DIN EN ISO 20344 Determination of Rigidity of Outsole

Description

8.4 Determination of flexing resistance of outsole

8.4.1 Rigidity test
8.4.1.1 Apparatus
8.4.1.1.1 Smooth metal hinged plate, fixed to a rigid base.
8.4.1.1.2 Clamping device, to fix the forepart of the footwear to be tested to the rigid base.
8.4.1.1.3 Sensor, capable of measuring force in the range 0 N to 50 N, to a tolerance of Â±1 %, fixed to the
hinged plate at a distance of 315 mm from the hinge.

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8.4.1.2 Preparation of test pieces
Use one complete item of footwear as the test piece. The middle size of the range should be selected. This will normally be French size 42 (UK size 8) or French size 39 (UK size 6).
Mark the longitudinal axis of the footwear, XY, following the method described in 5.4.2.
The flexing line is defined as the line at 90Â° to the longitudinal axis passing through it at one third of the
distance XY from the toe at X. The flexing line is AC. Then draw 2 lines parallel to AC at 5 mm each, defining the flexing area (width 10 mm) (see Figure 42).

8.4.1.3 Test procedure
Clamp the forepart of the footwear to the rigid base using a solid block (corresponding to the forepart of the last) in such a way that the flexing area is aligned with the hinge axis of the base plate (8.4.1.1.1) (see Figure 42).

Dimensions in millimetres

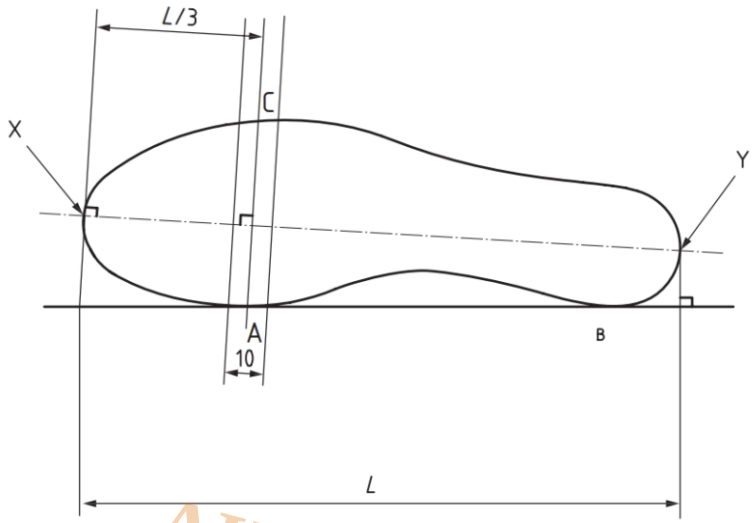
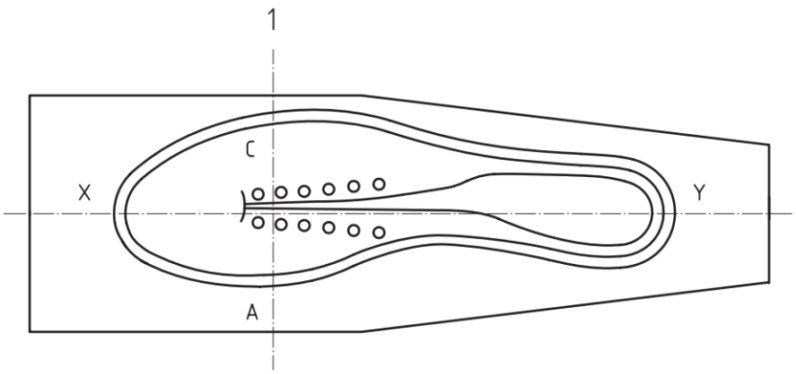


Figure 42 — Position of flexing on the sole

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The rear edge of the block shall be positioned 10 mm forward of the flexing line (A-C as shown in Figure 43).



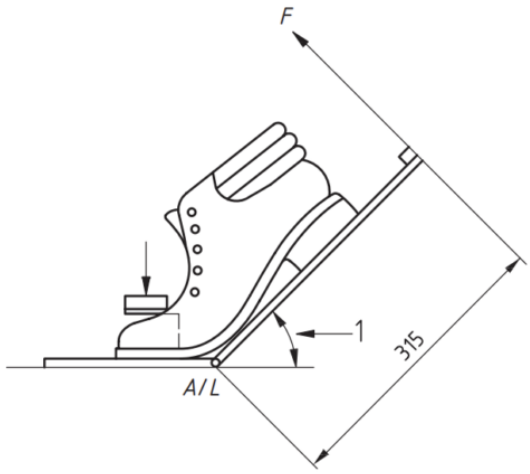
Key
1 flex line

Figure 43 — Position of the footwear on the testing machine

It is possible that when the front part of the shoe is fixed the heel will not touch the plate.
If this is the case move the plate until contact is made with the heel block, then zero the angle measuring device in this position.
Measure the flexed angle when a force of (30 Â± 0,5) N is applied normal to the plane of the hinged plated
(8.4.1.1.1) at a distance of 315 mm from the centre of the hinge (see Figure 44).
Flex the sole so that the centre of the hinge is moved at a speed of (100 Â± 10) mm/min until a force of (30 Â± 0,5) N has been exerted. Measure the angle at this point.
Lubricant can be added under the heel to facilitate the test.

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Dimensions in millimetres



Key
1 flex angle, α

Figure 44 — Flexing angle

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8.4.1.4 Selection criteria
Footwear whose angle under the applied force is lower than 45Â° from the horizontal is not subjected to the flexing test described in 8.4.2.



Rigidity Tester for Outsole of Shoes

According to ISO 20344
Digital display of angle
Digital display of force

Category

1. Equipment for Standards
2. Standards