

LOCAL GOVERNMENT ENGINEERING DEPARTMENT
LABORATORY AT LGED, JASHORE
Aggregate Grading for 25mm Bituminous Dense Carpeting

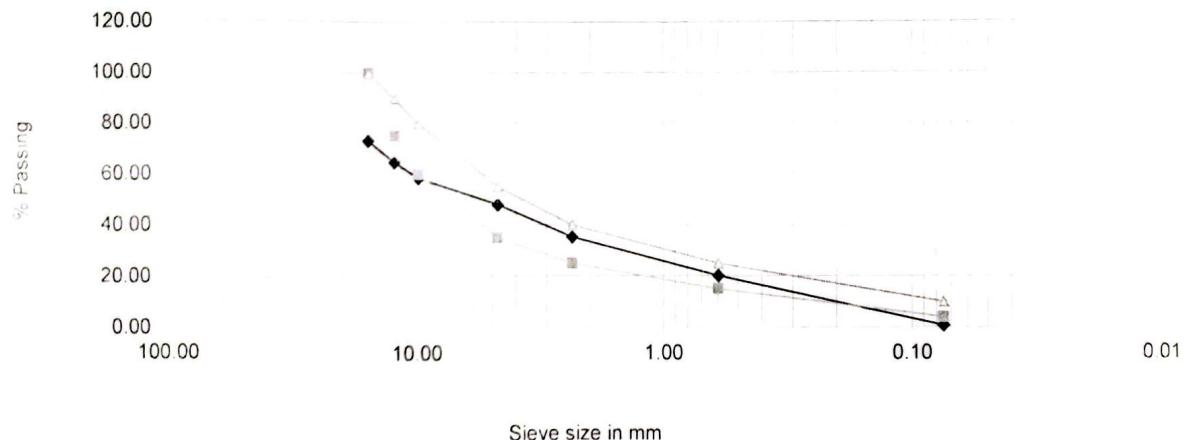
Client:
Scheme:
Sample no:
Quantity Collected From Field: 25kg
Laboratory Register No: 93/7

Memo/Ref.no:
Location:
Sampled by & date- dt-
Quantity Represented: N/A
Date of test: 18.02.2025

Type of Specimen: Stone Chips (Dinajpur)

Sieve size (mm)	% of Passing				Actual Grading	Specified Grading	
	Stone Chip (16mm)	Stone Chips (12.5mm)	Stone Chips (6mm)	Stone Dust		Lower Limit	Upper Limit
16.00 mm	46.72	100.00	100.00	100.00	73.36	100	100
12.50 mm	29.48	100.00	100.00	100.00	64.74	75	90
10.00 mm	17.32	100.00	100.00	99.60	58.46	60	80
4.75 mm	2.95	100.00	100.00	93.09	48.02	35	55
2.36 mm	1.26	100.00	100.00	69.22	35.24	25	40
0.600 mm	0.78	100.00	100.00	39.60	20.19	15	25
0.075 mm	0.12	100.00	100.00	1.51	0.82	4	10
Mixing % 100 →	50	0	0	50			

Sieve Analysis Test



Tested by: Aminur Rahman (L.T.)

18.02.25
Laboratory Technician
LGED, Jashore

18/02/25
Assistant Engineer
LGED, Jashore

18.02.25
Senior Assistant Engineer
LGED, Jashore

LOCAL GOVERNMENT ENGINEERING DEPARTMENT
LABORATORY AT LGED, JASHORE

RESISTANCE TO ABRASION OF COARSE AGGREGATE

BY THE USE OF LOS ANGELES ABRASION (LAA) TEST (ASTM C-131)

Client: Memo/Ref.no:
Scheme: Location:
Sample no: Sampled by & date- dt-
Quantity Collected From 10.0kg Quantity Represented: N/A
Lab Register : 93/7 Date of test: 18.02.2025

Type of Specimen: Stone Chips (*Dihajpur*)

