BN 157-02

DETERMINATION OF LEATHER STIFFNESS

Application

To assess the flexural stiffness of leather (45 °Cantilever Method)

Scope

This procedure is applicable to all types of leather.

Apparatus and Materials Required

Constructed from smooth planed wood, having the dimensions shown below with a graduated scale on the top surface, from 0 to 200mm (1mm graduations), with 0mm at the right angled end of the block. Steel presser plate.

Dimensions:

Wood Block:	Length (base) 285mm	Height 85mm	Width 34mm
Presser Plate: Steel Bar	Length 200mm	Height 5mm	Width 25mm

Graduation Scale: 0 – 200mm with 1mm graduations

Preparation

Cut two pairs of test pieces, 25 mm x 200mm, parallel to and perpendicular to the backbone.

Conditioning

The test pieces must be flat and be conditioned for 24 hours at 23 ± 2 °C and 50 ± 5% Relative Humidity.

Procedure

1. Place the test piece on the horizontal top surface of the test block so that the narrow end of the test piece is aligned with the zero on the scale..

2. Press the test piece with the presser plate and slide both slowly towards the 45° slope at a speed of approximately 10mm/second.

3. When the sample first touches the 45° slope, the value is taken at A (The end of the test piece) against the corresponding graduations.

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2010 01 13	Activated	J. Williams, EU

4. Measure each test piece four times, reversing its direction and by turning it over (i.e. measure both the grain and the flesh side)

   e.g.

   Test piece parallel to backbone
   Measurement 1: Grain side up/Right hand side
   Measurement 2: Grain side up/Left hand side
   Measurement 3: Flesh side up/Right hand side
   Measurement 4: Flesh side up/Left hand side

   Repeat for samples taken perpendicular to the backbone and for the other samples.

REPORT

1. The stiffness is determined by the average values taken at A, this value is calculated for both sides of the hide as well as for the direction of the samples, i.e. parallel to and perpendicular to the backbone. Total of eight measurements for each pair of samples.