

# BS group Bitumen Emulsion CMS-2

Cationic Bitumen Emulsion Medium Setting



## Introduction

BS group Bitumen Emulsion MS-2K/ CMS-2 is medium setting which containing minimum 65% Bitumen. Asphalt Emulsion CMS-2 is specially designed water based Bitumen Emulsion with moderate viscosity and setting time. This makes it a perfect product for premixing applications. It is chocolate brown in color and is a free flowing liquid at ambient temperature.

Tack coat MS-2K cationic bitumen emulsion is made according to Malaysian Standard, MS 1.61 (1994).

## Typical properties of CMS-2

BS group asphalt emulsion CMS-2 is manufactured strictly as per ASTM D2397-13 AASHTO M208-16 or IS 8887: 2004.

Property	Min	Max	Test Method
Viscosity, Saybolt Furol at 25°C, SFS	-	-	ASTM D7496
Viscosity, Saybolt Furol at 50°C, SFS	50	450	ASTM D7496
Storage stability test, 24-h, %	-	1	ASTM D6930
Demulsibility, 35mL, 0.8% dioctyl sodium sulfosuccinate, %	-	-	ASTM D6936
<b>Coating ability and water resistance:</b>			
Coating, dry aggregate	Good		ASTM D244
Coating, after spraying	Fair		ASTM D244
Coating, wet aggregate	Fair		ASTM D244
Coating, after spraying	Fair		ASTM D244
Particle charge test	positive	positive	ASTM D244
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test,%	-	-	ASTM D6935
<b>Distillation:</b>			
Oil distillate, by volume of emulsion, %	-	12	ASTM D6997
Residue, %	65	-	ASTM D6997
<b>Tests on residue from distillation test:</b>			
Penetration, 25°C (77°F), 100g, 5s	100	250	ASTM D5
Ductility, 25°C (77°F), 5cm/min, cm	40	-	ASTM D113
Solubility in trichloroethylene, %	97.5	-	ASTM D2042

## Advantages

At the following you can find some advantages of this product:

- No heating required thus eco-friendly
- Cost and energy efficient
- Easy and even mixing
- Low temperature curing
- Minimum preparation time for surface repair
- High adhesive properties
- Firm patch
- Resistant to stripping of water
- Bonds well with cool, damp surfaces.

## Applications

BS group Bitumen Emulsion CMS-2 is ideally suited for Patch Repairing & Pot Hole Repairing. You will see more information about applications of this product below:

The procedure consists of

- Blow off water and debris from the pot hole.
- Cut to rectangular shapes with all sides vertical
- Remove loose material, if any
- Spray tack coat of asphalt emulsion on all the side and bottom
- Mix prepared of clean (preferably washed) and dry aggregates with HPCPL MS cationic bitumen emulsion
- Typically, 13.2 mm and 11.2 mm sized aggregates mixed in 2:1 ratio
- HPCPL MS cationic bitumen emulsion content of approximately 7% by weight of aggregates works best
- Mix aggregates and emulsion properly to ensure good and uniform coating
- Mix till entire emulsion is broken (turn to black in color)
- Fill the premix immediately into the pot hole up to a level slightly higher than the adjoining road surface and roll properly
- Open the repaired pot hole to traffic as soon as workers and equipment are clear

For economical and fast construction of wearing course, emulsion is used for Premix Carpet.

## Recommended rate of application

Typical rate of application of BS group Bitumen Emulsion CMS for Patch Repairing/Pot Hole Repairing is 7 % by weight of aggregates.

Tack Coat MS-2K / CMS-2 cationic bitumen emulsion can be used at ambient temperature at the spray rate of 0.25 to 0.70 liter per square meter (0.05 to 0.15 gallon per square yard).

### To ensure best results

- Use without diluting Bitumen Emulsion with any solvent or water
- Use at ambient temperature
- Roll the Bitumen Emulsion drums 5 times before using

### Handling and safety

- Contains petroleum distillate; flammable: keep away from open fire, sparks or other ignition sources; wear protective clothing, gloves and goggles.
- Fire flammable when wet, flash point 40°C.
- Skin –avoid repeated or prolonged contact, if occurs remove with hand cleaner that removes oil or grease, then clean with soap and water.
- Eyes contact could cause irritation, if contact occurs flush immediately with clean water  
Inhalation can cause dizziness, move immediately in fresh air if dizzy and if breathing difficulty persists administer oxygen.

### Cleaning

**Tools:** Clean with kerosene.

**Hands:** Use a hand cleanser or kerosene followed by soap and water.

### Availability

BS group asphalt emulsion CMS-2 is available in:

- Bulk
- IBC Tank, Flexi Tank
- Reconditioned steel drums 220 lit., Net Weight: 200 ± 3 Kg
- New steel drums 220 lit., Net Weight: 200 ± 3 Kg

### Production Standard

ASTM D2397-13

AASHTO M208-16

IS 8887: 2004