

Evidence of performance

Thermal transmittance

Test Report

N° 13-001890-PR10
(PB-K20-06-en-02)



Client	profine GmbH International Profile Group Mülheimer Straße 26 53840 Troisdorf Germany
Product	uPVC profile, profile combination: sash - frame
Designation	KBE 76 KÖMMERLING 76 TROCAL 76
Performance-relevant Product details	Material plastic - uPVC ; Projected width W in mm 116 ; frame; Profile cross section, width in mm 67 ; Profile cross section, thickness in mm 76 ; reinforcement; Material Metal - galvanized steel ; sash; Profile cross section, width in mm 78 ; Profile cross section, thickness in mm 76 ; reinforcement; Material Metal - galvanized steel ; replacement panel; Thickness in mm 48 ; Edge cover in mm 18
Special features	-

Basis *)

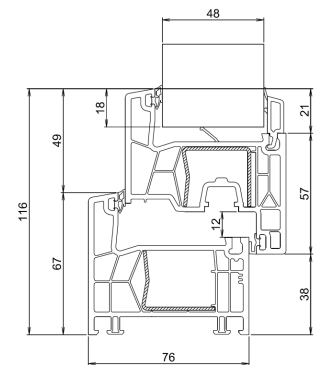
EN 14351-1:2006+A1:2010

EN 12412-2:2003-07
*) Corresponds to the national standard/s (e.g. DIN EN)

Test report 13-001890-PR10 (PB-K20-06-de-01) dated 14.08.2013

Test report 13-001890-PR10 (PB-K20-06-en-01) dated 23.04.2015

Representation



Results

Thermal transmittance



$$U_f = 1.1 \text{ W}/(\text{m}^2\text{K})$$

Instructions for use

The results obtained can be used by the manufacturer as basis for the manufacturer's ITT report summary. The provisions of the applicable product standard have to be observed.

Validity

The data and results given relate solely to the tested/described specimen. This test/evaluation does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing.

Notes on publication

The ift-Guidance Sheet "Conditions and Guidance for the Use of ift Test Documents" applies. The cover sheet can be used as an abstract.

Contents

The report contains a total of 7 pages

ift Rosenheim

14.08.2013

Translation dated 17.03.2021

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Building Physics

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Building Physics

1 Object

1.1 Description of test specimen

Product	uPVC profile, profile combination: sash - frame
Manufacturer	Profine GmbH International Profile Group, 66954 Pirmasens, Germany
Date of manufacture	--
Product designation / System name	KBE 76 KÖMMERLING 76 TROCAL 76
Material	Plastic - uPVC
Frame member	
Cross section (W x D)	67 mm x 76 mm
Number	76101
Reinforcement profile n°	V300
Sash member	
Cross section (W x D)	78 mm x 76 mm
Number	76201
Reinforcement profile n°	V303
Material data in the reinforcement area	
Reinforcement	
Material	Metal - galvanized steel
Core	
Material	--
Density	--
Rebate design	
Rebate seals	1 rebate seal in frame member 1 overlap seal in sash member
Geometrical characteristics	
Projected width	116 mm
Infill panel	
Thickness of insulating panel (infill) d_p	48
Installation depth of insulating panel in rebate b_p	18
Special features	--

The description is based on information provided by the client and inspection of the test specimen at **ift**. (Item designations/numbers as well as material specifications were provided by the client unless stated as 'ift-checked')

Test specimen representations are documented in the Annex "Representation of product/test specimen".
The design details were examined solely on the basis of the characteristics / performance to be classified.
The drawings are based on unchanged documentation provided by the client unless stated otherwise;

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Client: profine GmbH International Profile Group, 53840 Troisdorf (Germany)



1.2 Sampling

The below sampling data were provided to the ift:

Sampler: profine GmbH
International Profile Group, 66954 Pirmasens (Germany)

Evidence: A sampling report has not been presented to ift.

Delivered on: 25.07.2013, 25.07.2013, 25.07.2013, 25.07.2013

ift-No. of test specimen (PK): 13-001890-PK10 / **WE:** 35192-013, WE: 35192-014, WE:
35192-015, WE: 35192-016

2 Procedure

2.1 Basis *) referring to method/s

EN 12412-2:2003-07

Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2 Frames

EN 14351-1:2006+A1:2010

Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics

*) and the relevant national versions, e.g. DIN EN

2.2 Short description of the procedures

Thermal transmittance

The test was performed according to the guarded hot box method. The thermal transmittance is determined in stationary state.

