

OFFICE OF THE CHIEF ENGINEER : PWD : RAJASTHAN : JAIPUR

No. SE PWD D-198

Dated : 11.3.04

CIRCULAR No. 1/2004

Sub:- Use of Crumb Rubber Modified Bitumen (CRMB) for wearing course on roads under PMGSY.

In view of specific recommendations of Ministry of Rural Development, Government of India, issued vide letter dated 14.11.2002, CRMB is being used for the wearing course on the road works under PMGSY. To ensure improved performance by use of CRMB in surfacing course (Generally premixed carpet), following points should be strictly followed :

- 1) Only "Refinery Manufactured" CRMB should be used. It is mandatory to check documents related to "purchase evidence" when the contractor had purchased such product from refineries. Mixing of Crumb Rubber Modifier at site shall not be allowed in any circumstances.
- 2) Properties of the CRMB should conform to IRC-SP:53-2002.
 - a) A test certificate for ensuring quality of CRMB should invariably be obtained from the refinery with each consignment.
 - b) Properties of CRMB such as penetration, Softening point and elastic recovery etc. should be regularly checked. Penetration and softening tests should be done for each consignment and records are to be maintained properly.
- 3) Selection criteria for CRMB will be governed by clause 8.2 and Table-6 of IRC SP-53-2002. Accordingly, based on tropical climatic conditions in the State of Rajasthan, CRMB-60 should be used as Binder in surfacing course.
- 4) The temperature requirement for CRMB is slightly higher than conventional bituminous mixes & it should be strictly adhered to as specified in Table-8 of IRC:SP:53:2002. It is reproduced below for ready reference.

<u>Stage of work</u>	<u>Temp. Range (°C)</u>
a) Binder at Mixing	165-185
b) Mix at Mixing Plant	140-160
c) Mix at laying site	130-150
d) Rolling at laying site	115-135

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- 5) As there are no clear guidelines about the storage life of modified bitumen, it should be used in the least possible time after its procurement from refinery.
- 6) Multiple heating of CRMB shall be avoided to retain its premium properties.

Above instructions for use of CRMB for wearing coat in PMGSY works are to be circulated to all the concerned technical staff and adhered to.

[Signature]
 (H.L. Mina) 11/3/2024
 Chief Engineer, PWD

Copy to:

- The Additional Chief Engineer, PWD Zone (All)
- ✓ The Superintending Engineer PWD Circle Rural Jaipur (All)
- The Executive Engineer PWD Dn. (All)

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 दिनांक - 19-3-2024

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[Signature]
 (H.L. Mina)
 Chief Engineer, PWD
 11/3/2024

महायक/ *[Signature]*
 चीफ़ ईंजीनियर (U, R & B) for District
 Jaipur

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 Sent copy to all the CCs and
 also in copy in G.P. file.
 19/3/2024

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उपरोक्त कार्य हेतु
 इत-शामिल
 नं. 6952

DA 18.3.24

2 Copy to XEN. PWD. Distt. Dn. 2 BE Jaipur
 & III H.O. Shubra for information & n/a.

[Signature]
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