

R290熱力学的特性

温度(°C)		密度(kg/m ³)		比容積(m ³ /kg)		エンタルピー(kJ/kg) [※]			エントロピー(kJ/kg・K) [※]	
		液体	気体	液体	気体	液体	潜熱	気体	液体	気体
-60.0	0.043	601.68	1.082	0.00166	0.9240	60.43	443.92	504.36	0.428	2.511
-59.0	0.045	600.57	1.136	0.00167	0.8800	62.61	442.95	505.56	0.438	2.507
-58.0	0.047	599.47	1.193	0.00167	0.8385	64.78	441.98	506.76	0.448	2.503
-57.0	0.050	598.36	1.251	0.00167	0.7993	66.97	441.00	507.96	0.458	2.499
-56.0	0.052	597.24	1.312	0.00167	0.7624	69.15	440.01	509.16	0.468	2.495
-55.0	0.055	596.13	1.375	0.00168	0.7275	71.34	439.02	510.36	0.478	2.491
-54.0	0.058	595.01	1.440	0.00168	0.6945	73.53	438.03	511.57	0.488	2.487
-53.0	0.061	593.89	1.507	0.00168	0.6634	75.73	437.03	512.77	0.498	2.484
-52.0	0.064	592.76	1.578	0.00169	0.6339	77.94	436.03	513.97	0.508	2.480
-51.0	0.067	591.63	1.650	0.00169	0.6060	80.14	435.03	515.17	0.518	2.477
-50.0	0.070	590.50	1.725	0.00169	0.5797	82.36	434.01	516.37	0.528	2.473
-49.0	0.074	589.37	1.803	0.00170	0.5547	84.57	433.00	517.57	0.538	2.470
-48.0	0.077	588.23	1.883	0.00170	0.5310	86.79	431.98	518.77	0.548	2.467
-47.0	0.081	587.09	1.967	0.00170	0.5085	89.02	430.95	519.97	0.558	2.463
-46.0	0.085	585.95	2.053	0.00171	0.4872	91.25	429.92	521.17	0.568	2.460
-45.0	0.089	584.80	2.142	0.00171	0.4670	93.49	428.88	522.36	0.577	2.457
-44.0	0.093	583.65	2.233	0.00171	0.4478	95.73	427.83	523.56	0.587	2.454
-43.0	0.097	582.49	2.328	0.00172	0.4295	97.97	426.79	524.76	0.597	2.451
-42.0	0.102	581.34	2.426	0.00172	0.4122	100.22	425.73	525.95	0.607	2.448
-41.0	0.106	580.17	2.527	0.00172	0.3957	102.48	424.67	527.15	0.616	2.446
-40.0	0.111	579.01	2.632	0.00173	0.3800	104.74	423.60	528.34	0.626	2.443
-39.0	0.116	577.84	2.739	0.00173	0.3651	107.01	422.53	529.54	0.636	2.440
-38.0	0.121	576.67	2.850	0.00173	0.3509	109.28	421.45	530.73	0.645	2.438
-37.0	0.126	575.49	2.964	0.00174	0.3373	111.55	420.37	531.92	0.655	2.435
-36.0	0.132	574.31	3.082	0.00174	0.3244	113.83	419.27	533.11	0.665	2.433
-35.0	0.137	573.13	3.204	0.00174	0.3121	116.12	418.17	534.30	0.674	2.430
-34.0	0.143	571.94	3.329	0.00175	0.3004	118.41	417.07	535.48	0.684	2.428
-33.0	0.149	570.75	3.458	0.00175	0.2892	120.71	415.96	536.67	0.693	2.425
-32.0	0.155	569.55	3.590	0.00176	0.2785	123.01	414.84	537.85	0.703	2.423
-31.0	0.161	568.35	3.727	0.00176	0.2683	125.32	413.71	539.04	0.712	2.421
-30.0	0.168	567.15	3.867	0.00176	0.2586	127.64	412.58	540.22	0.722	2.419
-29.0	0.174	565.94	4.012	0.00177	0.2493	129.96	411.44	541.40	0.731	2.416
-28.0	0.181	564.73	4.161	0.00177	0.2404	132.28	410.29	542.58	0.741	2.414
-27.0	0.188	563.51	4.313	0.00177	0.2318	134.62	409.14	543.75	0.750	2.412
-26.0	0.196	562.29	4.470	0.00178	0.2237	136.95	407.98	544.93	0.760	2.410
-25.0	0.203	561.06	4.632	0.00178	0.2159	139.30	406.81	546.10	0.769	2.408
-24.0	0.211	559.83	4.798	0.00179	0.2084	141.65	405.63	547.28	0.778	2.406
-23.0	0.219	558.60	4.968	0.00179	0.2013	144.00	404.44	548.45	0.788	2.405
-22.0	0.227	557.36	5.143	0.00179	0.1944	146.36	403.25	549.61	0.797	2.403
