

Pre-Cast Concrete Flags - Water Absorption

Lab Test Reference 336

British Standard Reference BS 7263 : 1990 Appendix C

Principal Apparatus

- Masonry Saw - Lab Invent No. xxx
- Electronic Balance - Lab Invent No. xxx or xxx
- Oven - Lab Invent No. xxx (BS 2648) 1/2
- Constant Temp Bath - Lab Invent No. xxx
- Timer - Lab Invent No. xxx
- Desiccator - Lab Invent No. xxx or xxx

1. Preliminaries

- 1.1 The test is carried out in the concrete laboratory. A flat area of clear bench shall be prepared and the equipment checked as follows.
- 1.2 Check the labels on the electronic balances indicate the calibrations are valid.
- 1.3 Check the calibration graphs on the ovens are valid.
- 1.4 Check the temperature of the water in the water baths are within permitted tolerances by using a calibrated thermometer.
- 1.5 Check the sample number and test schedule correspond and obtain a test worksheet 336 from Cabinet A.

2. Standard Test Method

- 2.1 Two test specimens are sawn from each of the three samples by choosing a 100 x 100 mm area of diagonally opposite corners such that they each have two sawn and two moulded edges. They must be cut through the full thickness of the flag.
- 2.2 The six test specimens are placed at the same time in a drying oven set at 105°C + 5°C ensuring that they are at least 25mm apart and away from a heating surface. They are left for 72 + 2 hour, then removed cooled in a desiccator or dry air-tight container for 24 + ½ hour and finally weighed. The weight shall be expressed to the nearest 1g.
- 2.3 Choose a cube tank with a measured water temperature of 20 + 1°C.
- 2.4 The six specimens are then immersed in this tank with their longitudinal axis horizontal for 30 + ½ min so that there is 25 + 5mm of water over the top.
- 2.5 After 30 mins, + 0.5 mins the specimens are removed, drained and dried with a cloth until all the free water has been removed from the surface. They are weighed again and the absorption calculated by expressing the increase in weight as a percentage of the dry specimen to the nearest 0.1%. The weight is again expressed to the nearest 1g.
- 2.6 The mean absorption of the two specimens from each flag is compared with the limits given in Table 7 of BS 7263.