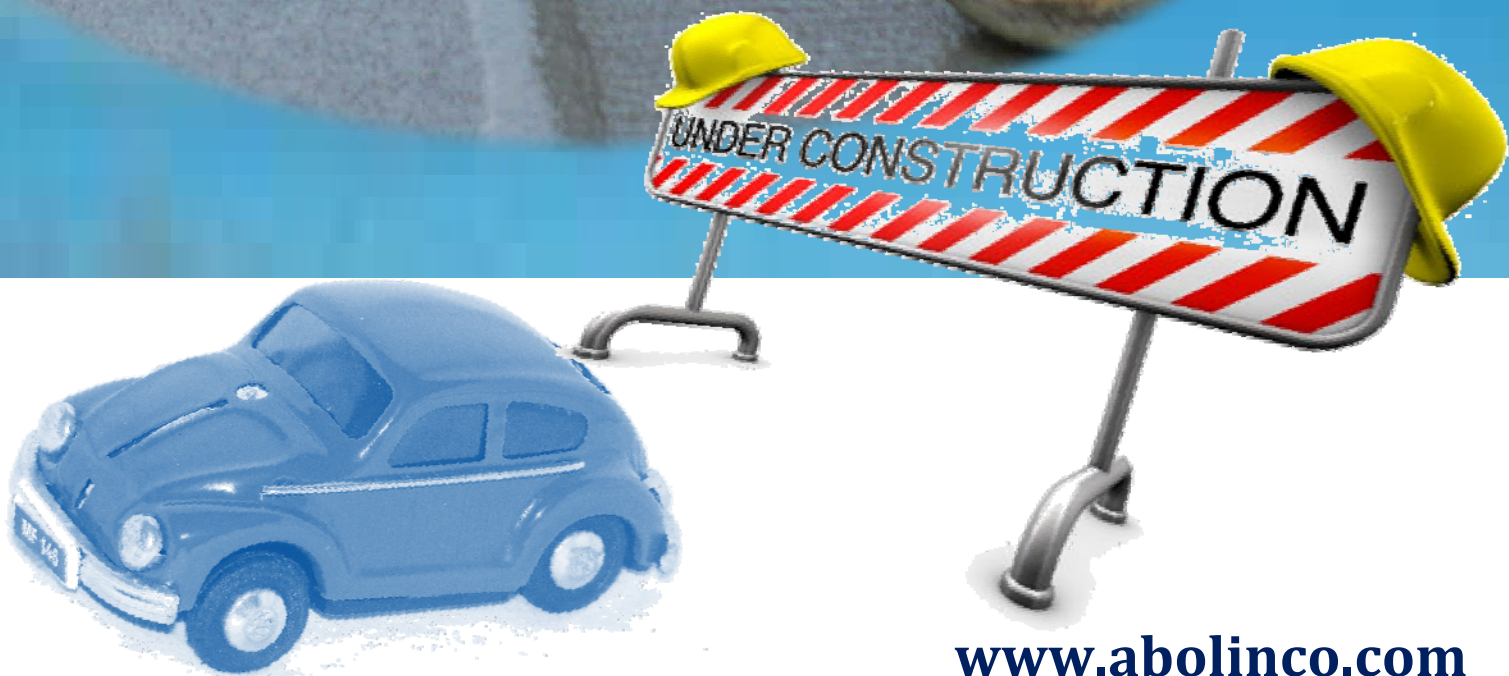


COOL BARRIER HEAVY DUTY ROAD



www.abolinco.com

Cool Barrier HEAVY DUTY ROAD

Cool Barrier Heavy Duty Road is a pre-mixed mortar in powder, consisting of light-coloured cement, siliceous aggregates of elected grain size, special additives and synthetic polymers, according to a formula developed in the laboratories of Abolin Co. The product is ready to use and only requires mixing with water. The applied product performs a hard and elastic film which is suitable for frequently car traffic.