-21.0	0.236	556.11	5.323	0.00180	0.1879	148.73	402.05	550.78	0.806	2.401
-20.0	0.244	554.86	5.508	0.00180	0.1816	151.11	400.84	551.94	0.816	2.399
-19.0	0.253	553.61	5.697	0.00181	0.1755	153.49	399.62	553.10	0.825	2.398
-18.0	0.263	552.35	5.892	0.00181	0.1697	155.87	398.39	554.26	0.834	2.396
-17.0	0.272	551.08	6.091	0.00181	0.1642	158.27	397.15	555.42	0.844	2.394
-16.0	0.282	549.81	6.296	0.00182	0.1588	160.67	395.91	556.58	0.853	2.393
-15.0	0.292	548.54	6.506	0.00182	0.1537	163.07	394.66	557.73	0.862	2.391
-14.0	0.302	547.26	6.722	0.00183	0.1488	165.49	393.39	558.88	0.872	2.390
-13.0	0.312	545.97	6.943	0.00183	0.1440	167.91	392.12	560.03	0.881	2.388
-12.0	0.323	544.68	7.169	0.00184	0.1395	170.33	390.84	561.17	0.890	2.387
-11.0	0.334	543.38	7.401	0.00184	0.1351	172.77	389.55	562.31	0.899	2.385
-10.0	0.345	542.08	7.639	0.00184	0.1309	175.21	388.25	563.45	0.908	2.384
-9.0	0.357	540.77	7.883	0.00185	0.1269	177.65	386.94	564.59	0.918	2.383
-8.0	0.369	539.45	8.133	0.00185	0.1230	180.11	385.62	565.72	0.927	2.381
-7.0	0.381	538.13	8.389	0.00186	0.1192	182.57	384.28	566.85	0.936	2.380
-6.0	0.393	536.81	8.651	0.00186	0.1156	185.04	382.94	567.98	0.945	2.379
-5.0	0.406	535.47	8.920	0.00187	0.1121	187.51	381.59	569.10	0.954	2.377
-4.0	0.419	534.13	9.195	0.00187	0.1088	189.99	380.23	570.22	0.963	2.376
-3.0	0.433	532.79	9.477	0.00188	0.1055	192.48	378.86	571.34	0.973	2.375
-2.0	0.446	531.44	9.765	0.00188	0.1024	194.98	377.47	572.46	0.982	2.374
-1.0	0.460	530.08	10.06	0.00189	0.0994	197.49	376.08	573.57	0.991	2.373

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		液体	気体	液体	気体	液体	潜熱	気体	液体	気体
0.0	0.475	528.71	10.36	0.001891	0.09650	200.00	374.67	574.67	1.000	2.372
1.0	0.489	527.34	10.67	0.001896	0.09370	202.52	373.25	575.78	1.009	2.371
2.0	0.504	525.97	10.99	0.001901	0.09100	205.05	371.83	576.87	1.018	2.370
3.0	0.520	524.58	11.31	0.001906	0.08839	207.58	370.38	577.97	1.027	2.369
4.0	0.535	523.19	11.65	0.001911	0.08588	210.13	368.93	579.06	1.036	2.368
5.0	0.551	521.79	11.98	0.001917	0.08345	212.68	367.47	580.15	1.046	2.367
6.0	0.568	520.38	12.33	0.001922	0.08110	215.24	365.99	581.23	1.055	2.366
7.0	0.584	518.97	12.69	0.001927	0.07883	217.81	364.50	582.31	1.064	2.365
8.0	0.602	517.55	13.05	0.001932	0.07663	220.38	362.99	583.38	1.073	2.364
9.0	0.619	516.12	13.42	0.001938	0.07451	222.97	361.48	584.45	1.082	2.363
10.0	0.637	514.68	13.80	0.001943	0.07246	225.56	359.95	585.51	1.091	2.362
11.0	0.655	513.23	14.19	0.001948	0.07047	228.16	358.41	586.57	1.100	2.361
12.0	0.674	511.78	14.59	0.001954	0.06855	230.77	356.85	587.62	1.109	2.360
13.0	0.693	510.32	14.99	0.001960	0.06670	233.39	355.28	588.67	1.118	2.360
14.0	0.712	508.85	15.41	0.001965	0.06490	236.02	353.69	589.71	1.127	2.359
15.0	0.732	507.37	15.83	0.001971	0.06315	238.66	352.10	590.75	1.136	2.358
16.0	0.752	505.88	16.27	0.001977	0.06147	241.30	350.48	591.78	1.145	2.357
17.0	0.773	504.39	16.71	0.001983	0.05983	243.96	348.85	592.81	1.154	2.356
18.0	0.794	502.88	17.17	0.001989	0.05825	246.62	347.21	593.83	1.163	2.356
