

**TESTING OF COLD MIX BINDERS SUPPLIED BY
MIXXON PETROCHEMICALS PVT. LTD, AIE
INDUSTRIAL PARK, PEDAGANTYADA,
VIZAG- 44, ANDHRA PRADESH**

Ref.: NIL, Dated 24.01.2019



**TRANSPORTATION DIVISION
DEPARTMENT OF CIVIL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL - 506 004, TELANGANA, INDIA
MARCH 2019**

1. INTRODUCTION

The Mixxon Petrochemicals Pvt. Ltd, AIE industrial Park ,Pedagantyada,Vizag- 44, Andhra Pradesh, requested the National Institute of Technology, Warangal (NITW) to perform the following tests on one emulsion binders: viscosity test, storage stability tests, particle charge test, residue on 600micron IS sieve, coagulation at low temperature, miscibility with water, residue on evaporation, penetration, ductility test, and solubility test. Subsequently, these tests were carried out at NITW, and the test results are reported below.

2. TESTS ON COLDMIX BINDERS SAMPLE

The test results on cold mix binders sample are shown in Table 1.

Table 1 Test results on cold mix binders

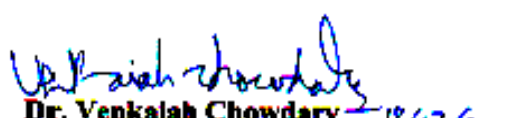
| Tests | Obtained Result | Specifications limits |
|--------------------------------------|-----------------|-----------------------|
| Viscosity, at 25 degrees | 31 | 20-100 |
| Storage Stability after 24 hours (%) | 0.62 | Max.1 |
| Particle Charge Test | Positive | Positive |
| Residue on 600 micron Sieve | 0.049 | Max 0.05 |
| Coagulation at low temperatures | Nil | Nil |
| Miscibility with water | No | No |
| Tests on Residue | | |
| Tests | Obtained Result | Specifications limits |
| Residue by evaporation | 66.78% | Min 60% |
| Penetration at 25 degrees Celsius | 67 | 60-120 |
| Ductility at 27 degrees Celsius | 60 | Min 50 cm |
| Solubility in Trichloroethylene | 99.9 | Min.98 |

References

- 1) IS 8887 (2004) Bitumen Emulsion for Roads (Cationic Type), New Delhi, India.
- 2) IS 3117(2004) Bitumen Emulsions for roads and allied applications, New Delhi, India.



Dr. S. Shankar
Assistant Professor
Transportation Division
Department of Civil Engineering


Dr. Venkalah Chowdary 18/03/2019
Associate Professor and Head
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Department of Civil Engineering



Deputy Executive Engineer (PR), PIU Sub Division, Paderu, and Visakhapatnam District

Date: 22-10-2019

TO WHOMSOEVER IT MAY CONCERN

This is to certify that cold mix binder supplied by M/S Mixxon Petrochemicals Pvt Ltd was found to have satisfactory performance and it was successful in fulfilling our site requirements in accordance with IRC Specifications and at Competitive price.

The following road works were executed by using the above said product.

- 1."Providing BT Surface to the Road from Vanthala road to Chintagondi of G.Madugula mandal for Length of 0.65km in PMGSY Ph XI Grant, Est.Cost:55.20Lakhs", Visakhapatnam District
- 2."Providing BT Surface to the Road from Vanthala road to Savaragedda of G.Madugula mandal for Length of 0.35km in PMGSY Ph XI Grant, Est.Cost:38.30Lakhs", Visakhapatnam District

Yours faithfully,

Deputy Executive Engineer (PR)
PIU Subdivision, Paderu

Government of Andhra Pradesh
Panchayat Raj Engineering Department
Office of the Superintending Engineer, PR Circle, Visakhapatnam.

From
Sri. G.Sudhakar Reddy, B.Tech
Superintending Engineer,
PR Circle, Visakhapatnam.

✓ To
The Engineer-In-Chief,
Panchayat Raj,
Vijayawada.

