

Transportation Engineering Laboratory (TEL)

Department of Civil Engineering (CED)

UNIVERSITY OF ENGINEERING & TECHNOLOGY (UET)

LAHORE – 54890 (PAKISTAN)



Phone: 092-42-9929202 Cable: UNIVENGTECH Fax: 092-42-9922566

Ref.:-----

Date:-----

Mr. Manohar Lal
Chief Resident Engineer,
NESPAK.

Subject: **Testing of Sub-base Material**

Rehabilitation of G. T. Road from Chan Da Qila to Aziz Cross Chowk in
Gujranwala City, Length =12.75 km, District Gujranwala

Dear Sir,

It is with reference to your letter No. 3699/103/GT/GRW/ML/LAB/11 dated 01-02-2025.
Please find below the results for the tests conducted on the aggregate sample provided to this
laboratory on 06-02-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	2"	1"	3/8"	#4	#10	#40	#200
%age Passing	100	83.02	47.96	39.93	29.61	16.62	5.97

2. Los Angeles Abrasion Value Test (ASTM C-131/535)

Grading Used	Los Angeles Abrasion Value (%)
A	28.22

If you have further query, please do not hesitate to contact the undersigned.

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
2. Sampling has not been performed by Transportation Engineering Laboratory (TEL), UET and TEL-UET does not accept the responsibility that the sample(s) supplied is/are truly representative sample(s) of any batch or stock or entire project.
3. While TEL-UET agrees to take every reasonable precaution to ensure validity of its test results, it assumes no liability thereof beyond the amount of the fee charged for the analysis or test.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
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Ref.:-----

Date:-----

Mr. Manohar Lal
Chief Resident Engineer,
NESPAK.

Subject: **Testing of Water Bound Macadam (WBM) Material**
Rehabilitation of G.T. Road from Chan Da Qila to Aziz Cross Chowk in
Gujranwala City, Length =12.75 km, District Gujranwala

Dear Sir,

It is with reference to your letter No. 3699/103/GT/GRW/ML/LAB/12 dated 01-02-2025.
Please find below the results for the tests conducted on the aggregate sample provided to this
laboratory on 06-02-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	88.87	39.46	5.81	0	0	0	0	0

2. Sodium Sulphate Soundness (ASTM C-88)

Sieve Size	Weight of Fraction Before Test. (gm)	Weight of Fraction After Test. (gm)	Percentage Passing Designated Sieve After Test.	Weighted Percentage Loss.
2" + 1 1/2"	5009.3	4984.3	0.50	0.42
	Total = 0.42%			

3. Los Angeles Abrasion Value Test (ASTM C-131/535)

Grading Used	Los Angeles Abrasion Value (%)
1	20.43

4. Flakiness Index (BS 812: Part 105)

Sieve Size		Individual Flakiness Index (%)	Weighted Flakiness Index (%)
Passing (in.)	Retained (in.)		
3	2 ½	0	0
2 ½	2	2.53	1.25
2	1 ½	3.32	1.12
1 ½	1	2.64	0.15
		Flakiness Index = 2.52%	

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The Sub Divisional Officer,
Highways Sub Division,
Shakargarh.

Subject: **Testing of Bitumen – AASHTO Standard (M-20)**
Project: Restoration/Improvement of Shakargarh Badwal Morr to Kot Naina Road,
Length = 10.50 km, (Taken Length = 10.61 km) in District Narowal
(ADP 24-25 GS # 2085)

Dear Sir,

It is with reference to your letter No. 1234/SG dated 17-03-2025.

Please find below the results of tests conducted on the bitumen sample provided to this laboratory through your representative.

Sr.#	Laboratory Tests	Results
1	Penetration (ASTM D-5)	56 Units
2	Penetration of Residue (ASTM D-5)	47 Units
3	Ductility (ASTM D-113)	Above 100 cm
4	Ductility of Residue (ASTM D-113)	Above 100 cm
5	Softening Point (ASTM D-36)	52.0°C
6	Flash Point (ASTM D-92)	301°C
7	Fire Point (ASTM D-92)	339°C
8	Solubility (ASTM D-2042)	99.80%
9	Specific Gravity Value (ASTM D-70)	1.021
10	Thin Film Oven Test Value (ASTM D-1754)	0.478%

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