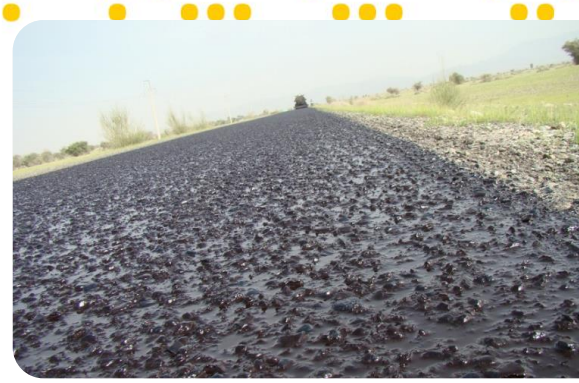
BS group Bitumen Emulsion CRS1

Cationic Bitumen Emulsion Rapid Setting



Introduction

BS group Bitumen Emulsion CRS1 is specially designed water based Bitumen Emulsion with low viscosity and fast setting that makes it an ideal product for Tack Coat spray application but one of the main application of CRS emulsion is surface treatment (Chip seal, sand seal and fog seal by cement curing). BS group asphalt emulsion CRS-1 contains 60% bitumen and it is chocolate brown in color and is a free flowing liquid at ambient temperature.

Typical properties of CRS1

BS group Bitumen Emulsion CRS1 is manufactured strictly as per ASTM D2397-13 AASHTO M208-16 or IS 8887: 2004.

Property	Min	Max	Test Method
Viscosity, Saybolt Furol at 50°C, SFS	20	100	ASTM D7496
Storage stability test, 24-h, %	-	1	ASTM D6930
Demulsibility, 35mL, 0.8% dioctyl sodium sulfosuccinate, %	40	-	ASTM D6936
Coating ability and water resistance:			
Particle charge test	positive	positive	ASTM D7402
Sieve test, %	-	0.1	ASTM D6933
Distillation:			
Oil distillate, by volume of emulsion, %	-	3	ASTM D6997
Residue, %	60	-	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 required
- Cost efficient
- Easy and uniform spray
- Low temperature curing, fast setting time
- High adhesive properties
- Prevents slippage of structural layers

Applications

Main application of CRS asphalt emulsion is using for surface treatment projects as:

- Single surface treatment
- Multiple surface treatment
- Sand seal

BS group Bitumen Emulsion CRS1 is ideally suited for Tack Coat application as well and other applications will see below:

- To ensure a proper bond between existing surface and the new bituminous course being placed over it.
- To ensure longevity of the road, it is important that the new bituminous surface bonds firmly with underneath surface
- To coat and bond loose mineral particle on the surface of the surface layer
- To seal surface pores and make the surface water-resistant
- To impart structural stability and prevent lateral movement of layer
- To assist adhesion between the base and super impose surface course

Tack coat application is a light spray of Bitumen Emulsion, which may be hand or machine sprayed. It is used to ensure a good bond between an old and a new bituminous surfacing layer. It is normally applied very thin and evenly over the entire surface.

Recommended Rate of Application

Application	Quantity in Kg/10 m^2 Area
Bitumen Surface	2 – 2.5
Aged Bitumen Surface	2.5 – 3
Primed Surface	2.5 – 3
Non Bitumen Surface	
Granular Base (Not Primed)	3.5 – 4.0
Cement Concrete Pavement	3.0 – 3.5

To Ensure Best Result

- 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 Bitumen Emulsion CRS1 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