

DECLARATION OF PERFORMANCE

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

Product and parameters:

Identification of the product type	Uponor Ecoflex VIP Thermo Single PN 6 (SDR 11)
Sizes	40/140, 50/140, 63/140, 75/140, 90/175 110/175, 125/200, 140/200, 160/250
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 Thermo 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	1.97	2.95	3.94	4.92	5.91	6.89	7.88
50/140	0.115	2.31	3.46	4.62	5.77	6.93	8.08	9.24
63/140	0.138	2.76	4.15	5.53	6.91	8.29	9.68	11.06
75/140	0.163	3.25	4.88	6.51	8.13	9.76	11.39	13.01
90/175	0.166	3.32	4.98	6.64	8.31	9.97	11.63	13.29
110/175	0.209	4.18	6.27	8.37	10.46	12.55	14.64	16.73
125/200	0.215	4.30	6.44	8.59	10.74	12.89	15.03	17.18
140/200	0.253	5.07	7.60	10.14	12.67	15.20	17.74	20.27
160/250	0.247	4.94	7.41	9.88	12.35	14.82	17.29	19.76

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