

Abrasion Testing

08/2019

Surface Abrasion Testing.

Standardised Abrasion Tester for the Determination of Glazed Ceramic Surface Resistance.

Designed to carry out tests in accordance with the P.E.I. (wet) method of European Norm EN154 and ISO 10545 part 7. The test involves exposing the glazed material to the abrasive action of a charge comprising balls of different diameters with the addition of corundum and distilled water (P.E.I. method). The different abrasion stages are achieved by programming the machine at an increasingly higher number of revs, with fixed instrument speed as required by the standard. Later on, a visual analysis of the test result will classify it in the various abrasion groups envisaged by the method.

Electric board coming with inverter for a precise regulation of rpm and fast set up during calibration phase.

The machines are supplied with 1 PEI abrasive charge and 0.5kg of corundum for each rotating head along with a sealing gaskets. (Each abrasive charge can be used 10-15 times depending on the average number of revolutions made during the cycle.) (For 230V, single phase, 50/60Hz supply, 0.5kW).

Product codes.

Model PEI/300/D, with 3 rotating heads (above right)
Model PEI/100/D, with 1 rotating head (right)
PEI complete abrasive charge (0.2kg)
FEPA 80 Corundum (1 kg)
Pack of 10 calibration float glasses 105 x 105 x 6mm



Art. 01CI0104



01CI0104/1
01CI0103/2
01CI0101/A
01CI0101/B
01CI0101/1

PEI-BOX Viewing Cabinet

The PEI-BOX cabinet has been especially designed to check the level of abrasion on glazed ceramic tiles in accordance with ISO 10545 part 7 and ASTM C1027- 99 (2004).



Art. 01CI0170/1

The inside of the instrument is painted in "neutral grey" as required by the standards. To carry out the test, place the PEI-BOX instrument in a dark room, and place the abraded tile of 100x100mm in the centre surrounded by 8 unabraded tiles of the same dimensions. Write on the marked face the r.p.m. corresponding to the abrasion made. Observing the tile specimen from a distance of 2 m and a height of 1,65 m it is possible to see the difference between the tile abraded and the other unabraded tiles.

To ensure that the test is true, the witness of at least three observers is required

Overall Dimensions: 700 x 650 x 630mm
LED Illumination with colour temperature of 6000K

Product Code:
PEI-BOX Cabinet
Luxmeter 0—50,000 Lux

01CI0170/1
GT0120

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Depth Abrasion Testing.

Standardized Depth Abrasion Tester, Model AP/10.

The AP/10 is an instrument for the depth abrasion determination of unglazed ceramic tiles, to meet the standards of European Norm EN102 and ISO 10545-6. The test consists of exposing the sample to the abrasive action of a steel disk rotating against the surface while corundum is fed from the fixed hopper at a given rate between the disk and the sample surface. At the end of the cycle the trace chord length is measured, and the volume of material removed is calculated, giving the comparison parameter for test classification.

The latter will act as the benchmark parameter for test classification.

The instrument can also be used for deep abrasion tests of glazed ceramic tiles (non-standard test).

In this case, the machine is programmed to turn at an increasingly higher number of revs, with fixed instrument speed, until the body appears.

The benchmark parameter will be the number of revs required to remove the layer of glaze until the body becomes visible.

General characteristics

- Epoxy powder painted sheet metal structure. Vibration-damping feet.
- Drawer for collecting the corundum used during tests. 600 cc corundum container. Corundum fall system operated automatically.
- The steady pressure of the test sample on the abrasion disk is achieved by a system of counterweights, thereby allowing the equipment to be used on a normal laboratory table.



- The test sample is fastened with 2 clamps.
- Automatic test cycle.
- Programming by means of an electronic control panel with LCD display.
- Safety front door with microswitch.

Supplied with 2 kg of FEPA 80 corundum.

230V single-phase 50 Hz.

Overall dimensions: 61 x 65 x 74 cm.

Net weight: 52 kg.

Product Code.

Model AP/10 Depth Abrasion Tester.

Standardised replacement disc, net weight 2.5kg

FEPA 80 corundum 1kg

Calibration tile, (transparent fused silica, size 100mm x 100mm x 3mm)

01CI0107

01CI0106/A

01CI0101/B

01CI0108