

## Test item: Water Vapor Resistance

**Date:** September 26,2021

**Test condition: ISO 11092:2014**

1. Air temperature:  $35.0\pm 0.1^{\circ}\text{C}$
2. Relative humidity:  $40\pm 3\%$
3. Air speed:  $1.0\pm 0.05\text{ m/s}$
4. Temperature of hotplate:  $35.0\pm 0.1^{\circ}\text{C}$
5. Orientation of test specimen: Specimens lied flat across the measurement unit with the side normally facing the human body towards the measuring unit. Fabric back side (skin contact side) is in contact with hotplate.

Sample Description : (A)10cm\*18.5cm H700 shoulder padding  
(B)10cm\*18.5cm NBA1 shoulder padding  
(C)10cm\*18.5cm NBA2 shoulder padding  
(D)Red impermeable film with a 10cm\*18.5cm hole

Sample Color : (A)Black/green;(B)Grey/blue;(C)Black/blue;(D)Red

Testing Period : Sep 17, 2021 - Sep 26, 2021

Test Result(s) : Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, for further details, please refer to the following page(s).

## Test Results:

Specimens	A+D_specimen1	A+D_specimen2	A+D_specimen3	A+D_mean
Unit(m <sup>2</sup> ·Pa/W)	14.372	12.064	12.951	13.1



Specimens	B+D_specimen1	B+D_specimen2	B+D_specimen3	B+D_mean
Unit(m <sup>2</sup> ·Pa/W)	28.608	28.516	30.116	29.1



Specimens	C+D_specimen1	C+D_specimen2	C+D_specimen3	C+D_mean
Unit(m <sup>2</sup> ·Pa/W)	29.223	33.216	30.107	30.8



Remark:

1. Water-vapor resistance  $R_{et}$ , a quantity specific to textile materials or composites, determines the latent evaporative heat flux across a given area in response to a steady applied water-vapor pressure gradient.
2. The evaporative heat flux may consist of both diffusive and conductive components.
3. The lower the evaporative resistance, the easier the water vapor transmission and more comfortable the clothing should be to wear.

Notes: Since the test specimens are much smaller than the standard required which is 50cm\*50cm, it is necessary to amount the specimens in an impermeable red material, as is shown in the pictures. The results below represent only the  $R_{et}$  of the padding in the center, do not include the  $R_{et}$  of red film.

<b>A+D-D</b>	<b>3.41</b>
<b>B+D-D</b>	<b>19.4</b>
<b>C+D-D</b>	<b>21.1</b>