

TABLE I. Measured viscosities.

Pressure (atm)	Density (g/cm ³)	Viscosity (μP)	Pressure (atm)	Density (g/cm ³)	Viscosity (μP)
N ₂ , 25°C			71.93	0.015000	162.74±0.05
6.77	0.00776	177.93±0.04	87.14	0.018000	162.94±0.06
20.86	0.02396	180.27±0.03	102.64	0.021000	163.00±0.07
20.86	0.02396	180.14±0.02	118.43	0.024000	163.16±0.02
20.86	0.02396	180.05±0.07	134.53	0.027000	163.25±0.03
41.68	0.04792	183.82±0.04	150.93	0.030000	163.38±0.07
52.20	0.06000	186.05±0.07	167.65	0.033000	163.81±0.15
62.58	0.07188	188.78±0.05	He, -90°C		
83.71	0.09585	193.97±0.06	7.56	0.002000	142.78±0.03
105.24	0.11981	200.19±0.07	15.21	0.004000	142.55±0.09
105.24	0.11981	200.07±0.06	22.95	0.006000	142.51±0.04
123.81	0.14000	205.59±0.10	34.75	0.009000	142.41±0.07
127.33	0.14377	206.79±0.06	46.77	0.012000	142.41±0.07
142.71	0.16000	211.72±0.11	63.16	0.016000	142.69±0.03
162.23	0.18000	218.41±0.12	79.97	0.020000	143.05±0.05
173.98	0.19169	222.62±0.08	97.21	0.024000	143.27±0.12
198.96	0.21565	231.72±0.09	114.89	0.028000	143.68±0.08
253.52	0.26358	251.66±0.08	133.04	0.032000	144.06±0.12
N ₂ , -50°C			151.67	0.036000	144.86±0.14
6.48	0.01000	141.75±0.03	170.78	0.040000	145.29±0.05
12.85	0.02000	142.91±0.11	H ₂ , 25°C		
25.29	0.04000	145.96±0.14	6.09	0.000500	88.67±0.04
37.40	0.06000	149.52±0.08	12.23	0.001000	88.72±0.03
49.24	0.08000	153.68±0.11	24.63	0.002000	88.81±0.03
60.89	0.10000	158.23±0.12	37.23	0.003000	89.04±0.03
72.43	0.12000	163.31±0.13	50.01	0.004000	89.23±0.06
83.92	0.14000	168.89±0.08	63.00	0.005000	89.45±0.04
95.46	0.16000	175.13±0.21	76.19	0.006000	89.72±0.01
95.46	0.16000	175.03±0.17	89.59	0.007000	89.97±0.04
107.13	0.18000	181.77±0.15	103.22	0.008000	90.24±0.01
119.03	0.20000	188.96±0.19	117.08	0.009000	90.50±0.04
131.26	0.22000	196.89±0.21	138.31	0.010500	90.86±0.05
143.93	0.24000	204.92±0.15	160.10	0.012000	91.41±0.02
157.16	0.26000	214.11±0.13	H ₂ , -50°C		
171.10	0.28000	223.62±0.15	4.56	0.000500	72.85±0.02
N ₂ , -90°C			9.14	0.001000	73.01±0.03
5.28	0.01000	119.32±0.11	18.40	0.002000	73.14±0.02
10.39	0.02000	119.65±0.06	27.77	0.003000	73.38±0.01
20.16	0.04000	123.02±0.07	37.27	0.004000	73.63±0.05
29.37	0.06000	127.60±0.34	46.90	0.005000	73.80±0.01
42.30	0.09000	133.46±0.13	56.67	0.006000	73.96±0.01
54.38	0.12000	140.76±0.18	66.58	0.007000	74.13±0.03
65.85	0.15000	149.55±0.25	76.64	0.008000	74.36±0.05
76.95	0.18000	159.19±0.08	86.85	0.009000	74.60±0.03
87.94	0.21000	169.73±0.10	102.48	0.010500	75.02±0.01
99.10	0.24000	182.50±0.20	118.50	0.012000	75.51±0.03
114.80	0.28000	201.06±0.22	134.92	0.013500	76.15±0.04
132.26	0.32000	222.42±0.13	151.78	0.015000	76.78±0.04
152.63	0.36000	247.19±0.17	169.10	0.016500	77.52±0.06
He, 25°C			H ₂ , -100°C		
6.13	0.001000	198.07±0.03	7.08	0.001000	61.27±0.02
12.30	0.002000	197.91±0.03	14.23	0.002000	61.47±0.02
24.75	0.004000	197.83±0.02	21.45	0.003000	61.68±0.02
37.35	0.006000	197.76±0.07	32.43	0.004500	61.96±0.03
56.53	0.009000	197.84±0.03	43.60	0.006000	62.51±0.02
76.07	0.012000	197.88±0.03	54.97	0.007500	62.95±0.06
95.98	0.015000	197.92±0.03	54.97	0.007500	63.03±0.02
116.25	0.018000	197.95±0.03	66.57	0.009000	63.71±0.07
136.90	0.021000	198.12±0.03	66.57	0.009000	63.56±0.03
157.93	0.024000	198.27±0.07	78.41	0.010500	64.06±0.01
He, -50°C			90.52	0.012000	64.55±0.04
4.59	0.001000	162.95±0.05	107.10	0.014000	65.26±0.04
9.21	0.002000	162.73±0.03	124.23	0.016000	65.98±0.06
18.53	0.004000	162.66±0.12	141.97	0.018000	66.98±0.07
27.97	0.006000	162.58±0.14	160.36	0.020000	68.02±0.02
42.35	0.009000	162.64±0.03			
57.00	0.012000	162.59±0.02			