

Substance: R1123

Published

Table Measured capillary constant and surface tension for HFO-1123

Date	Temperature (ITS-90)	Capillary rise height difference	Vapor density	Liquid density	Capillary constant	Surface tension	Measurement uncertainty
-	T / [K]	Dh_m / [mm]	ρ_V / [kg/m ³]	ρ_L / [kg/m ³]	a^2 / [mm ²]	σ / [mN/m]	$U\sigma$ / [mN/m]
2017.05.08	269.72	1.46	43.71	1140.75	1.40	6.96	0.24
	272.95	1.38	48.34	1127.03	1.33	6.43	0.23
	279.15	1.23	58.41	1099.94	1.18	5.48	0.23
	283.57	1.12	66.71	1079.80	1.08	4.84	0.22
	288.51	1.02	77.28	1056.28	0.98	4.20	0.21
	293.22	0.95	88.89	1032.56	0.92	3.74	0.20
	297.47	0.90	100.89	1009.80	0.87	3.38	0.20
302.28	0.77	116.63	982.00	0.74	2.70	0.19	
2017.05.30	266.95	1.52	40.04	1152.34	1.47	7.41	0.24
	275.71	1.35	52.62	1115.10	1.30	6.20	0.23
	281.19	1.19	62.13	1090.71	1.14	5.23	0.22
	285.76	1.14	71.21	1069.53	1.09	4.83	0.22
	290.50	1.02	81.99	1046.43	0.98	4.13	0.21
	297.86	0.83	102.07	1007.63	0.80	3.09	0.20
	301.49	0.76	113.84	986.78	0.73	2.68	0.19
	303.55	0.71	121.21	974.27	0.68	2.40	0.18

Kondou, C., Higashi, Y., Surface Tension measurement for a new low-GWP refrigerant R1123 by a differential capillary rise method. Trans. of the JSRAE, 35 (4), 403-408 (Dec. 2018). DOI:10.11322/tjrae.18-31AC_OA