MATTEST
Engineering Services

Quality care is only fair...

Paver Block Testing

CONTENTS

COMPRESSIVE STRENGTH OF CONCRETE PAVER BLOCKS

STANDARD: IS: 15658-2006 (RA 2011) ANNEX D

- This standard covers the procedure for determining the compressive strength of of Concrete Paver Blocks.

APPARATUS

1. Testing Machine
2. Steel Bearing Blocks and-Plates

Table Sampling Requirements

SR No	Property	Requirement Ref. to Cl No.	Test Method Ref.	Number of Paver Blocks for Test	
				Quality Assurance by Third Party	Quality Assurance by Manufacturer / Purchaser
1.	Compressive strength	6.2.5	Annex D	8	4(16)

PROCEDURE

1. The dimensions and plan areas of the specimens shall be determined as described in Annex B. The blocks shall be stored for 24 ± 4 h in water maintained at a temperature of 20 ± 5°C. The bearing plates of the testing machine shall be wiped clean. The specimens are aligned with those of the bearing plates.

2. The load shall be applied without shock and increased continuously at a rate of 15 + 3 N/mm2/min until no greater load can be sustained by the specimen or delamination occurs. The maximum load applied to the specimen shall be noted in N.

CALCULATION

❖ The apparent compressive strength of individual specimen shall be calculated by dividing the maximum load (in N) by the plan area (in mm2). The corrected compressive strength shall be calculated by multiplying the
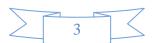
apparent compressive strength by the appropriate correction factor from Table as Shown. The strength shall I be expressed to the nearest 0.1 N

Correction Factors for Thickness and Arris/Chamfer of Paver Block for Calculation of Compressive Strength
(I.S.15658-2006)

SR NO	Paver Block Thickness in mm	Correction Factor	
		Plain Block	**Arrised/Chamfered Block**
1.	50	0.96	1.03
2.	60	1.00	1.06
3.	80	1.12	1.18
4.	100	1.18	1.24
5.	120	1.28	1.34
For other thickness of paver blocks between 50 mm and 120 mm, linear extrapolation of-concrete factor shall be made.			

REPORT

❖ The individual and average compressive strength of the specimens tested as per Calculation shall be reported.

WATER ABSORPTION OF CONCRETE PAVER BLOCKS

STANDARD: IS: 15658-2006 (RA 2011) ANNEX C

- This standard covers the procedure for determining the water absorption of Concrete Paver Blocks.

APPARATUS

1. Balance

SPECIMENS

❖ The paver block specimens selected as per the sampling procedure in 8 and as per the number of specimens mentioned in Table shall be tested.

Table Sampling Requirements *(I.S.15658-2006)*

(Clause 8.5)

SR No	Property	Requirement Ref. to Cl No.	Test Method Ref.	Number of Paver Blocks for Test	
				Quality Assurance by Third Party	Quality Assurance by Manufacturer / Purchaser
1.	Water Absorption	6.2.4	Annex C	3	3

PROCEDURE

Saturation

1. The test specimen shall be completely immersed in water at room temperature for 24 ± 2 h.
2. The specimen then shall be removed from the water and allowed to drain for 1 min by placing them on a 10mm or coarser wire -mesh. 'Visible water on the specimens shall be removed with a damp cloth.
3. The specimen shall be immediately weighed and the weight for each specimen noted in N to the nearest 0.01 N (W_W).

Drying

1. Subsequent to saturation, the specimens shall be dried in a ventilated oven at 107 ±7°C for not less than 24 h and until two successive weighing at intervals of 2 h show an increment of loss not greater than 0.2 percent of the previously determined mass of the specimen.

2. The dry weight of each specimen *(Wd)* shall be recorded in N to the nearest 0.01 N.

CALCULATION

Percent Water Absorption (W Percent)

❖ The percent water absorption shall be calculated as $W \, percent = \frac{Ww - Wd}{Wd} \times 100$

REPORT

❖ The individual and average values of measured water absorption of the specimens tested as per calculation shall be reported