SalierGeotechnical Limited

Pre-Cast Concrete Paving Blocks Pre-Cast Concrete Paving Blocks - Compressive Strength

Lab Test Reference 335
British Standard Reference BS 6717 : Part 1 : 1993

Principal Apparatus

Compression Testing Machine - Lab Inventory No. xxx (BS1881 Part 115)
Cube Tank - Lab Inventory No. xxx
4mm Packing Material at least 5mm larger than the blocks
T.Square - Lab Inventory No. xxx
Vernier Calipers - Lab Inventory No. xxx

1. Preliminaries

1.1 The concrete laboratory will be used to carry out this test.

1.2 Check the sample number and test schedule correspond.

1.3 Check the calibration certificate for the compression testing machine is valid and that it is clean and ready for use.

1.4 Obtain a test worksheet from the cabinet.

2. Standard Test Procedure

2.1 The dimensions of each block are taken and the plan area calculated using the procedure described in Appendix A3 of BS 6717. The chamfer shall be measured with the T.Square and Calipers and the block defined as chamfered if this exceeds 5mm.

2.2 The blocks are stored in the cube tanks for 24 ± 4hrs at a temperature of 20 ± 5^{o}C.

2.3 The blocks are removed from the tanks and tested individually by first ensuring there is no loose material adhering to the faces.

2.4 Two sheets of plywood are taken and firstly inspected for knots. Knotted plywood shall be rejected.

2.5 Plywood packing is placed on the top surface and underneath the block so that when resting between the platens of the compression testing machine, the block does not come in direct contact with metal. Ensure the wearing surface of the block is in the horizontal plane and the axes of the block are aligned with those of the machine platens.

2.6 A load is applied by switching on the machine ensuring the pace rate is set at 15 ± 3N/mm^2 per minute.

2.7 Loading is continued until no further load can be sustained or delamination occurs.

2.8 The maximum load is recorded for each block.

2.9 The procedure is repeated for each block using fresh packing material each time.

2.10 The compressive strength of each block is recorded to the nearest 0.1 N/mm^2, by dividing the maximum load by the plan area and multiplying by the appropriate factor given in Table 3 of BS 6717. (See Note on page 20)