

## Product Description

Red Stag's Road Shield is a rapid setting water based polymer bitumen compound to seal and restore aged asphalt and macadam surfaces. The major use for Road Shield is to spray it as a "lock-coat" application for surface dressed roads. Typical hand applications of Road Shield include carriageways, airport runways, car parks, cycle paths and footways. Road Shield also seals fine cracks and voids in the surface course, alleviating the ingress of water and stabilising fretting areas of the surface, thus prolonging the service life of bituminous surfaces.



## Application

- The surface should be clean and free from dust.
- Weather conditions should be dry and >10°C.
- Road Shield is best applied using an open textured foam roller to areas at a rate of spread of approx. 2-4m<sup>2</sup> per litre.
- Depending upon the surface texture. It should be allowed to fully break to a black, tack-free state before opening to traffic. A second coat may be applied if required after the first coat has dried.
- Please note solvented paints are typically not suitable for application on Road Shield.

## Performance

Performance Conforms to BS EN 13808:2013 Bitumen and bituminous binders - Framework for specifying cationic bituminous emulsions.

## Sizes Available

- RSM 5kg drum (126 per pallet)
- RSM 25kg drum (40 per pallet)
- RSM 200kg drum (4 per pallet)
- RSM 1,000kg IBC

## Storage

Road Shield has a shelf life of 6 to 8 months provided it is stored correctly. Correct storage requires the material to be out of direct sunlight, indoors and where the air temperature is not allowed to fall below 10°C. Material should be stirred / agitated until homogeneous every 2 to 4 weeks whilst in storage. The material must be protected from frost. Bulk material should be circulated before use. Circulation should be carried out in such a way to avoid foaming or frothing of the material. Drums should be rolled thoroughly or agitated suitably before use.

## Additional Information

All products should be used in accordance with the manufacturer's instructions. No responsibility can be taken by the manufacturer where conditions of use are beyond our control. Whilst any information and/or specification contained herein is to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendations or suggestions made by us or our Representatives, Agents, Distributors as the conditions of use and any labour involved are beyond our control.

## Health & Safety

Contact with the skin should be avoided by the use of protective clothing, suitable gloves & rubber boots. Eyes should be protected from splashes of emulsion droplets.



ISO  
14001 : 1996  
REGISTERED



ESSENTIAL CHARACTERISTIC	PERFORMANCE		HARMONISED TECHNICAL SPECIFICATION
	VALUE	CLASS	
<b>MANUFACTURED EMULSION</b>			BS EN 13808: 2013
Viscosity (BS EN 12846) [Efflux time 2mm @ 40°C]	15 70s	Class 3	
Water effect on binder adhesion (BS EN 13614)	≥ 90%	Class 3	
Breaking Behaviour (BS EN 13075-1)	≥ 170	Class 5	
Dangerous Substances	NR	NR	
<b>RECOVER BINDER (BS EN 13074-1)</b>	<b>VALUE</b>	<b>CLASS</b>	
Consistency at intermediate service temperature (BS EN 1426)	≤ 35 dmm	Class 1	
Consistency at elevated service temperature (BS EN 1427)	≥ 65°C	Class 1	
Cohesion (modified bitumen emulsions) (BS EN 13588)	≥ 1.0	Class 4	
<b>STAGE 1 DURABILITY - STABILISED RESIDUAL BINDER (BS EN 13074-1, 13074-2)</b>	<b>VALUE</b>	<b>CLASS</b>	
Consistency at intermediate service temperature (BS EN 1426)	≤ 35 dmm	Class 1	
Consistency at elevated service temperature (BS EN 1427)	≥ 65°C	Class 1	
Cohesion (modified bitumen emulsions) (BS EN 13588)	≥ 1.0	Class 4	



# Application Guide

## Road Shield By Red Stag



### Surface Preparation

Surface preparation - the surface to be treated must be clean, dry and free from dust. The surface should be swept / blown clean, and any dried mud or detritus removed by scraping/sweeping as necessary. Ironwork such as manhole covers and road gullies along with the edges of the area to be treated should be protected with masking tape, which can be removed after application of the road shield, as soon as it has dried to a tack-free state.

### Weather Conditions

Weather conditions - work should only be carried out in dry, fine conditions, with an ambient temperature  $>10^{\circ}\text{C}$ , and should cease if road temperatures become excessive. Work should also cease if rain appears imminent.

### Spread Rate

**The target rate of spread of Road Shield is normally in the range of 2-4m<sup>2</sup> per litre, depending on the surface texture.**

A simple way of checking the spread rate that is likely to be achieved is as follows:

- Mark out an area 4m x 1m with masking tape. Measure 1 litre of Road Shield into a can.
- Two operatives can now lay a trial - one pouring the Road Shield from the bottle, starting at one end of the area steadily pouring it across the area, just in front of the paint roller being used by the second operative to evenly spread the material over the measured area.
- If the operatives obtain an even coat to the whole area with the litre of Road Shield, they have successfully obtained the minimum recommended coverage of 4m<sup>2</sup> per litre.
- If they have not, measure the area that has been coated, and calculate the rate of spread achieved within the target range. It may be necessary to repeat this process a few times until the operatives achieve a uniform result.

