

BS group Bitumen Emulsion CSS1

Cationic Bitumen Emulsion Slow Setting



Introduction

BS group Bitumen Emulsion CSS-1 is cationic bitumen emulsion containing minimum 57% bitumen. It's specially designed water based Bitumen Emulsion with low viscosity and extended setting time that makes it an ideal product for prime coating on high porous surfaces. It is dark brown in color and is a free flowing liquid at ambient temperature.

Prime coat SS-1K / CSS-1 is a low viscosity emulsion used mainly for prime coating in place of cutback asphalt. Prime coat SS-1K / CSS-1 bitumen emulsion is made according to Malaysian Standard, MS 1.61: 1994 Grade SS-1K.

Typical properties of CSS1

BS group asphalt emulsion CSS-1 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	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1	ASTM D6930
Demulsibility, 35mL, 0.8% dioctyl sodium sulfosuccinate, %	-	-	ASTM D6936
Coating ability and water resistance:			
Particle charge test	positive	positive	ASTM D7402
Sieve test, %	-	0.1	ASTM D6933
Cement mixing test,%	-	2.0	ASTM D6935
Distillation:			
Oil distillate, by volume of emulsion, %	-	-	ASTM D6997
Residue, %	57	-	ASTM D6997
Tests on residue from distillation test:			
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:

- Environment friendly
- No heating requires, cost efficient
- Bound well with cool, damp surfaces
- High adhesive properties
- Low temperature curing
- Penetrate the cracks and impart strength to the layers

Applications

CSS-1 is an absorptive surface material (like low to medium high porosity wet mix macadam or water bound macadam), designed to penetrate, plug the capillary voids in the surface, bond and stabilize the existing surface and to promote adhesion between it and the construction course that follows. BS group Bitumen Emulsion CSS1 is ideally suited for Prime Coat application on high porous surfaces like WBM. It can also be used as Fog Seal Application.

For pavement bases and surfaces:

Plant mix (cold):

- with both dense-graded aggregate and sand

Mixed-in-place:

- Dense-graded aggregate
- Sand
- Sandy soil
- Slurry seal

Bituminous applications

- Fog Seal
- Prime coat-penetrable surface
- Tack coat
- Dust Binder
- Mulch Treatment
- Crack filler

Recommended rate of application

Bitumen Emulsion CSS1 ASTM is designed for use in slurry seals and for cold storable mixtures for patching. They are designed for soil stabilization and also suitable for use with cold recycling. These emulsions are tailor made as per quality of aggregates and local site conditions.

Application	Quantity in Kg/10 m2 Area
Fog Seal	5 to 10
Slurry Seal	10 to 12
Premix Seal Coat	12 o 15

To ensure best results

- Use without diluting Bitumen Emulsion with water
- Use at ambient temperature
- Roll the Bitumen Emulsion drums to and fro motion at a distance of minimum 5 meter

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 CSS1 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