

R134a 冷媒飽和性質表 (Saturated Properties Table of R134a Refrigerant)

冷媒(refrigerant) : R134a		臨界溫度(critical temperature) : 374.2 K 臨界壓力(critical Pressure) : 4059.3 kPa 莫爾質量(molar mass) : 102 kg/kmol																	
溫度 (temp.)	壓力 (press.)	比容 (specific volume)		比焓 (specific enthalpy)		比熵 (spec. entropy)		定壓比熱 (isobaric sp. heat)		定容比熱 (isochoric sp. heat)		黏度 (viscosity)		熱傳導率 (thermal conductivity)		聲速 (speed of sound)		表面張力 (surface tension)	
°C	kPa	m <sup>3</sup> /kg		kJ/kg		kJ/(kgK)		kJ/(kgK)		kJ/(kgK)		mPa·s		W/(mK)		m/s		m-N/m	
相(phase)		液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)
-62	13.9	0.0007	1.2206	120.9	360.0	0.67	1.81	1.22	0.69	0.81	0.60	686.6	8.44	0.1218	0.0064	912.7	138.9	21.1	21.1
-60	15.9	0.0007	1.0790	123.4	361.3	0.68	1.80	1.22	0.69	0.81	0.60	660.5	8.52	0.1207	0.0066	903.0	139.4	20.8	20.8
-58	18.1	0.0007	0.9565	125.8	362.6	0.70	1.80	1.23	0.70	0.81	0.61	636.0	8.60	0.1197	0.0067	893.3	139.9	20.5	20.5
-56	20.5	0.0007	0.8502	128.3	363.8	0.71	1.79	1.23	0.70	0.82	0.61	612.9	8.67	0.1186	0.0069	883.6	140.4	20.1	20.1
-54	23.2	0.0007	0.7577	130.7	365.1	0.72	1.79	1.23	0.71	0.82	0.62	591.1	8.75	0.1176	0.0070	873.9	140.8	19.8	19.8
-52	26.2	0.0007	0.6769	133.2	366.4	0.73	1.78	1.23	0.71	0.82	0.62	570.4	8.82	0.1166	0.0072	864.3	141.3	19.5	19.5
-50	29.5	0.0007	0.6062	135.7	367.7	0.74	1.78	1.24	0.72	0.82	0.63	550.9	8.90	0.1156	0.0074	854.7	141.7	19.2	19.2
-48	33.1	0.0007	0.5441	138.2	368.9	0.75	1.78	1.24	0.73	0.82	0.63	532.4	8.97	0.1146	0.0075	845.2	142.1	18.9	18.9
-46	37.0	0.0007	0.4896	140.6	370.2	0.76	1.77	1.24	0.73	0.83	0.64	514.8	9.05	0.1136	0.0077	835.6	142.5	18.5	18.5
-44	41.3	0.0007	0.4414	143.1	371.5	0.77	1.77	1.25	0.74	0.83	0.64	498.1	9.12	0.1126	0.0078	826.1	142.9	18.2	18.2
-42	46.1	0.0007	0.3988	145.6	372.7	0.78	1.77	1.25	0.74	0.83	0.65	482.2	9.20	0.1116	0.0080	816.7	143.3	17.9	17.9
-40	51.2	0.0007	0.3611	148.1	374.0	0.80	1.76	1.25	0.75	0.83	0.65	467.0	9.27	0.1106	0.0082	807.2	143.6	17.6	17.6
-38	56.8	0.0007	0.3276	150.7	375.3	0.81	1.76	1.26	0.76	0.83	0.66	452.6	9.34	0.1096	0.0083	797.8	144.0	17.3	17.3
-36	62.9	0.0007	0.2977	153.2	376.5	0.82	1.76	1.26	0.76	0.84	0.66	438.8	9.42	0.1086	0.0085	788.4	144.3	17.0	17.0
