EN ISO 20344 Determination of Flexing Resistance of Outsole

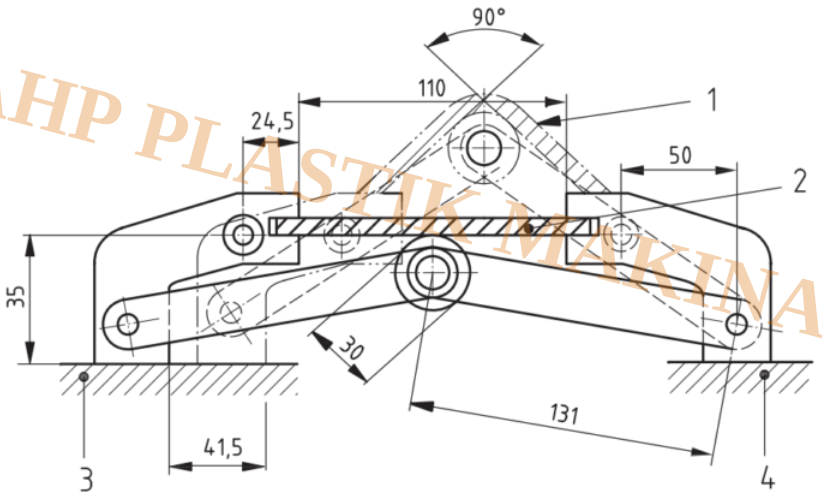
Description

8.4.2 Flexing test

8.4.2.1 Apparatus

8.4.2.1.1 Testing device, as illustrated in Figure 45. The test piece shall be guided in such a way that on one side it can be bent at an angle of 90Â° about a mandrel with a radius of 15 mm.

Dimensions in millimetres



AHP PLASTIK MAKINA

Key

1 test piece at maximum flex position
2 test piece at the neutral flex position
3 moveable bearing
4 fixed bearing

Figure 45 — Testing device for flexing resistance of outsole

8.4.2.1.2 Cutting tool, as defined in Figure C.2 of ISO 5423:1992.

8.4.2.1.3 Measuring magnifier, with an accuracy of 0,1 mm.

8.4.2.2 Preparation of the test piece

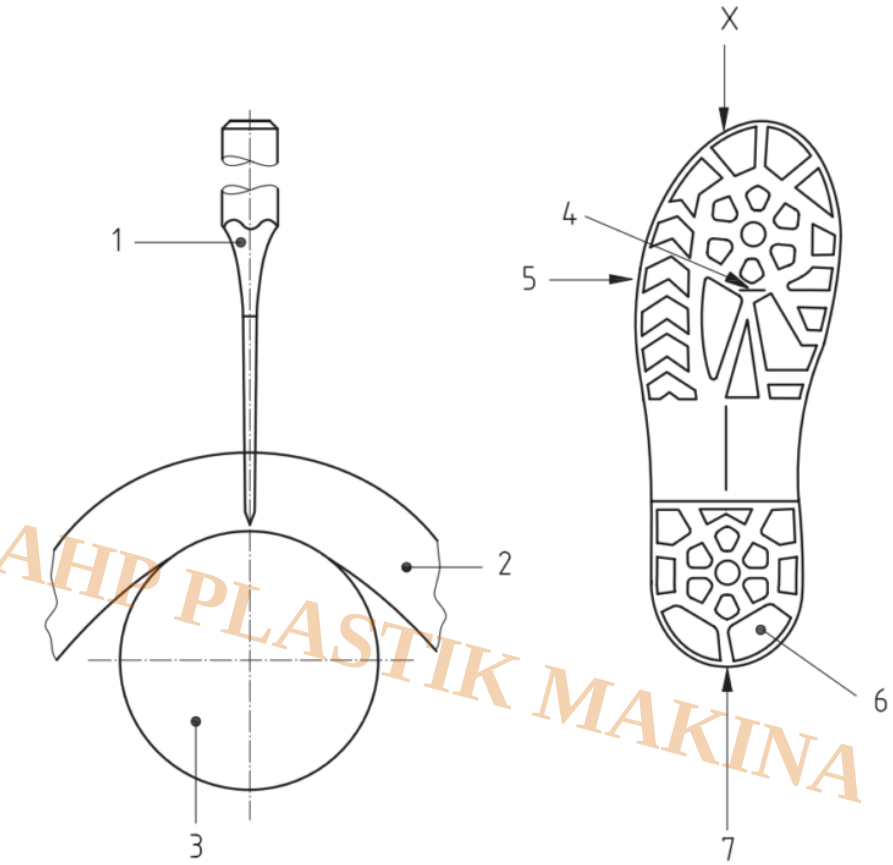
Take the bottom of the footwear with the insole, separated from the upper, as the test piece.

Define the flexing line in accordance with 8.4.1.2.

Mark a point, for the later insertion of a cut, as follows:

Find the centre of the line AC, and then identify two adjacent cleats that are as close as possible to the centre of the line AC. Mark the sole midway between these cleats (see Figure 46).

Direct Sales by Manufacturer



AHP PLASTIK MAKINA

Key

1 cutting tool
2 test piece
3 mandrel of the test machine, radius 15 mm
4 single incision on the line of maximum stress
5 auxiliary line AC, parallel or on the line of maximum stress
6 cleats
7 longitudinal axis XY

Figure 46 — Sole incision

8.4.2.3 Procedure

Ensure that the testing device (8.4.2.1.1) is at the neutral flex position (see Figure 45) and clamp the test piece into the device in such a way that the flexing line AC is parallel with the central roller and the cut position marked 8.4.2.2 is directly above the centre roller. If the sole unit is naturally curved, the clamping procedure shall be carried out so that the sole comes close to the centre roller under no load. Manipulate the machine until the test piece is in the maximum flexed, extended or stretched state. Make a single incision at the point marked in 8.4.2.2 with the blade of the cutting tool (8.4.2.1.2) parallel to the flexing line AC. The cutting device shall pass through the full thickness of the outsole and into the insole or equivalent layer. If the product contains a penetration resistant insert, only cut until contact with this is made.

If there are several materials constituting the sole, another incision shall be made, but it is necessary to avoid the cut in a region of 15 mm from the edge of the sole.

Direct Sales by Manufacturer

Measure the initial length of the cut at the surface of the test piece using the measuring magnifier (8.4.2.1.3).

Carry out 30 000 cycles starting from the maximum flexed, extended or stretched state, with the test piece
undergoing deformation at a constant rate value between 135 cycles/min and 150 cycles/min.
At completion of the 30 000 cycles, the testing device should not be left in the fully flexed position.
After 30 000 cycles, measure the final length of the cut at the surface of the test piece using the measuring magnifier (8.4.2.1.3). The number and dimensions of spontaneous cracks shall be recorded if present.
Cut growth = (final cut length) â€“ (initial cut length).

AHP PLASTIK MAKINA

Flexing Tester for Outsole of Shoes

Bending angle	90±1°
Circular shaft	Diameter 30mm
Bending speed	0~150cpm
Fixture width	144mm
Test station	3sets
Counter	LCD, 0~999,999
Motor	AC frequency motor
Machine size	100*45*45cm
Weight	100kg
Power source	1-phase, AC220V, 50Hz

Category

1. Equipment for Standards
2. Standards