

Substance: R1233zd(E)

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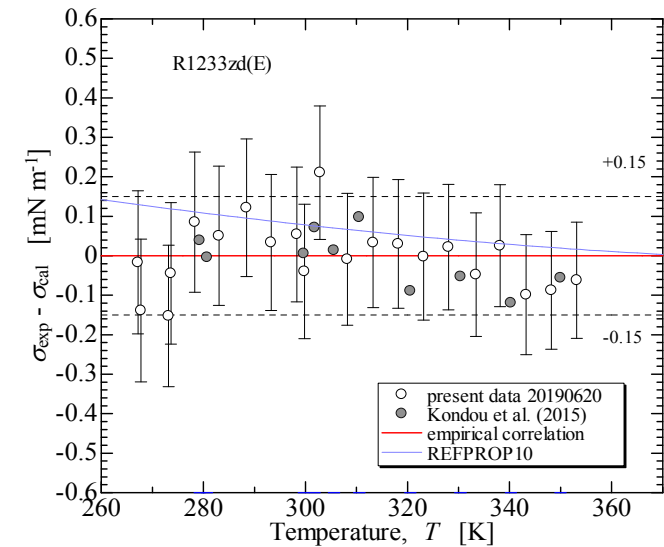
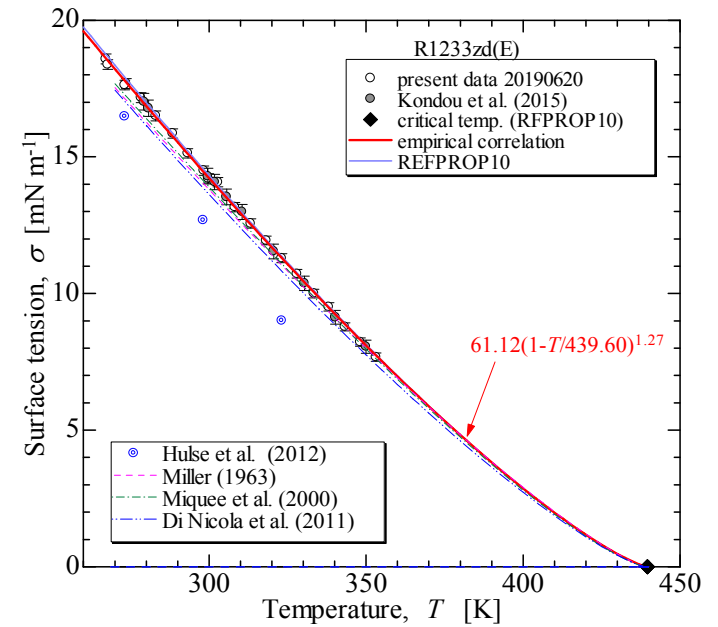
Table Measured capillary constant and surface tension for R1233zd(E)

Date	Temperature (ITS-90)	Vapor density	Liquid density	Surface tension	Measurement uncertainty
-	T / [K]	ρ_V / [kg/m ³]	ρ_L / [kg/m ³]	σ / [mN/m]	$U\sigma$ / [mN/m]
series1	302.83	8.42	1251.39	14.07	0.17
	308.21	10.01	1238.07	13.16	0.17
	313.27	11.71	1225.30	12.56	0.17
	318.20	13.58	1212.65	11.94	0.16
	323.15	15.68	1199.74	11.29	0.16
	267.18	2.20	1334.72	18.58	0.18
	273.63	2.89	1320.18	17.68	0.18
	278.32	3.49	1309.47	17.17	0.18
	283.04	4.19	1298.59	16.50	0.18
	288.45	5.13	1285.94	15.86	0.17
	293.27	6.09	1274.52	15.13	0.17
	298.31	7.25	1262.39	14.50	0.17
	299.81	7.62	1258.76	14.21	0.17
	328.03	18.00	1186.72	10.72	0.16
	333.43	20.88	1172.01	10.00	0.16
	338.13	23.69	1158.91	9.51	0.15
	343.24	27.07	1144.32	8.78	0.15
	348.18	30.71	1129.87	8.22	0.15
	353.16	34.80	1114.86	7.67	0.15
	267.75	2.26	1333.45	18.38	0.18
	273.17	2.84	1321.23	17.63	0.18

Acknowledgements

The experiment was kindly conducted by Mr. T., Numadate and Mr. Y., Joshima.
 The high purity sample was provided by Honeywell International Inc.
 Their supports are thankfully ancknowledged here.

$$\sigma = 61.12(1 - T/439.60)^{1.27} \text{ [mN m}^{-1}\text{]} \quad \text{for R1233zd(E)}$$



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Table Measured capillary constant and surface tension for R1234ze(Z)

Date	Temperature (ITS-90)	Vapor density	Liquid density	Capillary constant	Surface tension	Measurement uncertainty
-	T / [K]	ρ_V / [kg/m ³]	ρ_L / [kg/m ³]	a^2 / [mm ²]	σ / [mN/m]	$U\sigma$ / [mN/m]
series1	299.64	7.56	1259.20	2.33	14.29	0.29
	310.54	10.75	1232.22	2.17	12.99	0.28
	320.56	14.53	1206.51	1.98	11.54	0.27
	330.37	19.19	1180.36	1.82	10.38	0.26
	340.23	25.01	1152.92	1.65	9.13	0.25
	349.98	32.11	1124.41	1.51	8.05	0.24
	305.58	9.19	1244.61	2.24	13.53	0.28
	280.72	3.82	1303.97	2.64	16.78	0.30
series2	301.79	8.12	1253.94	2.31	14.08	0.29
	279.26	3.61	1307.32	2.67	17.02	0.30

Kondou, C., Nagata, R., Nii, N., Koyama, S., Higashi, Y., 2015. Surface tension of low GWP refrigerants R1243zf, R1234ze(Z), and R1233zd(E). *Int. J. Refrig.* 53, 80789. doi:10.1016/j.ijrefrig.2015.01.005

$$\sigma = 0.06195(1 - T/438.75)^{1.277} \text{ [N m}^{-1}\text{]} \quad \text{for R1233zd(E)}$$

