

Substance: R1130(E)  
 Molar mass= 96.94  
 Parachor= 173.36  
 T\_crit= 516.5

Published in

K. Tanaka, C. Kondou, S. Fukuda, R. Akasaka, Vapor Pressure, (p, ρ, T) Behavior, Saturated Densities, and Surface Tension of trans-1,2-Dichloroethene [R1130(E)], International Journal of Thermophysics (in press), (2022).

Table Measured capillary constant, surface tension, and parachor for R1130(E)

Date	Temperature (ITS-90)	Vapor * density	Liquid * density	Capillary constant	Surface tension	Measurement uncertainty	Obtained Parachor	
-	$T$ / [K]	$\rho_v$ / [kg/m <sup>3</sup> ]	$\rho_L$ / [kg/m <sup>3</sup> ]	$a^2$ / [mm <sup>2</sup> ]	$\sigma$ / [mN/m]	$U_\sigma$ / [mN/m]	$P$	
1	20211011	273.13	0.63	1282.02	4.47	28.1	0.52	174.14
2	20211011	283.32	0.98	1265.43	4.30	26.6	0.49	174.18
3	20211012	292.90	1.44	1249.66	4.14	25.3	0.47	174.15
4	20211012	304.30	2.19	1230.70	3.89	23.4	0.44	173.58
5	20211013	313.76	3.03	1214.72	3.72	22.1	0.42	173.42
6	20211013	323.19	4.09	1198.56	3.49	20.4	0.39	172.48
7	20211013	333.63	5.59	1180.33	3.33	19.2	0.37	172.70
8	20211014	343.39	7.36	1162.92	3.14	17.8	0.34	172.26
9	20211014	352.67	9.41	1145.99	2.99	16.6	0.32	172.26
10	20211018	303.49	2.13	1232.06	3.99	24.1	0.45	174.56
11	20211018	313.02	2.95	1215.98	3.83	22.8	0.43	174.60
12	20211020	353.37	9.58	1144.69	3.10	17.3	0.33	174.05
13	20211020	364.06	12.51	1124.64	2.90	15.8	0.31	173.80
14	20211020	372.95	15.46	1107.46	2.75	14.7	0.29	173.85
15	20211129	283.14	0.97	1265.72	4.26	26.4	0.49	173.69
16	20211130	263.16	0.39	1298.15	4.50	28.6	0.53	172.79
17	20211130	263.16	0.39	1298.15	4.54	28.8	0.53	173.10
18	20211201	263.32	0.39	1297.89	4.52	28.8	0.53	173.01
19	20211202	249.29	0.19	1320.46	4.71	30.5	0.56	172.53
20	20211202	258.44	0.31	1305.75	4.64	29.7	0.55	173.30
21	20211202	273.25	0.63	1281.82	4.34	27.3	0.51	172.88
22	20211203	297.93	1.74	1241.34	3.94	23.9	0.45	173.00
23	20211203	313.24	2.97	1215.61	3.73	22.1	0.42	173.39
24	20211203	323.07	4.08	1198.78	3.55	20.8	0.39	173.19
25	20211206	297.45	1.71	1242.13	4.09	24.9	0.46	174.50
26	20211206	309.16	2.59	1222.52	3.82	22.9	0.43	173.75
27	20211206	317.98	3.47	1207.53	3.75	22.1	0.41	174.56
28	20211207	228.52	0.05	1353.77	5.11	33.9	0.62	172.81
29	20211207	232.89	0.07	1346.75	5.08	33.5	0.61	173.17
30	20211207	237.51	0.09	1339.35	5.03	33.0	0.60	173.48
31	20211208	241.76	0.12	1332.54	4.89	31.9	0.58	172.94
32	20211208	253.42	0.24	1313.82	4.71	30.3	0.55	173.14
33	20211208	262.93	0.39	1298.52	4.45	28.3	0.52	172.24
34	20211208	273.05	0.62	1282.15	4.28	26.9	0.50	172.25
35	20211209	283.04	0.97	1265.87	4.18	25.9	0.48	172.89
36	20211209	292.72	1.43	1249.96	4.06	24.8	0.46	173.35
37	20211209	303.67	2.14	1231.75	3.91	23.5	0.44	173.63
38	20211213	333.68	5.60	1180.23	3.47	19.9	0.38	174.40

\* calculated with EOS developed by Tanaka et al. (2022)

