

Measurement and Testing Devices

1. Thickness Measurement

Thickness values are measured on 0% stretched material.

1.1 Value

Maximum value: equal or less than 0.8 mm

Minimum value: equal or superior to 50 % of maximum value

Tolerance: +/- 0.1 mm

1.2 Equipment

The equipment consists of a reference plate, a disk (parallel to the plate) together with a test gauge capable of measuring the distance between disk and plate with an accuracy of at least 0.01 mm.

1.3 Specifications

According to ISO 5084:
disk size $100 \text{ mm}^2 \pm 1 \text{ mm}^2$
(diameter $11.28 \text{ mm} \pm 0.05 \text{ mm}$)
pressure $1 \text{ kPa} \pm 0.01 \text{ kPa}$



2. Permeability

2.1 Value

Minimum Value:

Equal or higher than 80 litres/square meter/seconds (l/m²/s)

Tolerance: +/- 5 % (in the range of Minimum Value)

2.2 Measurement of air permeability

A flow of air is sucked through the fabric specimen, a tube system and differential pressure transducer. The unit measures the resultant differential pressure (proportional to volumetric flow), the absolute pressure and the medium temperature. The air permeability of the measured specimen is established based on those values.

The value of permeability is given in litres/m²/seconds (l/m²/s) for a given material.

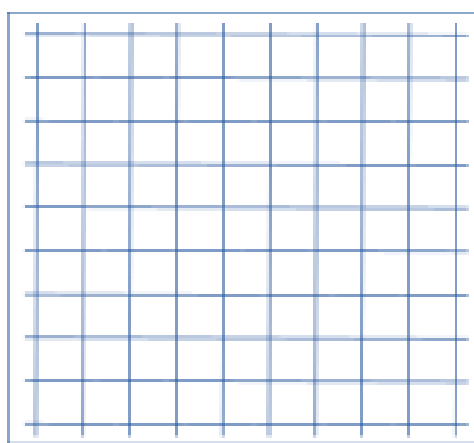
2.3 Measurement characteristics

Measuring area: Diameter 25 mm.

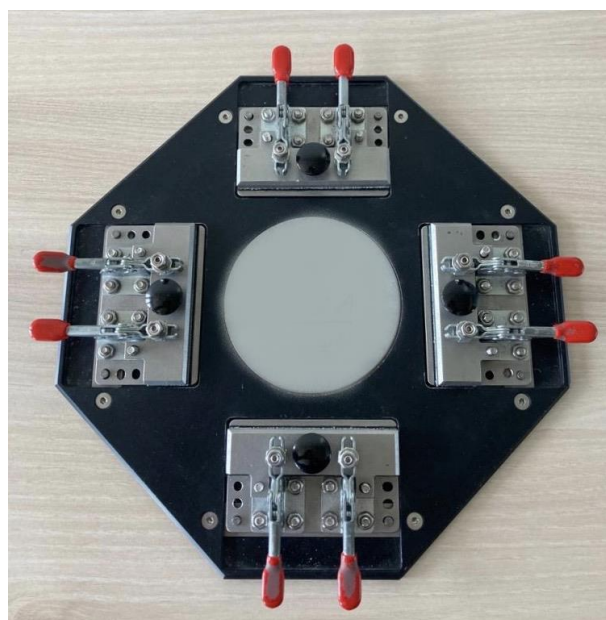
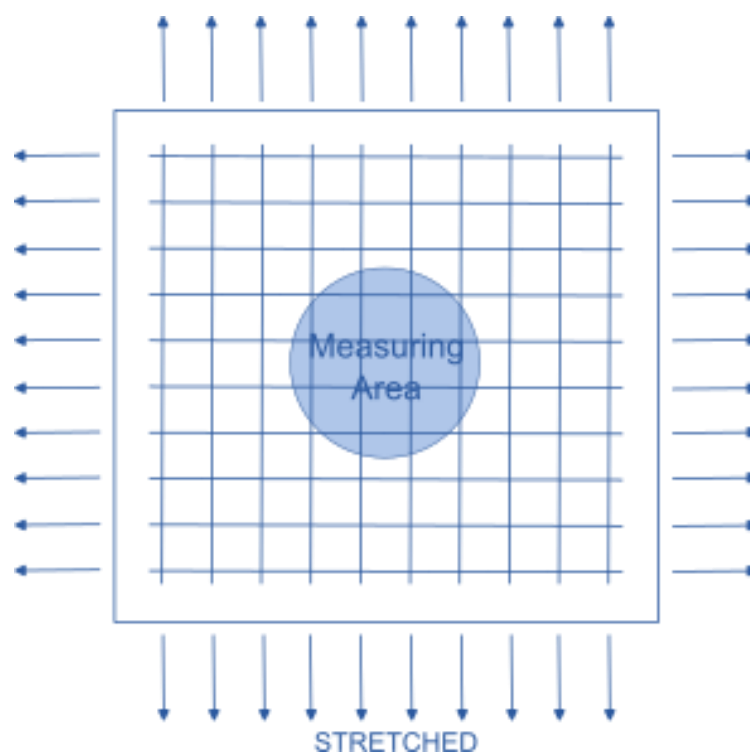
Differential pressure: 20 Pa

Measuring range: 0-400 l/m²/s (high accuracy around Minimum Value)

Definition of stretch: Uniform bidirectional and perpendicular stretch of 25% applied to the fabric (see sketch below)



UNSTRETCHED



Stretching Device



Permeability Measurement Device

.2.4 Conditions

The swimsuit material is tested new and dry.

For accuracy purpose, repeatable tests will be done if the test value is close to the limit.

