



TEST RESULTS

1. Water vapour resistance R_{et} (m^2mbar/W or m^2Pa/W):

Apparatus: Hohenstein Skin Model

Test conditions: according to DIN EN 31 092 (02/94) or to ISO 11 092 (10/93)

Test climate: $T_a = 35^\circ C$; $\varphi_a = 40\%$ r.h.

Mean value of 3 single measurements with 3 different items of the sample.

RESULT: $R_{et} = 21.5 \cdot 10^{-3} m^2mbar/W = 2.15 m^2Pa/W$

Director of the Institute:

Director of the Department
of Clothing Physiology:

Dr. S. Mecheels



Prof. Dr. K.H. Umbach



Appendix to Test Report No. 03.4.4901

2. Discussion of test results:

Generally from a physiological point of view a textile has to be judged the better, the lower its water vapour resistance R_{et} , and consequently the higher its water vapour permeability, because thus the better the possible evaporation of moisture (sweat) from the wearer's or sleeper's body. Recent fundamental tests have shown that for the judgment of the physiological quality of barrier textiles for encasings, tight to dust, the following criteria can be applied:

	$R_{et} \leq 5 \text{ m}^2\text{Pa/W}$	very good
$5 \text{ m}^2\text{Pa/W} < R_{et} \leq 20 \text{ m}^2\text{Pa/W}$		good
$20 \text{ m}^2\text{Pa/W} < R_{et} \leq 35 \text{ m}^2\text{Pa/W}$		acceptable
$R_{et} > 35 \text{ m}^2\text{Pa/W}$		not sufficient

If this classification is used, the water vapour permeability or "breathability" of the article tested has to be rated as very good.

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