Re.No. AEE8 /PMGSY/SE PR VSP/2018 Dt. .03.2020

Sir,

Sub :-PR Circle, Visakhapatnam –PMGSY-PackageNo.AP1918 P15-Two works-1.“Road from Vanthala Raoad to Chintagondi-0.61km Est cost Rs.55.20 lakhs 2. .“Road from Vanthala Raoad to Savaragedda-0.35km Est cost Rs.38.30 lakhs of G.Madugula mandal of Visakhapatnam District-Use of cold mix technology in construction of Rural roads –supply of cold mix to the contractors by the Mixxon petro chemicals Pvt Ltd- Report submitted-Regarding.

- Ref:- 1) Lr Rc.No.31/2013-14/AE/DB, dated 10.02.2020 of the Executive Engineer, PIU, Paderu.
2) Memo No.AEE T1/ cold mix/ 2019, dt 18-04-2019 of the Engineer-in-Chief, Vijayawada.
3) Lr dated 07.02.2020 of Mixxon Petrochemicals Pvt Ltd, industrial Park, Pedagantyada, Visakhapatnam.
4) Performance evaluation Report given by NIT Warangal

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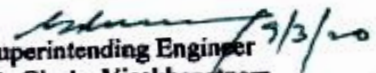
It is submitted that in the ref 1st cited the Executive Engineer,PIU,Paderu stated that Mixxon petro chemicals Pvt Ltd has supplied Bitumen emulsions to the executing agency for usage of cold mix technology for black topping of the two works on pilot basis -“ PackageNo.AP1918 P15-1.“Road rom Vanthala Raoad to Chintagondi-0.61km Est cost Rs.55.20 lakhs 2.“Road from Vanthala Raoad to Savaragedda-0.35km Est cost Rs.38.30 lakhs of G.Madugula mandal of Visakhapatnam District

The works were executed duly obtaining required test certificates of the cold mix material supplied by Mixxon petro chemicals Pvt Ltd from Warangal and were completed by using the M/s Mixxon Mixxon petro chemicals cold mix technology in june2019 and the roads evaluated on 18th January 2020by NIT warangaland the results found satisfactory and in good condition with a request to approval the Mixxon Cold mix and allow to procure the material by the executing agency.e.Mixxon Petro chemicals Pvt Ltd.

This is submitted for taking further action.

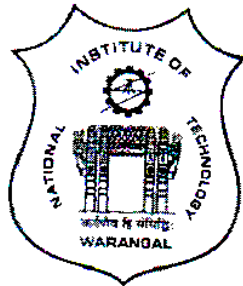
Encl: Ref 1-3

Yours faithfully,


Superintending Engineer
PR, Circle, Visakhapatnam
9/3/20

**VISUAL EVALUATION OF ROADS CONSTRUCTED
USING COLD MIX TECHNOLOGY IN PADERU
DIVISION, VISAKHAPATNAM- 44,
ANDHRA PRADESH**

Ref.: Lr dated 07.01.2020



**TRANSPORTATION DIVISION
DEPARTMENT OF CIVIL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL - 506 004, TELANGANA, INDIA
JANUARY 2020**

1. INTRODUCTION

The Mixxon Petrochemicals Pvt. Ltd, AIE industrial Park, Pedagantyada, Visakhapatnam, - 44, Andhra Pradesh, requested the National Institute of Technology, Warangal (NITW), to evaluate the following roads constructed with cold mix technology in Paderu division, Visakhapatnam, Andhra Pradesh. The following is a list of the roads evaluated by the Transportation Division of the National Institute of Technology, Warangal.

- 1) The road from Vanthala to Chintagondi of G. Madugula Mandal for length 0.615km constructed under PMGSY grants Package No: AP1918P15-2018-19 (Batch-I).
- 2) The road from Vanthala to Savaragidda of G. Madugula Mandal for length 0.35km constructed under PMGSY grants Package No: AP1918P15-2018-19 (Batch-I).

