

Katowice, 15 April 2025

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	<b>"IZOLACJA"</b> <b>Construction Materials Laboratory</b>		
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**REPORT No. 70/25/126/M-3/ $\lambda_{HFM I}$**   
**ON THERMAL PROPERTIES OF BUILDING PRODUCTS AND**  
**MATERIALS – DETERMINATION OF THERMAL RESISTANCE**  
**USING THE HEAT FLUX SENSOR METHOD – PRODUCTS WITH**  
**HIGH AND MEDIUM THERMAL RESISTANCE**  
**according to PN-EN 12667:2002**  
(number of pages: 3)

1. Description and identification of the tested item:  
As declared by the client:  
**Product sample: SOLVO SO-03 PVC-U panels for external walls**  
**according to PN-EN 13245-2:2009/AC:2010,**  
manufactured by: Profile VOX sp. z o.o. Sp. k.,  
ul. Gdyńska 143, 62-004 Czerwonak, Poland.  
The following items were supplied for testing:
  - 1 undamaged sample measuring approximately (300 x 300 x 56) mm, consisting of three layers of tightly adhering panels.
2. Name and address of the client:  
Profile VOX sp. z o.o., Sp. k., ul. Gdyńska 143, 62-004 Czerwonak, Poland
3. Order No. and date: Order No. 70/25 dated 17 Jan. 2025
4. Product sample ~~collection~~/delivery date: 27 March 2025
5. Testing date: 07 Apr. 2025 ÷ 11 Apr. 2025
6. Product sample collection/delivery procedure:  
Product sample collected and delivered to Łukasiewicz-WIT "IZOLACJA" Construction Materials Laboratory by the client. No data on product sampling.
7. Seasoning routine:  
The test sample was conditioned to constant weight at  $(23 \pm 2)^{\circ}\text{C}$  and  $(50 \pm 5)\%$  relative humidity.

## 8. Test results:

No.	Property	Test results
1	2	3
1.	Sample thickness, m	0.0571
2.	Mass of seasoned material tested, g	2116
3.	Relative change in weight during seasoning	0.00
4.	Relative change in weight during testing	0.00
5.	Change in thickness (and volume) during testing, mm ( $\text{mm}^3$ )	0.0 (0.0)
6.	Mean sample temperature difference during testing, K	20.0
7.	Mean test temperature, $^{\circ}\text{C}$	10.0
8.	Ambient temperature surrounding the testing instrument during the test, $^{\circ}\text{C}$	21
9.	Density of the heat flux passing through the sample during testing, $\text{W/m}^2$	31.60
10.	Thermal resistance, $R$ , $\text{m}^2 \cdot \text{K/W}$	0.633
11.	Thermal conductivity coefficient, $\lambda$ , $\text{W/m} \cdot \text{K}$	0.0903
12.	Uncertainty (U) of measurement of the thermal conductivity coefficient, $\lambda$ , $\text{W/m} \cdot \text{K}$ (The reported uncertainty is an expanded uncertainty with a confidence level of approximately 95% and coverage factor $k=2$ )	0.0044

## 9. Other observations: none.

## 10. Additional information:

- The test was carried out at "IZOLACJA" Construction Materials Laboratory.
- Test sample thickness: measured in the apparatus under a load of 300 Pa.
- Calculated thermal resistance for one layer of panels is 1/3 of the measured resistance, i.e.  $0.211 \text{ m}^2 \cdot \text{K/W}$ .
- Measurements taken using a Netzsch HFM 446M device – measuring section dimensions: (102 x 102) mm, buffer section dimension: (305 x 305).
- Date of last calibration of the heat flux sensors: 25 March 2025.
- Calibrated using CRM IRMM-440 (Joint Research Center IRMM, Institute for Reference Materials and Measurements, Geel, Belgium):  
CRM IRMM-440 thermal resistance at  $10^\circ\text{C}$ :  $R_{10} = 1.066 \text{ m}^2 \cdot \text{K/W}$ .  
CRM IRMM-440 certification date: March 2000.
- Type of device: single-sample, symmetrical.
- Device orientation: horizontal.
- Hot sample side position: bottom.
- Edge heat loss reduction method: edge insulation.

## 11. Deviation or variation in the test method: none.

Tested by: Bogdan Kuźnik

Report by:  
Adam Bielak

Authorised by: mgr Ewelina Kaputa-Kuc  
Manager of the "IZOLACJA" Construction Materials Laboratory  
*/signed electronically/*

## Remarks:

1. The report is the property of the client.
2. The test results given in the Report refer to the tested samples of the product.
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No. AB 008".

Report No. 70/25/126/M-3/ $\lambda_{\text{HFM I}}$  ends here.

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