-34	69.5	0.0007	0.2711	155.7	377.8	0.83	1.76	1.27	0.77	0.84	0.67	425.6	9.49	0.1077	0.0087	779.0	144.6	16.7	16.7
-32	76.7	0.0007	0.2473	158.2	379.1	0.84	1.75	1.27	0.77	0.84	0.67	413.0	9.56	0.1067	0.0088	769.6	144.9	16.3	16.3
-30	84.4	0.0007	0.2259	160.8	380.3	0.85	1.75	1.27	0.78	0.84	0.68	401.0	9.64	0.1058	0.0090	760.3	145.2	16.0	16.0
-28	92.7	0.0007	0.2068	163.3	381.6	0.86	1.75	1.28	0.79	0.85	0.68	389.4	9.71	0.1048	0.0092	750.9	145.4	15.7	15.7
-26	101.7	0.0007	0.1896	165.9	382.8	0.87	1.75	1.28	0.79	0.85	0.69	378.3	9.78	0.1039	0.0093	741.6	145.7	15.4	15.4
-24	111.3	0.0007	0.1741	168.5	384.1	0.88	1.75	1.28	0.80	0.85	0.69	367.7	9.85	0.1029	0.0095	732.3	145.9	15.1	15.1
-22	121.6	0.0007	0.1601	171.1	385.3	0.89	1.74	1.29	0.81	0.85	0.70	357.4	9.93	0.1020	0.0097	723.1	146.1	14.8	14.8
-20	132.7	0.0007	0.1474	173.6	386.6	0.90	1.74	1.29	0.82	0.86	0.70	347.6	10.00	0.1011	0.0098	713.8	146.3	14.5	14.5
-18	144.6	0.0007	0.1359	176.2	387.8	0.91	1.74	1.30	0.82	0.86	0.71	338.1	10.07	0.1001	0.0100	704.5	146.4	14.2	14.2
-16	157.3	0.0007	0.1255	178.8	389.0	0.92	1.74	1.30	0.83	0.86	0.72	329.0	10.14	0.0992	0.0102	695.3	146.6	13.9	13.9
-14	170.8	0.0007	0.1161	181.4	390.2	0.93	1.74	1.31	0.84	0.86	0.72	320.2	10.22	0.0983	0.0103	686.1	146.7	13.6	13.6
-12	185.2	0.0007	0.1074	184.1	391.5	0.94	1.73	1.31	0.85	0.86	0.73	311.7	10.29	0.0974	0.0105	676.8	146.8	13.3	13.3
-10	200.6	0.0008	0.0996	186.7	392.7	0.95	1.73	1.32	0.85	0.87	0.73	303.5	10.36	0.0965	0.0107	667.6	146.9	13.0	13.0
-8	216.9	0.0008	0.0924	189.3	393.9	0.96	1.73	1.32	0.86	0.87	0.74	295.6	10.43	0.0956	0.0108	658.4	146.9	12.7	12.7
-6	234.3	0.0008	0.0859	192.0	395.1	0.97	1.73	1.33	0.87	0.87	0.74	288.0	10.51	0.0947	0.0110	649.2	147.0	12.4	12.4
-4	252.7	0.0008	0.0799	194.6	396.3	0.98	1.73	1.33	0.88	0.87	0.75	280.6	10.58	0.0938	0.0112	640.0	147.0	12.1	12.1
-2	272.2	0.0008	0.0744	197.3	397.4	0.99	1.73	1.34	0.89	0.88	0.76	273.5	10.65	0.0929	0.0113	630.8	147.0	11.8	11.8
0	292.8	0.0008	0.0693	200.0	398.6	1.00	1.73	1.34	0.90	0.88	0.76	266.5	10.73	0.0920	0.0115	621.6	146.9	11.6	11.6
2	314.6	0.0008	0.0647	202.7	399.8	1.01	1.73	1.35	0.91	0.88	0.77	259.8	10.80	0.0911	0.0117	612.5	146.9	11.3	11.3
4	337.7	0.0008	0.0604	205.4	400.9	1.02	1.72	1.35	0.92	0.88	0.77	253.3	10.87	0.0902	0.0119	603.3	146.8	11.0	11.0