2. VISUAL DISTRESS SURVEY RESULTS

The road from Vanthala to Chintagondi of G. Madugula Mandal of length 0.615 km is opened to the traffic in June 2019. The distress evaluation survey is carried out on 18th January 2020 i.e., for (07 months only), and the results are presented below in Table 1.

Table 1 Distress Results of Vanthala Road to Chinthagonthu

| Chainage | Distress Severity | | | Area of Test Section (150 sqm) | | |
|------------------------------------|-------------------|----------|------------|--------------------------------|-------------|--------------|
| | Distress | Severity | Extent | Quantity of distress (sqm) | Density (%) | Deduct Value |
| 0+50 | -Distresses NIL- | | | | | |
| 0+100 | -Distresses NIL- | | | | | |
| 0+150 | Raveling | Low | Occasional | 1.2 | 0.8 | 1.0 |
| 0+200 | -Distresses NIL- | | | | | |
| 0+250 | - Distresses NIL- | | | | | |
| 0+300 | - Distresses NIL- | | | | | |
| 0+350 | Raveling | Low | Occasional | 0.9 | 0.6 | 0.8 |
| 0+400 | - Distresses NIL- | | | | | |
| 0+450 | - Distresses NIL- | | | | | |
| 0+500 | - Distresses NIL- | | | | | |
| 0+550 | - Distresses NIL- | | | | | |
| 0+600 | - Distresses NIL- | | | | | |
| 0+615 | - Distresses NIL- | | | | | |
| Total Deduct Value | | | | | | 1.8 |
| Maximum Corrected Deduct Value | | | | | | 1.8 |
| Pavement Condition Index (100-1.8) | | | | | | 98.2 |
| Pavement Condition Rating | | | | | | Good |

Similarly, the road from Vanthala to Savaragidda of G.Madugula Mandal for length 0.35km constructed under PMGSY is opened to the traffic in June 2019.

The distress evaluation survey is carried out on 18th Janury, 2020, i.e., for (07 months only), and the results are presented below in Table 2.

Table 1 Distress Results of Vanthala Road to Savaragidda

| Chainage | Distress Severity | | | Area of Test Section (150 sqm) | | |
|----------|-------------------|----------|------------|--------------------------------|------------------------------------|--------------|
| | Distress | Severity | Extent | Quantity of distress (sqm) | Density (%) | Deduct Value |
| 0+50 | - Distresses NIL- | | | | | |
| 0+100 | - Distresses NIL- | | | | | |
| 0+150 | - Distresses NIL- | | | | | |
| 0+200 | Raveling | Low | Occasional | 0.75 | 0.5 | 0.5 |
| 0+250 | - Distresses NIL- | | | | | |
| 0+300 | - Distresses NIL- | | | | | |
| 0+350 | - Distresses NIL- | | | | | |
| | | | | | Total Deduct Value | 0.5 |
| | | | | | Maximum Corrected Deduct Value | 0.5 |
| | | | | | Pavement Condition Index (100-0.5) | 99.5 |
| | | | | | Pavement Condition Rating | Good |

Reference

- 1) ASTM-D6433-07 "Standard practice for roads and parking lots and pavement condition index surveys." West Conshohocken, PA, USA.

S. Shankar
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 Transportation Division
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 Department of Civil Engineering





Date: 06.05.2019

TO WHOM SOEVER IT MAY CONCERN

This is to certify that Bitumen Emulsion (SS1 & RS1) supplied by M/s. Mixxon Petrochemicals Pvt. Ltd. was found to have satisfactory performance. The product was successful in fulfilling our site requirements in accordance with IRC specifications.

The following project is being executed by using above said products.

Hyderabad Outer Ring Road to Medak section of NH-765D from existing Km 15/970 (Design Km 0/000) to Km 78/700 (Design Km 62.920) to Two lane with paved shoulders / Four lane in the State of Telangana.

I convey my best wishes to Mixxon Petrochemical.

Thanking you,



Authorized Signatory

SLMI Infra Projects Pvt. Ltd.