

PLAZROK CONCRETE CUBE TEST REPORT

1. Objective

To compare the compressive strength performance of concrete produced using Plazrok aggregates(2%) and without plazrok, under identical mix design and curing conditions.

2. Materials Description

MATERIAL A	MATERIAL B
19mm Quarry Stones	19mm Quarry Stones (2% PLAZROK AGG)
Quarry Dust	Quarry Dust(2% PLAZROCK AGG)
Riversand	Riversand2% PLAZROCK AGG)
Admixture	Admixture
Cement	Cement
Water	Water

3. Mix Design Details

MATERIAL	C25 MIX DESIGN(kg)	C30 MIX DESIGN(kg)
19mm Quarry Stones	950	940
Quarry Dust	500	500
Riversand	550	545
Admixture	4	4
Cement	300	325
Water	170	175

Cement Type: SINO 42.5N

Admixtures :Optima 206

4 Cube Sample Details

C25 MIX									
DATE OF MOULD	MATERIAL TYPE	WEIGHT(kg)	CRUSHING DATE	3 DAYS		WEIGHT(kg)	CRUSHING DATE	7 DAYS	
				(KN)	MPA			C1	(KN)
10/10/2025	AGGREGATE MIX(PLAZROCK 2%)	8219	10/13/2025	352.7	15.68	8345	10/17/2025	449.5	19.98
10/10/2025	AGGREGATE MIX	8264	10/13/2025	356.2	15.83	8357	10/17/2025	558.8	24.84

C30 MIX						
DATE OF MOULD	MATERIAL TYPE	WEIGHT(kg)	CRUSHING DATE	3 DAYS		AVERA
				(KN)	MPA	
14/10/2025	C1	8058	17/10/2025	402.5	17.89	20.75
14/10/2025	C2	8281	17/10/2026	531.3	23.61	

6. Observations:

- For C25 concrete, aggregates with 2% plazrok achieved slightly lower early strength (7 days) than aggregates without plazrok.
- However the mix with plazrok aggregates surpassed expected strength gain at both 3 and 7 days(60% and 79.9% respectively)

- No Surface finish differences noted

7. Conclusion

- Further testing to be done to measure performance in terms of compressive strength (28 days)

8. Attachments

See videos below