

**GOVERNMENT OF TELANGANA  
ROADS AND BUILDINGS DEPARTMENT**

Office of the Chief Engineer (R&B)  
Administration & QC, Hyderabad.

**Circular Memo No: 711/CE(Admin&QC)/EE(QC&MC)/DEEE/AEE2/2017 Dt.27.12. 2017**

**Sub:-**(R&B)Department –Road Works- Providing prime coat over Granular Base (WMM) using Bitumen Emulsion SS1 preparatory to the super imposition of Bituminous Mix- - Certain Instructions -Issued -Regarding.

**Ref:-**1)MORT&H 5th Revision- Clause 502.  
2) Manual for Construction and Supervision of Bituminous Works  
3)IRC :16- 2008- Standard Specifications and Code of Practice for Prime and Tack Coat (Second Revision)

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It has come to the notice of the undersigned that priming coat and tack coat are being done simultaneously on granular base instead of applying priming coat and without curing for minimum period of 24 hours as per MORT&H Clause 502. Further tack coat shall be laid only on Primed granular base as per MORT&H Clause 503. Laying of Prime Coat and tack coat together is violating the procedure for priming coat.

In this regard, it is to state that the objectives of priming a granular surface are as under:

- (i) to penetrate the existing base course surface so as to plug capillary voids in it.
- (ii) to coat and bond loose mineral particles on the surface of the base course.
- (iii) to seal surface pores and make the surface of the base course water-resistant.
- (iv) to provide adhesion between the base and the superimposed bituminous surface course in conjunction with a tack coat.

Prime Coat is not to be regarded as a substitute for tack coat

The primer shall be cationic bitumen emulsion SS1 Grade conforming to IS:8887. Quantity of SS1 grade bitumen emulsion for WMM/ WBM surface shall be 0.70-1.00 kg/sqm or as specified in the agreement. The quantity of primer shall be such that it should achieve desired penetration of about shall 8-10 mm deep into base course.

Bitumen emulsion shall be applied on a damp surface. Surface shall be just wet with very light sprinkling of water. Primer shall not be applied during dust storm, rainy, foggy or windy weather. The ambient temperature during priming by bitumen emulsion should be above 10°C.

The primer distributor shall be a self-propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures. Hand spraying shall not be allowed except in small areas, inaccessible to the distributor, or in narrow strips ( width < 3.0 m ) where primer shall be sprayed with a pressure hand Sprayer, or as directed by the Engineer. Pouring of primer using perforated can should not be permitted.

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The granular surface to be primed shall be swept clean of dust and loose and other foreign particles using power broom or mechanical sweepers. All loose material and other foreign material on the surface shall be removed completely.

Before opening, the cationic bitumen emulsion drums shall be rolled at a slow speed, to and fro at least 5 times, for a distance of about 10metres, to distribute any storage sedimentation.

After preparation of base, the primer shall be sprayed uniformly at the specified rate. The method for application of the primer will depend on the type of equipment to be used, size of nozzles, pressure at the spray bar and speed of forward movement. The Contractor shall demonstrate at a spraying trial, that the equipment and method to be used is capable of producing a uniform spray, within the tolerances specified.

No heating or dilution of SS1 bitumen emulsion shall be permitted.

A primed surface shall be allowed to cure for at least 24 hours or such other higher period as is found to be necessary to allow all the moisture/volatiles to evaporate before any subsequent surface treatment or mix is laid. Any unabsorbed primer shall first be blotted with an application of sand, using the minimum quantity possible. A primed surface shall not be opened to traffic other than that necessary construction vehicles to lay the next bituminous course.

The Quality of Bitumen Emulsion SS1 shall be checked as per IS:8887 at the rate one test for tanker or lot of 10 tonne. Rate of spread of binder shall be checked as per Appendix 2 of IRC:16-2008 at one test per 1000 sqm and not less than two tests per day.

All the Superintending Engineers(R&B) and Executive Engineers(R&B) are instructed to follow the guide lines scrupulously, ensure that MORT&H Clause 502 is followed for prime coat and any negligence and lapse in the this regard will be viewed seriously and action will be initiated on the defaulting filed Engineers.

*H. Jindal*  
28/12/2017  
for Chief Engineer (R&B)  
Administration & QC

To

- ◆ The Superintending Engineers (R&B) i.e 1) Rural Circle, Hyderabad 2) Head Quarter Circle, Hyderabad 3) Karimnagar 4) Warangal 5) Nalgonda 6) Khammam 7) Nizambad 8) Mahabubnagar 9) Adilabad 10) Sanga Reddy 11) NH Circle, Hyderabad 12) NH Circle, Karimnagar.
- ◆ The District (R&B) officers i.e 1) Adilabad 2) Mancherial 3) Nirmal 4) Khumarambheem Asifabad 5) Karimnagar 6) Jagithyla 7) Peddhapally 8) Rajanna Siricilla 9) Nizambad 10) Kamareddy 11) Warangal Urban 12) Warangal Rural 13) Jayashankar Bhupalapally 14) Janagaama 15) Mahabubabad 16) Khammam 17) Bhadradi Kothagudem 18) Medak 19) Sangareddy 20) Siddipet 21) Mahabubnagar 22) Wanaparthi 23) Nagar Kurnool 24) Jogulamaba Gadwal 25) Nalgonda 26) Suryapet 27) Yadadri Bhongiri 28) Vikrabad 29) Medachal (Malkajigiri) 30) Rangareddy 31) Hyderabad (EBD).

➔ **The Executive Engineers (R&B) i.e,** 1) South Building Division, Hyderabad 2) North Building Division, Hyderabad 3) Assembly Building Division ,Hyderabad 4) Central Building Division ,Hyderabad 5) NH Division, Hyderabad 6)NH Division, Warangal 7) NH Division, Perkit 8) NH Division, Khammam 9) NH Division, Kalwakurthy 10) NH Division, Mancheria11)Sathupally 12) Radial Roads.

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