

REGIONAL LABORATORY
R.W.D, MUZFFARPUR

TEST RESULT OF CONCRETE CUBE

Name of Work :- Cube Test for CCP-M30.
 Name of Road :- Birauli Pramod Thakur House to PMGSY Road
Birauli Khopi in Pupri Block under MMGSY.
 Name of Division :- R.W.D Works Division Pupri. Date of Collection/Receipt 12.10.2020
 Name of Agency :- Dewesh Kumar Singh. Date of Test :- 14.10.2020
 Agreement No :- 09/SBD/2020-21 Package No :- MMGSY.
 Ref :- (PIU) A.E R.W.D Works Sub Div. Pupri. LT No :- 0/Enclosure 12.10.2020

SL No	Test after 7 days			Test after 28 days CH-500 M.		
Dt. of Concreting				16.09.20	16.09.20	16.09.20
Dt. Of Test				14.10.20	14.10.20	14.10.20
I D Mark				D ₁	D ₂	D ₃
Area C.M ²				225	225	225
Maximum Load KN				670.00	690.00	670.00
Crushing Strength Kg/CM ²				303.85	312.92	303.85
Remarks				— M30 —		

Remarks :- M30.

Memo No. 1140 Date 14/10/2020

Copy To :- E.E R.W.D Works Division Pupri.

22/10/20
LA

14/10/20
A.E

14/10/20
E.E

R.W.D
Regional Laboratory
Muzaffarpur

REGIONAL LABORATORY
R.W.D, MUZAFFARPUR

PHYSICAL & GRADATION TEST OF WBM Gr. III

Name of Work:- Birauli Premod Thakur House to PMGSY Road Birauli
Khopi in Pupri Block under MMGSY.
 Name of Division:- R.W.D Works Division Pupri Date of Collection/ Receipt: 12.10.20
 Name of Agency:- Dewesh Kumar Singh Date of Test:- 14.10.2020
 Agreement No:- 09/SBD/2020-21 Package No:- MMGSY
 Ref:- (PIU) A.E, R.W.D, Works Sub Div Pupri LT No:- 0/Enclosure/DT 12.10.2020

PHYSICAL TEST

SL.NO	A.I.V		WATER ABSORPTION		REMARKS
	TEST VALUE %	REQUIRED LIMIT %	TEST VALUE %	REQUIRED LIMIT %	
1.	22.88%	40%	0.817%	3%	Permissible

GRADATION TEST

SL.NO	Sieve No. mm	Weight Retained (KG)	% Wt. of Retained	Cumulative % Retained	% of passing (KG)	Required limit %	Remarks
		CH - 400 M.					
		Wt. of Sample - 32.110 Kg.					
		Wt. of Screening - 6.904 "					
		Wt. of Stone Metal - 25.206 Kg.					
	63	NIL	NIL	NIL	100	100	
	53	1.311	5.20	5.20	94.80	95-100	
	45	6.579	26.10	31.30	68.70	65-90	
	22.4	14.720	58.40	89.70	10.30	0-10	
	11.2	2.336	9.27	98.97	1.03	0-5	Permissible.

Memo No:- 1140 Date: 14/10/2020

Copy to:- E.E, R.W.D, Works Div Pupri

21/10/20
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A.E

24/10/20
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GRADATION TEST OF G.S.B. Gr. I

Name of works: Construction of Road from Birauli Pramod Thakur House to PMGSY Road Birauli Khopi under MMGSY under Pupri Block.

Name of Division: R.W.D, Works Division... Pupri Date of Collection: 12.10.20

Name of Agency: Dewesh Kr. Singh Date of Test: 14.10.2020

Agreement No: 09/SBD/2020-21 Package No: MMGSY

Ref: (PIU) A.E, R.W.D, Works Sub Div. Pupri LT. No: 0/Enclosure/Jt. 12.10.20

GRADATION TEST OF GSB Gr. I

Name of works: Construction of Road from Birauli Pramod Thakur House to PMGSY Road Birauli Khopi under MMGSY under Pappri Block.

