



DoP

DATE: 11 APRIL 2022

DOC: DOP - N:o 5/2022

DECLARATION OF PERFORMANCE

Manufacturer : Uponor GmbH
Product family : Ecoflex VIP Aqua Single
Product parameters : U-Values
Analysing organization : Stressfield Oy

Product and parameters:

Identification of the product type	Uponor Ecoflex VIP Aqua Single PN 10 (SDR 7.4)
Sizes	40/140, 50/140, 63/140, 75/140, 90/175, 110/175
Assesment of performance	Numerical simulation with ANSYS Fluent 2021 R1 solver.
Applied parameters	PEX-foam thermal conductivity at local temperature. Other material thermal conductivities at 50 °C. Heat losses, including soil to ambient thermal transmittance, according to EN 15632-1 Appendix B. Added resistance of two-pipe installation according to CEN/TC 107, prEN 13941-1:2016.

Declared performance:

Ecoflex VIP Aqua Single	U-Value ¹⁾ [W/mK]	Heat loss ²⁾ [W/m] for corresponding $\Delta\vartheta$ [K] ³⁾							
		20	30	40	50	60	70	80	
40/140	0.098	1.96	2.94	3.92	4.90	5.88	6.86	7.84	
50/140	0.115	2.30	3.44	4.59	5.74	6.89	8.04	9.19	
63/140	0.137	2.75	4.12	5.50	6.87	8.24	9.62	10.99	
75/140	0.161	3.23	4.84	6.46	8.07	9.69	11.30	12.92	
90/175	0.165	3.30	4.94	6.59	8.24	9.89	11.54	13.18	
110/175	0.207	4.14	6.21	8.28	10.35	12.42	14.49	16.57	

¹⁾ Two-pipe installation. See 'Applied parameters' above.

²⁾ According to EN 15632-1 Appendix B

³⁾ Calculation example for $\Delta\vartheta$:

Flow pipe at 70 °C, return pipe 40 °C, ambient at 5 °C $\rightarrow \Delta\vartheta = (70\text{ °C} + 40\text{ °C})/2 - 5\text{ °C} = 50\text{ °C}$

Signed on behalf of the Analysing organization by Date

11.4.2022

Vesa Tanskanen, D.Sc. (tech)

Stressfield Oy
Laserkatu 6
53810 Lappeenranta

Vesa Tanskanen
E-mail: vesa.tanskanen@stressfield.fi
Tel: +358 40 026 4935