

Product Description

Liquid Bitumin Rapid Setting Grade is a high performance Cationic Rapid Setting Liquid. It is a water based emulsion with low viscosity and fast setting time, that makes it ideal for spray application. The liquid is designed to react quickly with aggregate and revert rapidly from the liquid state to hard bitumen.

Uses

- Mostly suited for Tack coat application and surface dressing works.
- Ideal for bituminous surfaces, aged bituminous surfaces, primed bituminous surfaces and non-bituminous surfaces.

Advantages

- Easy to apply
- Low temperature curing and fast setting time
- Cost Efficient and high adhesive property

Application Procedure

Surface Preparation

Surface preparation is the most important step before application of Liquibit rapid setting emulsion. Prior to the application of bituminous material, all loose dirt and other objectionable material shall be removed from the surface with a power brush. When required, a light application of water shall be made just before the application of bituminous material.

Application

If the liquid is procured in barrels, each barrel must be laid on its side and rolled gently, to and fro, to agitate the liquid to counter any minor settlement that may occur during storage.

If the liquid has been stored at the bulk, it may gently be agitated through circulation, prior to application.

Rapid setting RS 1 grade is primarily used for tack coat applications and is sprayed on the surface very thin and must cover the entire surface evenly. Too much tack coat may create a slipping plane between the two courses, as the bitumen may act as a lubricant. All bonding operations require a clean base. After spraying the tack coat, enough time should be allowed for complete breaking to occur before the new reinforcement or maintenance layer is placed. During this time, traffic should be kept off the tacked area.

Rapid setting RS 2 grade is specially recommended for surface dressing work. In surface dressing, bitumen is sprayed on the road surface by a sprayer tank. An aggregate cover follows immediately, laid by a grit spreader, and the surface is then rolled as soon as possible. Surface Dressing is performed either in single or multiple (two or even three) layers, the thickness of each layer being approximately equal to the maximum dimension of the aggregates. The purpose of surface dressing is mainly to bind the aggregates to the base course, improving the impregnability of the pavement. The importance of having a strong base under the new wearing course should be noted. Surface dressing layer is laid on many types of road, from rural and mountain roads to city and major roads.

Coverage

Recommended rate of application is 2.5 to 5 Kg per 10 m² area.

Packing 200 kg barrel or as bulk.

Mechanical Properties

Properties	Test Method	RS 1	RS 2
Residue on 600 micron IS sieve, percent by mass, Max	IS 8887:2004	0.05	0.05
Viscosity by Saybolt Viscometer, seconds: 1) At 25° C 2) At 50° C	IS 3117	- 20 - 100	- 100 - 300
Coagulation of emulsion at low temperature	IS 8887:2004	NIL	NIL
Storage Stability after 24 hrs, percent, Max	IS 8887:2004	2	1
Particle charge	IS 8887:2004	Positive	Positive
Miscibility with water	IS 8887:2004	No Coagulation	No Coagulation
Test on residue:	IS 8887:2004		
1) Residue by evaporation, %, Min		60	67
2) Penetration 25 °C/100 g/ 5 sec	IS 1203	80-150	80-150
3) Ductility 27° C/cm, Min	IS 1208	50	50
4) Solubility: In trichloroethylene, percent by mass, Min	IS 1216	98	98

Storage

SS 1 and SS 2 are preferred to be stored as emulsions in bulk tanks. Vertical tanks that minimise the surface area of liquid are preferred to horizontal tanks. Do not allow a bituminous emulsion to either freeze or boil – it will break. Storage temperature should not be allowed to fall below 10°C or exceed 85°C (except for some specialty emulsions that may be heated as high as 90°C under strictly controlled conditions)

Safety precautions

Wear all necessary safety goggles, gloves, shoes, etc. while handling emulsion. Any splashes on the skin or eyes, seek medical attention immediately. Bitmen emulsion should be used at ambient temperatures and use without diluting with any solvent. If the liquid is procured in barrels, each barrel must be laid on its side and rolled gently, to and fro, to agitate the liquid to counter any minor settlement that may occur during storage. If the liquid has been stored at the bulk, it may gently be agitated through circulation, prior to application.