### Sizes Available

- RSM 5kg drum (126 per pallet)
- RSM 25kg drum (40 per pallet)
- RSM 200kg drum (4 per pallet)
- RSM 1,000kg IBC (It is recommended to use smaller containers to ensure the product can be thoroughly stirred prior to application)



### Equipment Required

This method statement requires the use of long-handled foam rollers or suitable yard brush to spread and apply the Road Shield emulsion. Other types of paint rollers or brushes may work initially but suffer from material break, apply at an excessive spread rate and require frequent replacement.

### Storage

Road shield- Material should be stored under cover and out of direct sunlight, in temperatures of between 10 and 40 Centigrade until required on site. There may be some settlement during storage. The emulsion should be thoroughly stirred / agitated before use. Product must be stored above 5 degrees centigrade.





## Application of Road Shield

Mask the start and end of the area to be treated with tape to provide a tidy joint with the adjacent areas, and mask edges of any ironwork and edge channels in the same way. To ensure application of the Road Shield at the set rate of spread a known quantity of material is to be poured out over a known area as set by the spread rate trial. Prior to application starting, markers are to be put on the edge of the works to indicate the area to be covered by the set rate of material. For example if a 10 Ltr unit of measure is used for pouring out the Road Shield and The rate of spread has been set at 3m<sup>2</sup>/Ltr, a mark must be put at the side of the works to denote the end of each 30m<sup>2</sup> area. As the operatives become used to the rate of spread, the areas and quantity of Road Shield applied can be scaled up.

## Completion

Road Shield is a fast-breaking emulsion, and in good weather conditions should be tack-free in 20-40 minutes after application. When it has reached this stage, remove any masking tape to ironwork, edges etc. Check that the Road Shield has fully dried before allowing traffic onto the surface in a controlled way. Finally, when it is clear the surface is stable, open the area to full traffic.



Pouring Road Shield



Rolling Process

## Additional Information

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# Application Guide- Minor Cracks

Road Shield By Red Stag

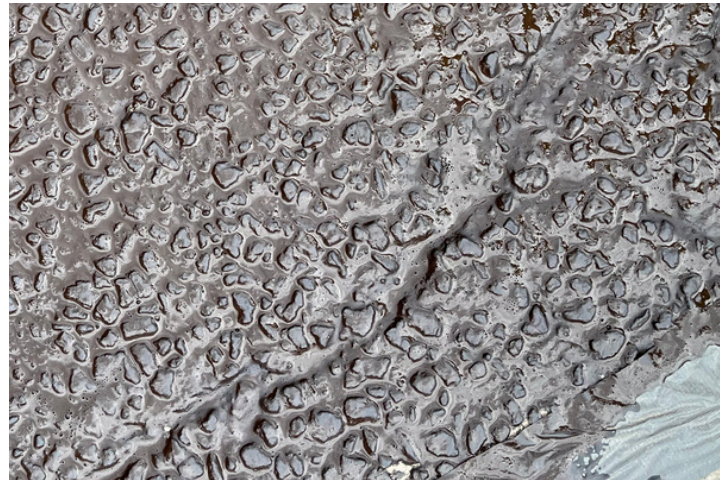


## Minor Crack Repair

Road Shield can also be used to fill minor cracks. Work should only be carried out in dry, fine conditions, with an ambient temperature >10°C, and should cease if road temperatures become excessive. Work should also cease if rain appears imminent.

## Process

- The area to be treated should be cleaned thoroughly.
- Any cracks should be blown out using a crimped steel pipe connected to an air compressor.
- The area to be treated should then be taped out ensuring a neat finish.
- A light application of kiln dried sand should then be brushed into the cracks which acts as a plug to stop the Road Shield running away into the substrate. Please Note - the crack should only have enough sand applied to fill the bottom of the crack.
- Stir the Road Shield thoroughly and pour out directly on to the surface and apply a thin layer with a yard brush (a roller can pluck the kiln dried sand from the cracks and so should be avoided).
- The Road Shield should be left to dry thoroughly (if required, drying can be assisted with gentle heating from a gas bottle and burner - direct flame should be avoided).
- On larger cracks a fine shrinkage crack may appear after a first application.
- If required these areas can have a second coating of Road Shield applied directly to it.



## Early Treatment Benefits

This surface was showing signs of distress. Early treatment of Road Shield helped seal the surface off from the ingress of water and prolonged the service life of the pavement so far by 7½ years - *see separate case study available on request*