6	362.0	0.0008	0.0564	208.1	402.1	1.03	1.72	1.36	0.93	0.89	0.78	247.0	10.95	0.0894	0.0120	594.1	146.7	10.7	10.7
8	387.6	0.0008	0.0528	210.8	403.2	1.04	1.72	1.36	0.94	0.89	0.78	240.8	11.02	0.0885	0.0122	584.9	146.5	10.4	10.4
10	414.6	0.0008	0.0494	213.6	404.3	1.05	1.72	1.37	0.95	0.89	0.79	234.9	11.10	0.0876	0.0124	575.7	146.4	10.1	10.1
12	443.0	0.0008	0.0463	216.3	405.4	1.06	1.72	1.38	0.96	0.89	0.80	229.1	11.18	0.0867	0.0126	566.5	146.2	9.9	9.9
14	472.9	0.0008	0.0435	219.1	406.5	1.07	1.72	1.38	0.97	0.90	0.80	223.4	11.25	0.0859	0.0128	557.3	146.0	9.6	9.6
16	504.3	0.0008	0.0408	221.9	407.6	1.08	1.72	1.39	0.98	0.90	0.81	217.9	11.33	0.0850	0.0130	548.1	145.7	9.3	9.3

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°C	kPa	m <sup>3</sup> /kg		kJ/kg		kJ/(kgK)		kJ/(kgK)		kJ/(kgK)		mPa·s		W/(mK)		m/s		m-N/m	
相(phase)		液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)	液(liq.)	汽(vap.)
18	537.2	0.0008	0.0383	224.7	408.7	1.09	1.72	1.40	0.99	0.90	0.81	212.6	11.41	0.0841	0.0131	538.8	145.5	9.0	9.0
20	571.7	0.0008	0.0360	227.5	409.7	1.10	1.72	1.40	1.00	0.91	0.82	207.4	11.49	0.0833	0.0133	529.6	145.1	8.8	8.8
22	607.9	0.0008	0.0339	230.3	410.8	1.11	1.72	1.41	1.01	0.91	0.83	202.3	11.57	0.0824	0.0135	520.4	144.8	8.5	8.5
24	645.8	0.0008	0.0319	233.1	411.8	1.12	1.72	1.42	1.03	0.91	0.83	197.3	11.65	0.0816	0.0137	511.1	144.5	8.2	8.2
26	685.4	0.0008	0.0300	236.0	412.8	1.12	1.72	1.43	1.04	0.91	0.84	192.5	11.73	0.0807	0.0139	501.8	144.1	7.9	7.9
28	726.9	0.0008	0.0283	238.8	413.8	1.13	1.72	1.44	1.05	0.92	0.85	187.7	11.82	0.0798	0.0141	492.5	143.6	7.7	7.7
30	770.2	0.0008	0.0266	241.7	414.8	1.14	1.71	1.45	1.07	0.92	0.85	183.1	11.91	0.0790	0.0143	483.2	143.2	7.4	7.4
32	815.4	0.0008	0.0251	244.6	415.8	1.15	1.71	1.46	1.08	0.92	0.86	178.6	12.00	0.0781	0.0145	473.9	142.7	7.2	7.2
34	862.6	0.0009	0.0237	247.5	416.7	1.16	1.71	1.47	1.10	0.92	0.87	174.2	12.09	0.0773	0.0148	464.6	142.1	6.9	6.9
36	911.8	0.0009	0.0224	250.5	417.6	1.17	1.71	1.48	1.11	0.93	0.87	169.9	12.18	0.0764	0.0150	455.2	141.6	6.6	6.6
38	963.2	0.0009	0.0211	253.4	418.5	1.18	1.71	1.49	1.13	0.93	0.88	165.6	12.27	0.0756	0.0152	445.8	141.0	6.4	6.4
40	1016.6	0.0009	0.0200	256.4	419.4	1.19	1.71	1.50	1.14	0.93	0.89	161.4	12.37	0.0747	0.0154	436.4	140.3	6.1	6.1