Sieve		Grading	Weight(gm) of Material	Weight(gm) Retained on #12(1.70mm) Sieve	Other Information	Abrasion Value, % $\frac{W_1-W_2}{W_1} \times 100$
Passing mm	Retained mm					
37.5	25	A				
25	19					27.2 \approx 27
19	12.5	B	2500		Grading = B	
12.5	9.5		2500		No. of Sphere = 11	
9.5	6.3	C			Wt. of Spheres = 4560gm	
6.3	4.75(# 4)				Revolution = 500Nos	
4.75	2.36(# 8)	D				
TOTAL>>			W ₁ = 5000	W ₂ = 3640.00		

NOTE: Total weight of test specimen should be 5000 ± 10 gm

NOTE: For A-grading, use 12 Spheres of total weight 5000 ± 25 gm

For B-grading, use 11 Spheres of total weight 4584 ± 25 gm

For C-grading, use 8 Spheres of total weight 3330 ± 20 gm

For D-grading, use 6 Spheres of total weight 2500 ± 15 gm

Specified Los Angeles Abrasion (LAA) According to LGED $\leq 30\%$

Tested by: Md. Aminur Rahman (L..T)

Comments : Supplied Materials Tested

18/02/25
Laboratory Technician
LGED, Jashore

18/02/25
Assistant Engineer
LGED, Jashore

18/02/25
Senior Assistant Engineer
LGED, Jashore

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
নির্বাহী প্রকৌশলী (সওজ) এর কার্যালয়
উপকরণ পরীক্ষা ও রক্ষণাবেক্ষণ বিভাগ
বাংলাদেশ সড়ক গবেষণাগার, মিরপুর, ঢাকা
eemtm@rhd.gov.bd

স্মারক নং-৩৫.০১.০০০০.৩৭৮.২২০.২২- 

তারিখ: ০২/০২/২০২২ খ্রিষ্টাব্দ

বিষয়ঃ মধ্যপাড়া খনির বোল্ডার ও ক্রাশ পাথরের টেস্ট সম্পাদনের লক্ষ্যে পাথরের নমুনা ও টেস্ট ফি বাবদ অর্থ জমাদানের বিপরীতে টেস্ট রিপোর্ট দাখিল সংক্রান্ত কাজের ব্যবহৃত মালামাল পরীক্ষার ফলাফল প্রেরণ প্রসঙ্গে।

সূত্রঃ তার দপ্তরের স্মারক নং-২৮.১৭.০০০০.৬৩১.২৫.০০২.২৩.১৬, তারিখঃ ২৮.০১.২০২৫ খ্রিস্টাব্দ।

উপর্যুক্ত বিষয় ও সূত্র স্মরকের প্রেক্ষিতে তার দপ্তর নমুনা পরীক্ষা করত: পরীক্ষালব্ধ ফলাফল পরবর্তী প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য প্রেরণ করা হলো।

সংযুক্তঃ পরীক্ষার ফলাফল ০৮ (চার) পাতা, ০১ (এক) প্রস্তুত।



(মোহাম্মদ ওয়াহিদুজ্জামান)
নির্বাহী প্রকৌশলী, সওজ
পরিচিতি নম্বর: ৬০১৯৭৬
ফোন: ০২-৫৮০৫৪৬২৭

ব্যবস্থাপনা পরিচালক,
মধ্যপাড়া গ্রানাইট মাইনিং কোম্পানি লিমিটেড,
দিনাজপুর।

অনুলিপিঃ

- ১। পরিচালক (তৎপৰ, সওজ) বাংলাদেশ সড়ক গবেষণাগার, মিরপুর, ঢাকা।
- ২। সিনিয়র সিস্টেম এনালিস্ট (সওজ), ম্যানেজমেন্ট ইনফরমেশন সেল, সড়ক ভবন, তেজগাঁও, ঢাকা) (টেস্ট রিপোর্টটি সওজ এর ওয়েবসাইটে প্রকাশের জন্য অনুরোধ করা হলো)।

Government of the People's Republic of Bangladesh
Bangladesh Road Research Laboratory, RHD
Paikpara, Mirpur, Dhaka, Bangladesh

