

Declaration of Performance

DoP/TKO3+1/TKO2+1

Producer: AS VILJANDI AKEN JA UKS, reg no 10052966, Puidu 6, 71020 Viljandi, Estonia

Hereby declares, that

Product: window **TKO 3+1** and **TKO 2+1**

Product description: inward opening wood-aluminium window, one glass in outer sash and double or triple glazing unit in inner sash.

Systems of assessment and verification of constancy of performance of the construction product: system 3

Produced: AS Viljandi Aken ja Uks, Puidu 6, 71020, Viljandi, Estonia

Confirms with characteristics in product standard EN 14351-1:2006+A1:2010

No	Characteristics	Test or calculation standard	Classification standard	Unit	Class/ value	Test report	Notified body*
1.	Resistance to wind load – test pressure	EN 12211	EN 12210	Class	3	VTT-S-04780-15	0809
2.	Resistance to wind load – frame deflection	EN 12211	EN 12210	Class	C		
3.	Water tightness	EN 1027	EN 12208	Class	E1200		
4.	Air permeability	EN 1026	EN 12207	Class	4		
5.	Acoustic performance	EN ISO 140-3 EN ISO 717-1	Declared value	dB	37-42	VTT-S-05482-15	0809
6.	Thermal transmittance	EN 10077-1 EN 10077-2	Declared value	W/m ² K	0,68-1,0	5P07259-1	0402

***Notified body:**

0809 – VTT Technical Research Centre of Finland P.O. Box 1000, FI-02044 VTT, Finland

0402 – SP Technical Research Institute of Sweden, Box 857, SE-501 15 Borås, Sweden

- Products are produced according to standard SFS 4433 in case it is not in conflict with European standards.
- Products are installed according to the product installation and maintenance instructions.
- “Warranty conditions for doors and windows sold by AS Viljandi Aken ja Uks” apply to the sale of products.

The Declaration of Performance is established in accordance with Regulation 305/2011/EU.

AS Viljandi Aken ja Uks



Veiko Põldsaar
 R&D Manager
 27.05.2016



Table 1. Sound insulation and thermal transmittance 1,23 m x 1,48 m

No.	Pane 1	Gas	Space	Pane 2	Gas	Spacer	Pane 3	Gas	Spacer	Pane 4	U _g	g _g	U _w	R _w	R _w +C	R _w +Ctr
TKO 3+1 Triple glazing till 52 mm + single glass till 8 mm																
1	4 float	air	38 mm	4 S	argon	18	4 float	argon	18	4 S	0,47	0,500	0,71	38	36	31
2	8 float	air	34 mm	4 S	argon	18	4 float	argon	18	4 S	0,47	0,483	0,71	42	40	35
3	4 float	air	38 mm	4 Se	argon	18	4 float	argon	18	4 Se	0,43	0,359	0,68	38	36	31
4	6 float	air	36 mm	4 Se	argon	18	4 float	argon	18	4 Se	0,47	0,491	0,68	40	38	33
5	6 float	air	36 mm	4 S	argon	18	4 float	argon	18	4 S	0,43	0,354	0,71	40	38	33
TKO 2+1 Double glazing till 24 mm + single glass till 8 mm																
1	4 float	air	62 mm	4 float	argon	16	4 S	-	-	-	0,86	0,599	1,00	39	36	30
2	4 float	air	62 mm	4 float	argon	16	4 Se	-	-	-	0,81	0,484	0,96	39	36	30
3	6 float	air	60 mm	4 float	argon	16	4 Se	-	-	-	0,81	0,476	0,96	41	40	35
4	4 G-fasT	air	62 mm	4 float	argon	16	4 S	-	-	-	0,70	0,530	0,87	39	36	30
5	4 G-fasT	air	62 mm	4 float	argon	16	4 Se	-	-	-	0,66	0,430	0,84	39	36	30
6	8 mm	air	58 mm	4 mm	argon	16	4 mm	-	-	-	-	-	-	42	41	38
7	4 mm	air	38 mm	4 mm	argon	16	4 mm	-	-	-	-	-	-	37	36	31
8	8 mm	air	34 mm	4 mm	argon	16	4 mm	-	-	-	-	-	-	41	39	33
9	6 mm	air	36 mm	4 mm	argon	16	4 mm	-	-	-	-	-	-	39	38	32

4 float - float glass, 4 mm

4 G-fasT - Planibel Low-e G fasT (hard coated glass), 4 mm

4 S - Pilkington Optitherm S3 or Planitherm XN, 4 mm (U_g' 1,1)

4 Se - Pilkington Optitherm S1 or Planitherm ONE , 4 mm (U_g' 1,0)

16 - Spacer, Chromatech Ultra, 16 mm

18 - Spacer, Chromatech Ultra, 18 mm