

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:-----

Engr. Ghulam Rasool
Resident Engineer, NESPAK,
MCL Nishtar Zone, Lahore.

Subject: **Testing of Aggregate (Granular Sub-base)**
Rehabilitation/Improvement of Streets (PCC), Sewerage/Drainage
UC-237, 238 & 239 Nishtar Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/NZ/04/128 dated 16-01-2025.
Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-01-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	84.54	51.57	28.06	20.16	14.26

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

Grading Used	Los Angeles Abrasion Value (%)
A	25.34

3. Flakiness & Elongation Index (BS 812: Part 105)

Sieve Size		Individual Flakiness Index (%)	Weighted Flakiness Index (%)	Individual Elongation Index (%)	Weighted Elongation Index (%)
Passing (in.)	Retained (in.)				
1 1/2	1	10.81	1.95	12.99	2.34
1	3/4	7.87	3.03	10.39	4.00
3/4	1/2	12.13	3.33	14.65	4.02
1/2	3/8	12.18	1.12	14.84	1.37
3/8	1/4	11.59	0.80	14.02	0.96
Flakiness Index = 10.23%			Elongation Index = 12.69%		

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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Date:-----

Engr. Ghulam Rasool
Resident Engineer, NESPAK,
MCL Nishtar Zone, Lahore.

Subject: **Testing of Sand (Ravi)**
Rehabilitation/Improvement of Streets (PCC), Sewerage/Drainage
UC-237, 238 & 239 Nishtar Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/NZ/04/129 dated 16-01-2025.
Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-01-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	3/8"	#4	#8	#16	#30	#50	#100	#200
%age Passing	100	99.91	99.73	99.57	99.08	83.65	10.50	1.86

2. Percentage of Fines (ASTM D-1140) Wet Sieving

Silt and Clay (%)	3.51
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3. Fineness Modulus (ASTM C-142)

Fineness Modulus (%)	1.08
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Director
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The Executive Officer,
Five Star Corporation,
Bahawalpur.

Subject: **Testing of Bitumen**

Project: Amina Girls Degree College (AGDC), Lodhran

Dear Sir,

It is with reference to your letter No. AGDC/105/25/LD dated 22-02-2025.

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)	80 Units
2	Ductility (ASTM D-113)	Above 100 cm
3	Softening Point (ASTM D-36)	45.0°C

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Director
Transportation Engineering Laboratory

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