

H-11 Hygroscopic heat processing Test

Experimentation-1

<Measured fabrics>

4 polyester fabrics:

Blank, Non-washed (HL-0), 15 washes (HL-15), 30 washes (HL-30).

<Measurement method>

A temperature sensor was wrapped in a test cloth (6×18cm) and it was left in a thermo-hygrostat set at 20°C or 35°C×RH40%. After the humidity had stabilized, it was then increased up to 90% to measure the rise in humidity.

<Test Results>

Test Cloth	Measurement	20°C×RH40% (At stability)	20°C×RH90% (At stability)
Blank	Measured temperature	20.6°C	21.6°C
	Difference in temperature		+1.0°C
HL-0	Measured temperature	20.6°C	23.4°C
	Difference in temperature		+2.8°C
HL-15	Measured temperature	20.5°C	22.8°C
	Difference in temperature		+2.3°C
HL-30	Measured temperature	20.4°C	22.5°C
	Difference in temperature		+2.1°C

Experimentation -2

<Measured fabrics>

2 items (E100%) : Non-washed (HL-0), 10 washes (HL-10).

<Measurement method>

A temperature sensor was wrapped in a test cloth (6×18cm) and it was left in a thermo-hygrostat set at 20°C or 35°C×RH40%. After the humidity had stabilized, it was then increased up to 90% to measure the rise in humidity. Both were tested simultaneously.

<Test results>

Test material	Measurement	20°C×RH40% (At stability)	20°C×RH90% (At maximum)
HL-0	Measured temperature	20.6°C	23.2°C
	Difference in temperature		+2.6°C
HL-10	Measured temperature	20.6°C	22.7°C
	Difference in temperature		+2.1°C

Test material	Measurement item	35°C×RH40% (At stability)	35°C×RH90% (At maximum)
HL-0	Measured temperature	35.2°C	39.5°C
	Difference in temperature		+4.3°C
HL-10	Measured temperature	35.2°C	38.7°C
	Difference in temperature		+3.5°C