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**REPORT No. 205/23/373/F-1/DYF**  
**DETERMINATION OF WATER VAPOUR**  
**TRANSMISSION PROPERTIES**  
**according to PN-EN ISO 12572:2016-10**  
(number of pages: 2)

- Description and identification of the tested item(s):  
In accordance with the Client information of the item(s) there are:  
**Sample of product: Membrane KB textil 500,**  
produced by: Kegel-Błażusiak Sp. z o.o., ul. Składowa 26, 34-400 Nowy Targ, Poland.  
There was delivered for tests 2 running meters undamaged sample of product. The top side of the product sample in green colour with print, the bottom side in black colour.
- Name and address of the client:  
Kegel-Błażusiak Sp. z o.o., ul. Składowa 26, 34-400 Nowy Targ, Poland.
- Order, letter dated: 205/23 of 24.10.2023
- Date of the sampling/the delivery of the test item(s): 19.10.2023 / 25.10.2023
- Date of the performance of the test item(s): 06.11.2023 ÷ 14.11.2023
- Procedure of sampling/delivery of the test item(s):  
The samples were sampled and delivered to Łukasiewicz-WIT Laboratorium Materiałów Budowlanych „IZOLACJA” by the Producer. There is no data from the sampling stage of product samples.
- Preparation of specimen:  
The water vapour permeability properties were determined in accordance with PN-EN ISO 12572:2016-10, using the test set described in Annex C, directing the top side of the test specimens to environment of 23°C and 50% RH. The thickness of the specimens during the test was the same as the thickness of the product in the use.
- Conditioning of test specimens:  
In accordance with EN ISO 12572:2016-10 p. 6.4 the test specimens, before the tests of determination water vapour properties, were not conditioned.
- Test conditions

Set	Condition °C-%RH	Temperature in °C	Relative Humidity in %	
			“dry state”	humid state
C	23-50/93	23±1	50±5	93±5

Conditions during test:

- mean barometric pressure and mean temperature and their standard deviations are:  
(975±4) hPa and (23±0,1) °C,
- mean humidity gradient across the sample with standard deviation of the average:  
(74,3±1,3) (%/mm).

## 10. Results of tests:

	Test specimen <sup>1)</sup>					Mean value
	No. 1	No. 2	No. 3	No. 4	No. 5	
Water vapour flow, <b>G</b> , kg/s	1,97·10 <sup>-8</sup>	1,89·10 <sup>-8</sup>	2,02·10 <sup>-8</sup>	2,09·10 <sup>-8</sup>	2,00·10 <sup>-8</sup>	2,00·10 <sup>-8</sup>
Water vapour permeance <b>Wc</b> , kg/(m <sup>2</sup> ·s·Pa)	2,91·10 <sup>-9</sup>	2,77·10 <sup>-9</sup>	2,99·10 <sup>-9</sup>	3,12·10 <sup>-9</sup>	2,97·10 <sup>-9</sup>	2,95·10 <sup>-9</sup>
Water vapour permeability <b>δ</b> , kg/(m·s·Pa)	1,69·10 <sup>-12</sup>	1,60·10 <sup>-12</sup>	1,73·10 <sup>-12</sup>	1,80·10 <sup>-12</sup>	1,72·10 <sup>-12</sup>	1,71·10 <sup>-12</sup>
Water vapour resistance, <b>Z</b> , (m <sup>2</sup> ·s·Pa)/kg	3,43·10 <sup>8</sup>	3,62·10 <sup>8</sup>	3,35·10 <sup>8</sup>	3,21·10 <sup>8</sup>	3,37·10 <sup>8</sup>	3,39·10 <sup>8</sup>

<sup>1)</sup> Mean value of area of the test specimen, **A**: 0,0064 m<sup>2</sup> and mean value of test specimen thickness, **d**: 0,000579 m

11. Other observations: none

12. Deviations from and changes of the test method: none

13. Additional informations:

The test was performed in Łukasiewicz – WIT Laboratorium Materiałów Budowlanych „IZOLACJA”.

Test performed by: mgr inż. Elżbieta Nawrot-Sadłoń

Test report prepared by: mgr inż. Elżbieta Nawrot-Sadłoń

Test report verified by:  
mgr inż. Mariusz Spyra

Authorized by:  
mgr Ewelina Kaputa-Kuc  
Kierownik Laboratorium Materiałów Budowlanych „IZOLACJA”

## Notes:

- The Report is the client property.
- Test results included in the Report relate only to the tested samples of product and are not their quality approval.
- This Report shall not be reproduced except in full, without written approval of Łukasiewicz-WIT Laboratorium Materiałów Budowlanych „IZOLACJA”.
- In the case of referring to this Report the following clause shall be used, without any changes: „Tests were performed by Łukasiewicz-WIT Laboratorium Materiałów Budowlanych „IZOLACJA”, accredited in this range by Polskie Centrum Akredytacji, No. AB 008”.

End of the Test Report no. 205/23/373/F-1/DYF

## Additional informations:

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Mean value
Water vapour diffusion-equivalent air layer thickness, <b>S<sub>a</sub></b> , m:	0,069	0,072	0,069	0,066	0,068	<b>0,069</b>
Density of water vapour flow rate, <b>g</b> , g/(m <sup>2</sup> ·24h)	265,2	250,6	271,3	281,7	269,6	<b>267,7</b>

Polish Standard: PN-EN ISO 12572:2016-10 is translation, without any changes, of English version of European Standard: EN ISO 12572:2016.