Principal Characteristics

- Improved surface durability
- Improved surface reflection and therefore improved safety and obvious electrical supply benefits
- Improved resistance to de-icing salts
- Less thermal creep in the summer months
- No gas emission in the event of fire
- Available in different colours
- Easy application
- Highly visible even in poor visibility conditions
- Mitigates Urban Heat Island phenomenon and related consequences such as smog generation

Suitable Substrates: Asphalt road surfaces with both high and low-density traffic. Open Graded Asphalt is a porous asphalt mix formulated to provide large voids, (Typically in excess of 15%).

Colors: It is available in a number of light shades.

Consumption Rates: For an excellent performance up to 5 kg per 1 m² must be obtained.

Special Notes:

- Cool Barrier Heavy Duty Road mortar must be protected against fast evaporation. On warm or windy days, it is best to spray the surfaces with water mist during the first hours of hardening to prevent fast evaporation of the water in the mix as this could cause cracking.
- Working Life of mix product at 20°C and RH 60% is 60 minutes.
- Always apply at a temperature between +5°C and +35°C.
- With temperatures above 30°C the application/working time of the mixed product drops to 15-25 minutes.

Product identification details:

Form: Consistency powder

Apparent specific weight: 1.750 kg/m³

Max diameter of aggregate: 2,00 mm

Packaging: Big Bags of 1 tonne

Storage: 6 months under appropriate storage conditions

Application method & Thinning Rates:

Cool Barrier Heavy Duty Road is applied on a bitumen conglomerate base in depths varying from 3 to 4 cm. The conglomerate must have intergranular drainage gaps that allow the product to accumulate in layers of various depths depending upon substrate granularity.

Preparing the mixture: Mix the powder with the below ingredients at the following proportion and procedure to obtain the right degree of fluidity and elasticity to allow the mixture to penetrate the open graded asphalt voids:

- a) 100 kg Cool Barrier Heavy Duty Road
- b) 20 kg Tap Water
- c) 10 kg Cool Barrier HDRL (Liquid)

Preparing the mortar: Empty 100 kg of product into a cement mixer and add gradually 20 kg of clean water. Mix for 3-5 minutes and amalgamate the mix well, detaching the powder still not dispersed from the sides of the cement mixer. Add 10 kg Cool Barrier HDRL and continue to mix for 2-3 minutes until the mix is smooth and without lumps.









Applying the mortar: Apply the mortar with a spatula to form a layer 1,50 to 2,00 mm thick. Subsequent layers will have to be applied using the same procedure, on top of the already hardened first layer. Wait at least 6 hours before applying a second layer.

Cool Barrier **HEAVY DUTY ROAD**

Cool Barrier Heavy Duty Road is available in a number of pal colours with optimum solar reflectance properties. Cool Barrier Heavy Duty Road in comparison to conventional coloured paint systems, performs unique properties in terms of:

Special Characteristics

- Particularly resistant to ultraviolet radiation
- Excellent Light Fastness
- Lower surface temperatures
- Contributes to Urban Heat Island mitigation
- Improved thermal comfort
- Comply with LEED Credit 7.1: Heat Island Effect - Non-Roof

Surface Temperature reduction with the use of Cool Barrier Heavy Duty Road (HDR) in comparison to new and aged asphalt pavements				Simulation Considerations:				
Product	HDR	HDR	HDR	HDR	HDR	HDR	New Asphalt	Aged asphalt
	Light Grey	Red - Brown	Light Yellow	Yellow-Brown	CB: 23 Grey	Light Green		
SRI: Solar Reflectance index	40	35	38	38	75	35	1	15
TS: Surface Temperature	67,2 °C	68,2 °C	66,7 °C	66,7 °C	54,5 °C	68,2 °C	81,9 °C	78,1 °C
COLOURS								
Surface Temperature Reduction in Comparison to New Asphalt	- 14,7 °C	- 13,7 °C	- 15,2 °C	- 15,2 °C	- 27,4 °C	- 13,7 °C		
Surface Temperature Reduction in Comparison to Aged Asphalt	- 10,9 °C	- 9,9 °C	- 11,4 °C	- 11,4 °C	- 23,6 °C	- 9,9 °C		
Note: Calculation Tool coded By Ronnen Levinson Heat Island Group (http://heatisland.lbl.gov)								

