ISO 811 – Textile Fabrics – Determination of Resistance to Water Penetration – Hydrostatic pressure test / Testing Equipment

Description

4 Apparatus

4.1 The apparatus used for the test should be designed to comply with the following conditions.

4.1.1 It should be possible to clamp the specimen of fabric in such a way that

a) it is horizontal and is not bulging;

b) an area of the fabric of 100 cm2 * is subjected to steadily increasing water pressure from below or from above the fabric;

C) no leakage of water takes place at the clamps during the test period (see annex, clause A.1);

d) the specimen does not slip in the clamps;

e) any tendency for penetration to occur at the clamped edge of the specimen is minimised (see annex, clause A.1).

4.1.2 The water in contact with the test specimen should be distilled or fully deionized water maintained at either 20 ± 2 °C or 27 ± 2 °C. The chosen alternative shall be stated in the test report. (The use of water at the higher temperature will yield lower values of hydrostatic head; the magnitude of this effect may vary from fabric to fabric.)

4.1.3 The rate of increase of water pressure shall be 10 ± 0,5 cm or 60 ± 3 cmH2O/min**. Results obtained by the two different rates may not be the same. The chosen alternative shall be stated in the test report.

4.1.4 A manometer connected to the testing head(s) should allow pressures to be read to an accuracy of 0,5 cmH2O (see annex, clause A.2).

6 Test specimens

After receipt, handle the fabric as little as possible, avoid folding it sharply and do not treat it in any way (e.g. by ironing it) other than by conditioning. Take at least five test specimens from different places in the fabric so that they represent the material as fully as possible. The fabric may be tested without

cutting specimens. Areas with deep creases or fold marks shall not be tested.

7 Test procedure

Provide freshly distilled water for each specimen tested (see annex, clause A.3).

Wipe all water from the clamping surfaces. Clamp the conditioned specimen in the test head so that the face of the fabric will be in contact with the water. The clamping shall be carried out in such a way that water will not be forced through the specimen prior to the start of the test. Subject the specimen immediately to increasing water pressure. Watch continuously for evidence of penetration by water.

Record the pressure, as conventional centimetres of water, at which water first appears at the third place in the specimen. The accuracy for recording the pressure shall be the following :

—until 1 mH2O : 0,5 cm

—more than 1 mH20 and until 2 mH2O : 1 cm

—more than 2 mH2O : 2 cm

Do not take into account very fine droplets which do not grow after being formed. Do not count subsequent drops which penetrate through the same place in the fabric. Note whether the penetration of water at the third place occurs at the edge of the clamp and reject as unsatisfactory any test in which such penetration occurs at a pressure less than the lowest pressure recorded for the other specimens from the same sample. Test further specimens until the requisite number of satisfactory results is obtained.

8 Calculation and expression of results

Calculate the mean of the pressures recorded for the specimens tested according to clause 7. Report the individual results and the mean result in conventional centimeters of water.

Water Proofness Tester According to ISO 811

- Sample holder with sealing
- Two different rate for pressure increase (rate is adjustable)
- Touch screen
- Thermal printer
- Test area 100mm2
- Pressure speed 10 or 60 cm H2O

- Max capacity 1000 cm H2O (options are available)

Category

1. Equipment for Standards
2. Standards