19.0	0.815	501.37	17.63	0.001995	0.05672	249.29	345.55	594.84	1.172	2.355
20.0	0.837	499.85	18.11	0.002001	0.05523	251.98	343.87	595.85	1.181	2.354
21.0	0.859	498.31	18.59	0.002007	0.05379	254.67	342.18	596.85	1.190	2.353
22.0	0.882	496.77	19.09	0.002013	0.05239	257.37	340.47	597.85	1.199	2.353
23.0	0.905	495.22	19.60	0.002019	0.05103	260.08	338.75	598.83	1.208	2.352
24.0	0.928	493.65	20.12	0.002026	0.04971	262.80	337.01	599.81	1.217	2.351
25.0	0.952	492.08	20.65	0.002032	0.04844	265.53	335.25	600.78	1.226	2.351
26.0	0.977	490.50	21.19	0.002039	0.04720	268.28	333.47	601.75	1.235	2.350
27.0	1.002	488.90	21.74	0.00205	0.04599	271.03	331.68	602.71	1.244	2.349
28.0	1.027	487.30	22.31	0.00205	0.04482	273.79	329.87	603.66	1.253	2.349
29.0	1.053	485.68	22.89	0.00206	0.04369	276.56	328.03	604.60	1.262	2.348
30.0	1.079	484.05	23.48	0.00207	0.04259	279.35	326.18	605.53	1.271	2.347
31.0	1.106	482.41	24.09	0.00207	0.04152	282.14	324.31	606.45	1.280	2.347
32.0	1.133	480.76	24.71	0.00208	0.04047	284.95	322.42	607.37	1.289	2.346
33.0	1.161	479.10	25.34	0.00209	0.03946	287.77	320.51	608.28	1.298	2.345
34.0	1.189	477.42	25.99	0.00209	0.03848	290.59	318.58	609.17	1.307	2.345
35.0	1.218	475.73	26.65	0.00210	0.03752	293.43	316.62	610.06	1.316	2.344
36.0	1.247	474.03	27.33	0.00211	0.03659	296.29	314.65	610.93	1.325	2.343
37.0	1.277	472.31	28.02	0.00212	0.03568	299.15	312.65	611.80	1.335	2.343
38.0	1.308	470.58	28.73	0.00213	0.03480	302.03	310.63	612.65	1.344	2.342
39.0	1.338	468.83	29.46	0.00213	0.03395	304.92	308.58	613.50	1.353	2.341
40.0	1.370	467.07	30.20	0.00214	0.03311	307.82	306.51	614.33	1.362	2.340
41.0	1.402	465.30	30.96	0.00215	0.03230	310.73	304.42	615.15	1.371	2.340
42.0	1.434	463.50	31.74	0.00216	0.03151	313.66	302.30	615.96	1.380	2.339
43.0	1.467	461.69	32.54	0.00217	0.03074	316.60	300.15	616.75	1.389	2.338
44.0	1.500	459.87	33.35	0.00217	0.02998	319.56	297.98	617.54	1.398	2.338
45.0	1.534	458.03	34.19	0.00218	0.02925	322.52	295.78	618.30	1.407	2.337
46.0	1.569	456.17	35.04	0.00219	0.02854	325.51	293.55	619.06	1.416	2.336
47.0	1.604	454.29	35.92	0.00220	0.02784	328.51	291.29	619.80	1.425	2.335
48.0	1.640	452.39	36.81	0.00221	0.02716	331.52	289.00	620.52	1.435	2.334
49.0	1.676	450.47	37.73	0.00222	0.02650	334.55	286.68	621.23	1.444	2.334
50.0	1.713	448.53	38.67	0.00223	0.02586	337.59	284.33	621.92	1.453	2.333
51.0	1.751	446.57	39.64	0.00224	0.02523	340.65	281.95	622.60	1.462	2.332
52.0	1.789	444.59	40.63	0.00225	0.02461	343.73	279.53	623.26	1.471	2.331
53.0	1.828	442.58	41.65	0.00226	0.02401	346.83	277.07	623.90	1.481	2.330
54.0	1.867	440.55	42.69	0.00227	0.02343	349.94	274.58	624.52	1.490	2.329
55.0	1.907	438.50	43.76	0.00228	0.02286	353.07	272.05	625.12	1.499	2.328
56.0	1.948	436.42	44.85	0.00229	0.02230	356.22	269.48	625.70	1.508	2.327
57.0	1.989	434.31	45.98	0.00230	0.02175	359.39	266.87	626.26	1.518	2.326
58.0	2.031	432.17	47.14	0.00231	0.02122	362.58	264.22	626.80	1.527	2.325