ABRASION TEST OF COARSE AGGREGATE BY LOS ANGELES METHOD
DATA & REPORT SHEET

Client	ব্যবস্থাপনা পরিচালক, মধ্যপাড়া গ্রানাইট মাইনিং কোম্পানি লিমিটেড, দিনাজপুর।		
Memo No	28.17.0000.631.25.002.23.16	Date	28/01/2025
Project / Work	মধ্যপাড়া খনির বোল্ডার ও ক্রাশ পাথরের টেস্ট সম্পাদনের লক্ষে পাথরের নমুনা ও টেস্ট ফি বাবদ অর্থ জমাদানের বিপরীতে টেস্ট রিপোর্ট দাখিল সংক্রান্ত।		
Date of receive at lab	29/01/2025	Date of Test	02/02/2025
Sample description	Boulder - Crushed Stone- (5-20 mm)		
Quantity supplied	One Bag. (30 kg)	Lab No.	47
Name of Agency	মধ্যপাড়া গ্রানাইট মাইনিং কোম্পানি লিমিটেড, দিনাজপুর।		

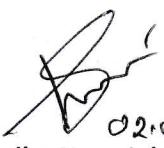
Data Analysis

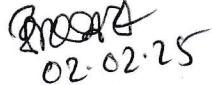
Test No:	Sieve Sive		Weight of Material Taken	Weight Retained on # 12 (1.70 mm) sieve W2 gm	Other Information	Abrasion value $(w1-w2)/w1 \times 100 \%$	Specification Limit
	Sieve Sive	Retained mm					
1	20	12.5	2500	3548	Garding : B No. of charge :11 Wt. of Charges, gm :4586	29.04%
	12.5	10	2500				
Total, W1 gm		5000					

Note:- Test was performed on the basis of supplied sample

Tested by:

Counter Signed by


02.02.25
(Shamiha Nazmin)
Asst. Research Officer
(RHD)


02.02.25
(Jahangir Alam)
Sub-Divisional Engineer(A.C)
(RHD)


(Mohammad Wahiduzzaman)
Executive Engineer
(RHD)

Material Testing & Maintenance Division
Road Research Laboratory, Mirpur, Dhaka

Government of the People's Republic of Bangladesh
Bangladesh Road Research Laboratory, RHD
Paikpara, Mirpur, Dhaka, Bangladesh

ABRASION TEST OF COARSE AGGREGATE BY LOS ANGELES METHOD
DATA & REPORT SHEET

Client	ব্যবস্থাপনা পরিচালক, মধ্যপাড়া গ্রানাইট মাইনিং কোম্পানি লিমিটেড, দিনাজপুর।		
Memo No	28.17.0000.631.25.002.23.16	Date	28/01/2025
Project / Work	মধ্যপাড়া খনির বোন্দার ও ক্রাশ পাথরের টেস্ট সম্পাদনের লক্ষে পাথরের নমুনা ও টেস্ট ফি বাবদ অর্থ জমাদানের বিপরীতে টেস্ট রিপোর্ট দাখিল সংক্রান্ত।		
Date of receive at lab	29/01/2025	Date of Test	02/02/2025
Sample description	Boulder - Crushed Stone- (16-20 mm)		
Quantity supplied	One Bag. (30 kg)	Lab No.	47
Name of Agency	মধ্যপাড়া গ্রানাইট মাইনিং কোম্পানি লিমিটেড, দিনাজপুর।		

Data Analysis

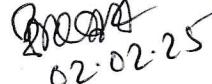
Test No:	Sieve Sive		Weight of Material Taken	Weight Retained on # 12 (1.70 mm) sieve W2 gm	Other Information	Abrasion value $(w1-w2)/w1 \times 100 \%$	Specification Limit
	Sieve Sive	Retained mm					
1	20	12.5	2500	3544	Garding : B No. of charge :11 Wt. of Charges, gm :4586	29.12%
	12.5	10	2500				
Total, W1 gm		5000					

Note:- Test was performed on the basis of supplied sample

Tested by:

Counter Signed by


02.02.25
(Shamiha Nazmin)
Asst. Research Officer
(RHD)


