates the issue of urban heat island, and contributes to the creation of an environment comfortable for people and the earth.

Features

Reduction of heat with water evaporation prevents the road surface temperature from increasing.
It consumes part of the heat energy from the Sun using water evaporation, and minimizes heat energy absorbed into the road.

Decreases road surface temperature around 5°C to 15°C.

Compared to standard asphalt pavement (dense graded asphalt pavement,) it decreases the road surface temperature from 5°C to 15°C.

Applicable to various types of roads
Urban Cool is usable on various types of roads including roadways, sidewalks, parking lots, open spaces, and park roads.

Possible to use on heavy traffic roads
It is even usable on heavy traffic roads with over 3,000 vehicles a day (per lane.)

Immediate release of the road is possible.

With the use of quick dry water retentive cement milk, 3 hours of curing as well as release of the road on the same day is possible.
アーバンクール(保水型)

Construction procedure

1. 母体混合物舗設

- 間粒度アスファルト混合物を舗設します。

Compose open graded asphalt mixture

2. 保水性セメントミルクの製造

- 現場で混合機を使って保水性セメントミルクを製造します。

Produce water retentive cement milk with a mixer

3. 施工

- 施工前に保水性セメントミルクを散布し、舗装を整形します。

Shape the ground while letting the cement milk absorbed

4. 浸透作業と整形

- 浸透作業を行います。

Shape the ground while letting the cement milk absorbed

5. 完成

- 短時間の養生で完成するため、即日使用することができます。

Road surface before/after water retentive milk is added

Road is releasable on the same day because of the short curing time.

Road Surface Temperature Test

アーバンクール(保水型)の路面温度低減効果を測定した事例を右図に示します。

- 密粒度アスファルト舗装材60℃の路面温度に対して、
本工法は、降雨1日後で15℃の路面温度低減効果がありました。

- Max. difference is 15℃

Right chart indicates case example of decreasing effect for road surface temperature.

This method has 15 degrees decreasing effect of road surface temperature after one-day rainfall as against 60 degrees of road surface temperature of Dense Graded Asphalt Pavement.

都市冷却機能を有する

- 本工法は、降雨1日後で15℃の路面温度低減効果がありました。

Urban Cool Water Retentive Type

Right chart indicates case example of decreasing effect for road surface temperature.

- This method has 15 degrees decreasing effect of road surface temperature after one-day rainfall as against 60 degrees of road surface temperature of Dense Graded Asphalt Pavement.