Name of Division: R.W.D, Works Division Pappri Date of Collection: 12.10.20

Name of Agency: Dewesh Kr. Singh Date of Test: 14.10.2020

Agreement No: 09/SBD/2020-21 Package No: MMGSY

Ref: (PIU) A.E, R.W.D, Works Sub Div. Pappri LT. No: Q/Enclosure/Jt. 12.10.20

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Memo No:- 1140 Date:- 14/10/2020

Copy forwarded to – Executive Engineer
R.W.D , Works Division Pupri.....

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 E.E
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MS TEST HOUSE

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...Substantial Testing for Quality Work

NABL ACCREDITED & ISO 9001:2015 CERTIFIED LABORATORY

(H.D. Office) Abhiyanta Nagar, Z-Sector Plot No.-09, Near R.J. Complex, Ashiana Nagar, Patna-800025

(B.R. Office) Raj Kumar Ganj, Near Poor Home, Darbhanga

Mobile no.: +91-900-6069-267, Email: - mstesthouse@gmail.com

TEST REPORT

Issued To:

Dewesh Kumar Singh

C-53, Ram Nagari More, Ashiyana Digha Road, Indrapuri, Fulwari, Patna

Description of Sample: Design Mix

Grade:- M-30

Sub: - Mix Design of concrete for the construction of Road and CD works with Maintenance for Birauli Pramod Thakur House to PMGSY Road Birauli Khopi Under MMGSY.

Ref.No.-, Dated: 09.05.2020

Report No: MSTH-0805201011

Date of Receipt: 10.05.2020

Date of Testing: 11.05.20-08.06.20

Date of Report: 09.06.2020

The method of concrete mix design consists of selection of optimum proportions of water, cement, fine & coarse aggregate and admixture of produce concrete of specified properties most economically. The proportion of concrete mix is obtained by experimentally evolved relationship between the factors in the choice of mix design. It provides reasonably accurate guide to arrive at optimum proportions of ingredients. The final mix proportions are obtained on the basis of trial mixes. The mix design has been carried out as per stipulation of India standards specification IS: 10262 guidelines keeping in view the recommended mix standard deviations and targeted mean strength. The Recommended mix proportions should be tested at site for their workability & strength before it is adopted.

1.	Design Stipulations:	
A	Characteristic Compressive Strength of Concrete required in field after 28 days	30 N/mm ²
B	Target Strength at 28 days N/mm ²	38.25 N/mm ²
C	Maximum size of Aggregates	20 mm
D	Required Slump	75-100 mm
E	Degree of quality control	Medium
F	Type of Exposure	Moderate
2.	Test Data For The Materials Used	
A	Type of Cement	OPC 43 Grade (Prism)
B	Consistency, %	30.2
C	Initial Setting Time (Minutes)	148
D	Final Setting Time(Minutes)	259
E	Compressive Strength (3 days) MPa	26.8
F	Compressive Strength (7 days) MPa	37.2
G	Compressive Strength (28 days) MPa	50.9
H	Specific Gravity	3.15
I	Minimum Cement Content	320 Kg/m ³
J	Specific Gravity of Admixture	
K	Type of Admixture	

Authorized Signatory
Kanwarshwar Kumar
(Tech. Manager)