02.02.25
(Jahangir Alam)
Sub-Divisional Engineer(A.C)
(RHD)


(Mohammad Wahiduzzaman)
Executive Engineer
(RHD)

Material Testing & Maintenance Division
Road Research Laboratory, Mirpur, Dhaka



BRTC No. : 1102-91414 /CE /22-23 ; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah , General Manager, (UGO&M), MGMCL, Maddhapara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : Crushed Stone (Stone Chips) MGMCL

Test : Specific Gravity and Water Absorption (ASTM C127)

Date of Test : 12/6/2023

TEST REPORT

Sample Designation	Weight of oven dry sample (gm)	Weight of SSD sample (gm)	Weight of saturated sample in water (gm)	Bulk Specific Gravity (OD) (Relative Density)	Absorption Capacity (%)
Crushed Stone (Stone Chips)	3102.7	3114.1	1999.9	2.78	0.40

Notes: Samples were not properly sealed.

Countersigned by:

Dr. Hasib Mohammed Ahsan
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



bFXKdd43R

19

Test Performed by:

Dr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



Important Notes: Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)**DEPARTMENT OF CIVIL ENGINEERING**

Mobile: 01819557964; PABX: 55167228-57 Ext. 7226

<http://brtc.ce.buet.ac.bd/#home>**TRANSPORTATION ENGINEERING LABORATORY**

BRTC No. : 1102-91414 /CE /22-23 ; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah, General Manager, (UGO&M), MGMCL, Maddhupara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : **Crushed Stone (Stone Chips)** MGMCLTest : **Ten Percent Fines Value [BS 812-111:1990]**

Date of Test : 12/6/2023

TEST REPORT

Type of Aggregate	Sample Size	Weight of sample	Applied Load	Weight of material	Ten Percent Fines Value
		(Surface Dry) (gm)	(kN)	(gm)	
Crushed Stone (Stone Chips)	20 mm to 14 mm	2831	180	327	160 kN

Notes: Samples were not properly sealed.



Countersigned by:

Dr. Hasib Mohammed Ahsan
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh

Test Performed by:

Dr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



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BRTC No. : 1102-91414 /CE /22-23 ; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah, General Manager, (UGO&M), MGMCL, Maddhupara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : Crushed Stone (Stone Chips) MGMCL

Test : Aggregate Impact Value [BS 812 (part 3) 1975]

Date of Test : 12/6/2023

TEST REPORT

Type of Aggregate	Sample Size	Weight of sample (Surface Dry)	Weight of material passing 2.36 mm sieve	Aggregate Impact Value
		(gm)	(gm)	%
Crushed Stone (Stone Chips)	14 mm to 10 mm	348	99	28

Notes: Samples were not properly sealed.

Countersigned by :

Dr. Hasib Mohammed Ahsan
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



Test Performed by :

Dr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



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BRTC No. : 1102-91414 /CE /22-23 ; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah , General Manager, (UGO&M), MGMCL, Maddhapara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : **Crushed Stone (Stone Chips)** MGMCLTest : **Aggregate Crushing Value [BS 812 (part 3) 1975]**

Date of Test : 12/6/2023

TEST REPORT

Type of Aggregate	Sample Size	Weight of sample (Surface Dry)	Weight of material passing 3.35 mm sieve	Aggregate Crushing Value
		(gm)	(gm)	%
Crushed Stone (Stone Chips)	20 mm to 14 mm	2831	612	22

Notes: Samples were not properly sealed.

Countersigned by:

Dr. Hasib Mohammed Ahsan
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



gKB4Egr54

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Test Performed by:

Dr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



Important Notes: Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)**DEPARTMENT OF CIVIL ENGINEERING**

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<http://brtc.ce.buet.ac.bd/#/home>**TRANSPORTATION ENGINEERING LABORATORY**

BRTC No. : 1102-91414 /CE /22-23 ; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah , General Manager, (UGO&M), MGMCL, Maddhapara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : **Crushed Stone (Stone Chips)** **MGMCL**

Test : Unit Weight/Bulk Density & Voids in Aggregate [ASTM C 29]

Date of Test: 12/6/2023

TEST REPORT

Unit weight/Bulk Density (kg/m ³) =	1560 kg/m ³
Voids in Aggregate, compacted by Rodding(%) =	

Notes: Samples were not properly sealed.