The test specimen was located in a wall with infill insulation that was surrounded by two half shells, the interior and the exterior space.

Air and surface temperature as well as the registered heating capacity were measured.



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3 Detailed results

Thermal transmittance

Project-No. 13-001890-PR10 Task No. 13-001890
Basis of testing EN 12412-2:2003-07
Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2: Frames
Test equipment used Pst/022762 - Hot Box U value
PstZ/022764 - Wall 1 (Hot Box)
Test specimen Frame profiles
Number of test specimen 35192-013, 35192-014, 35192-015, 35192-016
Date of testing 14.08.2013
Testing personnel in charge Sebastian Unterholzner

Informationen regarding test arrangement / test method

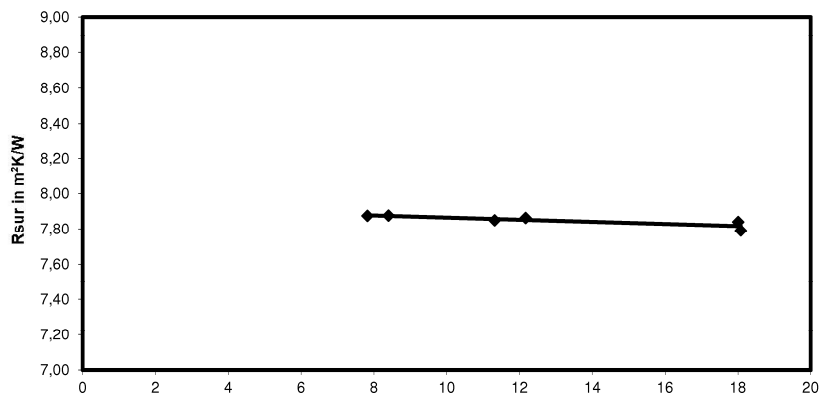
Test method There have been no deviations from the test methods according to standard/basis.

Implementation of tests / Test results

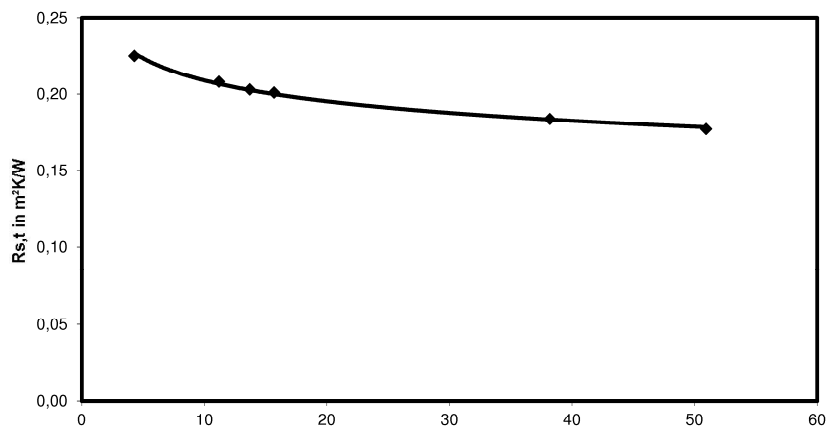
Designation	Symbol	Value	Unit
Results U_f			
Air temperature warm side	θ_{ci}	21,3	°C
Air temperature cold side	θ_{ce}	2,4	°C
Environmental temperature - warm	θ_{ni}	21,5	°C
Environmental temperature - cold	θ_{ne}	2,4	°C
Air velocity internal (air flow down)	v_i	approx. 0,1	m / s
Air velocity external (air flow down)	v_e	1,7	m / s
Input power to hot box	Φ_{in}	32,1	W
Heat flow density of specimen	q_{sp}	21,9	W / m ²
Total surface resistance	R_{st}	0,197	(m ² K) / W
Measured value U_f			
Thermal transmittance	U_f	1,1	W / (m ² K)
Uncertainty of measurement (absolute)	ΔU_f	0,07	W / (m ² K)