- Sample as received in the Laboratory by Agency.
- Result listed refer only to the tested sample & applicable parameters. Endorsement of product is neither inferred nor implied.
- Sample will be destroyed after one month from the date of issue of test certificates unless otherwise specified.
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3. Source Of Material			
A	Coarse Aggregate (20mm & 10 mm)		Sheikhpura
B	Fine Aggregate (Sand)		Koliwar
4. Specific Gravity			
A	Coarse Aggregate (20mm)		2.72
B	Fine Aggregate		2.60
C	Impact Value, % Coarse Aggregate (20mm)		15.6
5. Abrasion Value, %			
A	Coarse Aggregate (20mm)		22.2
6. Water Absorption, %			
A	Coarse Aggregate (20 mm)		0.42
B	Fine Aggregate		1.32
7. Free Moisture Content, %			
A	Coarse Aggregate (20mm)		Nil
8. Bulk Density, Gm/Cc			
A	Coarse Aggregate (20mm)		1.47
B	Fine Aggregate		1.61
9. Sieve Analysis			
(i)	Coarse Aggregate:		
IS: Sieve Size (mm)	Analysis of Aggregate coarse fraction % finer (%)		As Per IS: 383 For Graded Aggregate Of Nominal Size
	20mm	10mm	62:38
40.0	100	100	100
20.0	95.5	100	97.1
12.5	-	100	-
10.0	12.2	91.6	42.4
4.75	1.5	11.7	5.0
2.36	-	2.3	-
(ii)	Fine Aggregate:		
IS : Sieve Size	Cumulative Percentage Passing		Cumulative percentage Finer as per IS: 383-2016 Zone-III
10.0 mm	100		100
4.75 mm	96.3		90-100
2.36 mm	90.1		85-100
1.18 mm	80.5		75-100
600 micron	66.2		60-79
300 micron	20.5		12-40
150 micron	7.7		0-10



Authorized Signatory
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MS TEST HOUSE

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 Mobile no.: +91-900-6065-267, Email: - mstesthouse@gmail.com

TEST REPORT

10. Determination Of Quantity Of Materials:					
Water Cement ratio			0.45		
Water:			195.0 Ltr./m ³		
Sand content:			659 Kg/m ³		
Coarse Aggregate:			1125 Kg/m ³		
Cement Content:			431 Kg/m ³		
Slump			96 mm		
11. Ratio (By Weight)					
Cement Content		Water	Fine Aggregate	Coarse Aggregate	
1		0.45	1.53	2.61	
Mix Proportion By Weight Are As Follows:					
Cement Kg/m ³		Water Kg/m ³	Admixture (% by wt. of Cement), Kg/m ³ (0.8) %	Fine Aggregate Kg/m ³ (38%)	Total Coarse Aggregate (20mm) Kg/m ³ (62%)
Trial-1	442	205.0	3.54	651	1111
Trial-2	437	200.0	3.50	654	1117
Trial-3	431	195.0	3.45	659	1125

Mix Proportion By Weight Are As Follows:				
Cement Kg/m ³	Water Kg/m ³	Admixture (% by wt. of Cement), Kg/m ³ (0.8)%	Fine Aggregate Kg/m ³ (38%)	Total Coarse Aggregate (20mm) Kg/m ³ (62%)
50	24.0	0.40	76.5	130.5



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TEST REPORT

12. A. Compressive Strength (7 Days)		DOC-11.05.2020	DOT-18.05.2020
S No.	Compressive Strength (N/mm ²)	Average Compressive Strength	
		(N/mm ²)	(Kg/cm ²)
1.	24.0	24.2	242
2.	23.9		
3.	24.6		
B. Compressive Strength (28 Days)		DOC-11.05.2020	DOT-08.06.2020
S No.	Compressive Strength (N/mm ²)	Average Compressive Strength	
		(N/mm ²)	(Kg/cm ²)
1.	39.3	39.9	399
2.	40.6		
3.	39.8		

Remarks: -

1. Trial-3 is recommended for the mix proportion at the Site for their Workability and Strength.
2. This mix design has been done at saturated condition.
3. Your material brought at site is dry or wet, than water can be decreased or increased according water Absorption.
4. Tap Water of our lab has been used, if water not supply, water should be pure and clean in concrete mix As Per IS: 456-2000 & IS: 3025
5. Admixture is used.



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 (Tech. Manager)