59.0	2.073	430.01	48.32	0.00233	0.02069	365.79	261.52	627.31	1.536	2.324

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60.0	2.117	427.81	49.55	0.00234	0.02018	369.02	258.78	627.80	1.546	2.323
61.0	2.160	425.58	50.80	0.00235	0.01968	372.27	255.99	628.26	1.555	2.321
62.0	2.205	423.31	52.09	0.00236	0.01920	375.55	253.15	628.70	1.565	2.320
63.0	2.250	421.01	53.42	0.00238	0.01872	378.85	250.26	629.11	1.574	2.319
64.0	2.296	418.67	54.79	0.00239	0.01825	382.17	247.32	629.49	1.584	2.317
65.0	2.343	416.30	56.21	0.00240	0.01779	385.52	244.32	629.84	1.593	2.316
66.0	2.390	413.87	57.66	0.00242	0.01734	388.90	241.26	630.15	1.603	2.314
67.0	2.438	411.41	59.16	0.00243	0.01690	392.30	238.13	630.44	1.613	2.313
68.0	2.487	408.89	60.71	0.00245	0.01647	395.74	234.94	630.68	1.622	2.311
69.0	2.536	406.33	62.31	0.00246	0.01605	399.21	231.69	630.89	1.632	2.309
70.0	2.586	403.71	63.97	0.00248	0.01563	402.71	228.35	631.06	1.642	2.308
71.0	2.637	401.04	65.68	0.00249	0.01523	406.24	224.95	631.19	1.652	2.306
72.0	2.689	398.30	67.45	0.00251	0.01483	409.81	221.46	631.27	1.662	2.304
73.0	2.742	395.50	69.29	0.00253	0.01443	413.42	217.88	631.30	1.672	2.302
74.0	2.795	392.63	71.19	0.00255	0.01405	417.07	214.21	631.28	1.682	2.299
75.0	2.849	389.69	73.17	0.00257	0.01367	420.76	210.45	631.20	1.692	2.297
76.0	2.904	386.66	75.23	0.00259	0.01329	424.49	206.58	631.07	1.703	2.294
77.0	2.959	383.55	77.38	0.00261	0.01292	428.28	202.59	630.87	1.713	2.292
78.0	3.016	380.34	79.62	0.00263	0.01256	432.12	198.48	630.60	1.724	2.289
79.0	3.073	377.03	81.96	0.00265	0.01220	436.02	194.25	630.26	1.734	2.286
80.0	3.132	373.61	84.41	0.00268	0.01185	439.98	189.86	629.84	1.745	2.283
81.0	3.191	370.06	86.98	0.00270	0.01150	444.00	185.32	629.33	1.756	2.279
82.0	3.251	366.37	89.68	0.00273	0.01115	448.10	180.61	628.71	1.767	2.276
83.0	3.311	362.54	92.53	0.00276	0.01081	452.28	175.71	627.99	1.778	2.272
84.0	3.373	358.53	95.55	0.00279	0.01047	456.55	170.60	627.15	1.790	2.268
85.0	3.436	354.32	98.75	0.00282	0.01013	460.92	165.24	626.17	1.802	2.263
86.0	3.499	349.90	102.17	0.00286	0.00979	465.41	159.62	625.03	1.814	2.258
87.0	3.564	345.22	105.83	0.00290	0.00945	470.03	153.68	623.71	1.826	2.253
88.0	3.630	340.24	109.78	0.00294	0.00911	474.80	147.38	622.18	1.839	2.247
89.0	3.696	334.90	114.08	0.00299	0.00877	479.76	140.64	620.40	1.852	2.240
90.0	3.764	329.11	118.80	0.00304	0.00842	484.94	133.37	618.31	1.866	2.233
91.0	3.833	322.77	124.04	0.00310	0.00806	490.41	125.43	615.84	1.880	2.225
92.0	3.903	315.69	129.98	0.00317	0.00769	496.26	116.62	612.88	1.896	2.215
93.0	3.974	307.57	136.88	0.00325	0.00731	502.63	106.61	609.24	1.912	2.203
94.0	4.047	297.87	145.20	0.00336	0.00689	509.82	94.77	604.59	1.931	2.189
95.0	4.120	285.34	155.98	0.00350	0.00641	518.48	79.76	598.23	1.954	2.171
96.0	4.196	265.78	172.48	0.00376	0.00580	530.85	57.14	587.99	1.987	2.142
96.675	4.247	218.50	218.50	0.00458	0.00458	558.75	0.00	558.75	2.062	2.062

※0°Cにおいてエンタルピー(液)200kJ/kg, エントロピー(液)1kJ/kg・Kとする。