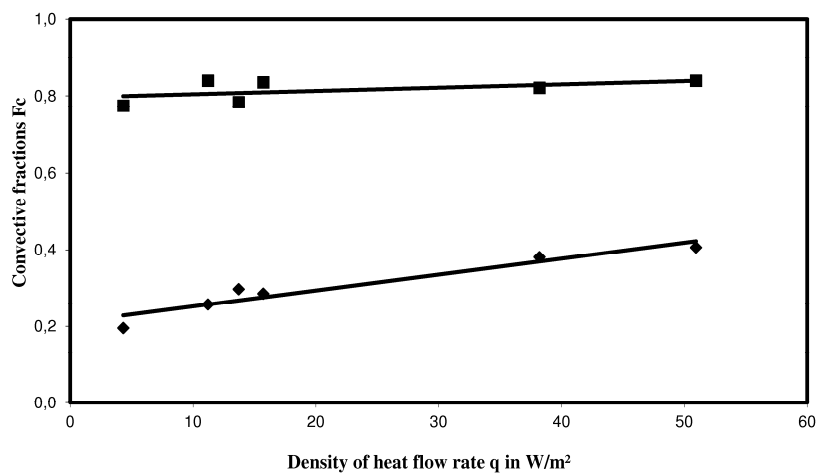
Diagrams showing results of calibration measurement



Surround panel, mean temperature



Density of heat flow rate q in W/m²



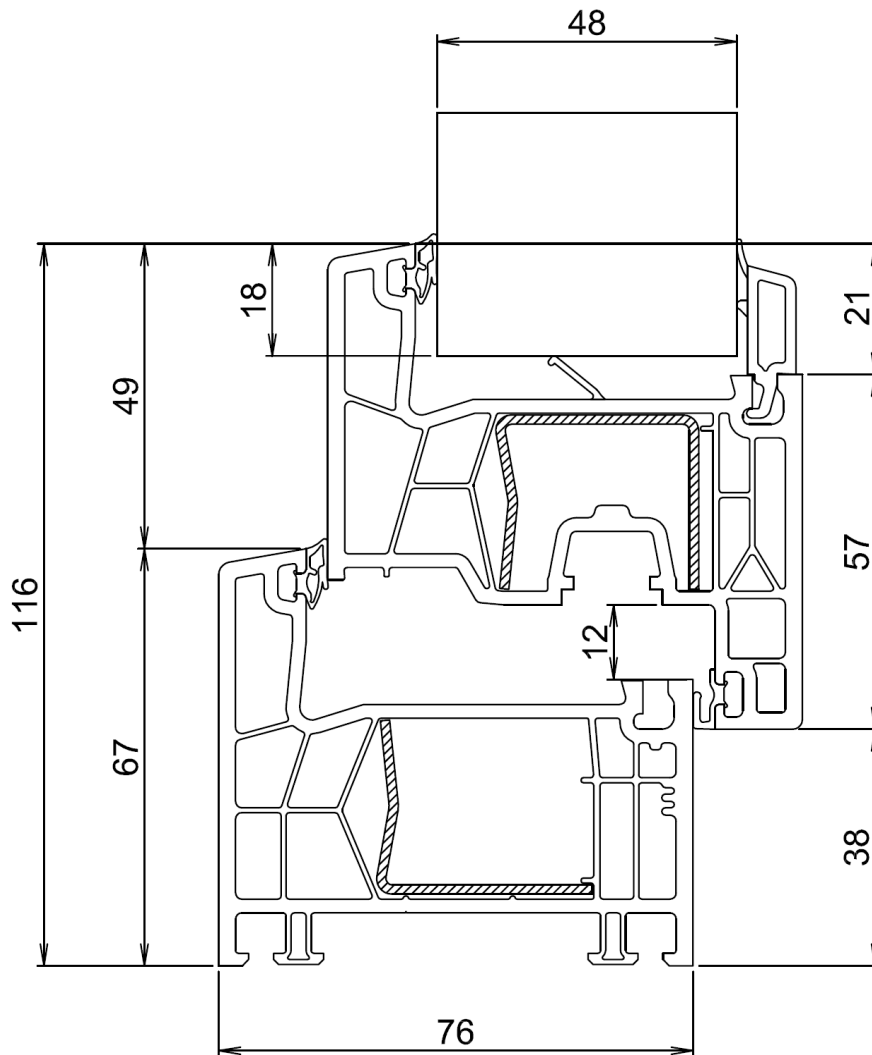
Density of heat flow rate q in W/m²

Evidence of performance

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Rahmen 76101 mit Stahl V300
Flügel 76201 mit Stahl V303
Glasleiste 76509

Cross-sectional drawings of profile combination