Countersigned by:

Dr. Hasib Mohammed Ahsan
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh

Test Performed by:

Dr. Md. Mizanur Rahman
ProfessorDr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh**Important Notes:** Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)



DEPARTMENT OF CIVIL ENGINEERING

Mobile: 01819557964; PABX: 55167100 Ext. 7226
<http://brtctest.ce.buet.ac.bd>



CONCRETE LABORATORY

BRTC No. : 1102-91414 /22-23/CE; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah, General Manager, (UGO&M), MGMCL, Maddhapara, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : **Concrete Cylinder** [Aggregate Type: Stone chips (MGMCL)]

Cement : AKIJ (OPC) w/c = 0.45 [Mix proportion(as quoted): 1:2:4]

[Admixture Added (as per letter): Not mentioned]

Test : **Compressive Strength Test of Concrete Cylinder [ASTM C39]**

Date of Test : 15/6/2023

TEST REPORT

SL No.	Date of Casting as per the letter	Specimen Designation/ Frog Mark	Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Mode of Failure
			(sq. in)	(lb)	(psi)		
1	8/6/2023	MGMCL	12.67	41,843	3,303	3410 psi	Combined *
2	(7 days test)	MGMCL	12.67	44,572	3,518	(23.5 MPa)	Combined *
3		MGMCL	12.55	42,753	3,407	(240 kg/cm ²)	Combined *

* Combined = Mortar and Aggregate Failure.

Note: Samples were received in unsealed condition.

Countersigned by:

Prof. Dr. Hasib Mohammed Ahsan
 Test-In-Charge
 Department of Civil Engineering
 BUET, Dhaka-1000, Bangladesh



Test Performed by:

Dr. Md. Mizanur Rahman
 Professor
 Department of Civil Engineering
 BUET, Dhaka-1000, Bangladesh



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DEPARTMENT OF CIVIL ENGINEERING

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CONCRETE LABORATORY



BRTC No. : 1102-91414 /22-23/CE; Dt: 17/5/2023

Sent by : Engineer Md Obaidullah, General Manager, (UGO&M), MGMCL, Maddhapa, Dinajpur

Ref. No. : 28.17.0000.311.48.001.23/687; Dt: 16/5/2023

Project : Different Tests of MGMCL Stone and Imported Stones.

Sample : **Concrete Cylinder** [Aggregate Type: Stone chips (MGMCL)]

Cement : AKIJ (OPC) w/c = 0.45 [Mix proportion(as quoted): 1:2:4]

[Admixture Added (as per letter): Not mentioned]

Test : **Compressive Strength Test of Concrete Cylinder [ASTM C39]**

Date of Test : 6/7/2023

TEST REPORT

SL No.	Date of Casting as per the letter	Specimen Designation/ Frog Mark	Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Mode of Failure
			(sq. in)	(lb)	(psi)		
1	8/6/2023	MGMCL	12.67	54,580	4,308	4490 psi	Combined *
2	(28 days test)	MGMCL	12.67	56,400	4,451	(31 MPa)	Combined *
3		MGMCL	12.55	59,129	4,711	(316 kg/cm ²)	Combined *

* Combined = Mortar and Aggregate Failure.

Note: Samples were received in unsealed condition.

Countersigned by:

Prof. Dr. Hasib Mohammed Ahsan
Test-In-Charge
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



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Test Performed by:

Dr. Md. Mizanur Rahman
Professor
Department of Civil Engineering
BUET, Dhaka-1000, Bangladesh



Important Notes: Samples as supplied to us have been tested in our laboratory. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that samples are sent in a secure and sealed cover/packet/container under signature of the competent authority. In order to avoid fraudulent fabrication of test results, it is recommended that all test reports are collected by duly authorized person, and not by the Contractor/Supplier.