42	1072.2	0.0009	0.0189	259.4	420.3	1.20	1.71	1.51	1.16	0.94	0.89	157.4	12.47	0.0739	0.0157	427.0	139.7	5.9	5.9
44	1130.1	0.0009	0.0178	262.4	421.1	1.21	1.71	1.52	1.18	0.94	0.90	153.4	12.58	0.0730	0.0159	417.5	138.9	5.6	5.6
46	1190.3	0.0009	0.0169	265.5	421.9	1.22	1.71	1.54	1.20	0.94	0.91	149.4	12.69	0.0721	0.0162	408.0	138.2	5.4	5.4
48	1252.9	0.0009	0.0160	268.5	422.7	1.23	1.71	1.55	1.22	0.95	0.91	145.6	12.80	0.0713	0.0165	398.5	137.4	5.1	5.1
50	1317.9	0.0009	0.0151	271.6	423.4	1.24	1.71	1.57	1.25	0.95	0.92	141.8	12.92	0.0704	0.0167	389.0	136.6	4.9	4.9
52	1385.4	0.0009	0.0143	274.7	424.1	1.25	1.71	1.58	1.27	0.95	0.93	138.0	13.04	0.0696	0.0170	379.4	135.7	4.7	4.7
54	1455.5	0.0009	0.0135	277.9	424.8	1.26	1.71	1.60	1.30	0.96	0.94	134.4	13.17	0.0687	0.0173	369.7	134.7	4.4	4.4
56	1528.2	0.0009	0.0128	281.1	425.5	1.27	1.70	1.62	1.32	0.96	0.94	130.7	13.30	0.0678	0.0176	360.0	133.8	4.2	4.2
58	1603.6	0.0009	0.0121	284.3	426.1	1.28	1.70	1.64	1.35	0.96	0.95	127.1	13.44	0.0670	0.0180	350.3	132.7	3.9	3.9
60	1681.8	0.0009	0.0114	287.5	426.6	1.28	1.70	1.66	1.39	0.97	0.96	123.6	13.59	0.0661	0.0183	340.5	131.7	3.7	3.7
62	1762.8	0.0010	0.0108	290.8	427.1	1.29	1.70	1.68	1.42	0.97	0.97	120.1	13.74	0.0652	0.0187	330.6	130.5	3.5	3.5
64	1846.7	0.0010	0.0102	294.1	427.6	1.30	1.70	1.71	1.46	0.97	0.97	116.7	13.91	0.0643	0.0191	320.7	129.4	3.3	3.3
66	1933.7	0.0010	0.0097	297.4	428.0	1.31	1.70	1.74	1.50	0.98	0.98	113.3	14.09	0.0635	0.0195	310.7	128.1	3.0	3.0
68	2023.7	0.0010	0.0092	300.8	428.4	1.32	1.70	1.77	1.55	0.98	0.99	109.9	14.27	0.0626	0.0200	300.5	126.8	2.8	2.8
70	2116.8	0.0010	0.0087	304.3	428.6	1.33	1.70	1.80	1.61	0.99	1.00	106.5	14.48	0.0617	0.0205	290.3	125.5	2.6	2.6
72	2213.2	0.0010	0.0082	307.8	428.9	1.34	1.69	1.84	1.67	0.99	1.01	103.2	14.69	0.0608	0.0210	279.9	124.0	2.4	2.4
74	2313.0	0.0010	0.0077	311.3	429.0	1.35	1.69	1.89	1.73	1.00	1.02	99.8	14.93	0.0599	0.0216	269.4	122.6	2.2	2.2
76	2416.1	0.0010	0.0073	314.9	429.0	1.36	1.69	1.94	1.81	1.00	1.03	96.5	15.18	0.0590	0.0222	258.7	121.0	2.0	2.0
78	2522.8	0.0011	0.0069	318.6	429.0	1.37	1.69	2.00	1.90	1.01	1.04	93.2	15.46	0.0581	0.0229	247.8	119.4	1.8	1.8
80	2633.2	0.0011	0.0064	322.4	428.8	1.38	1.68	2.06	2.01	1.01	1.05	89.8	15.77	0.0571	0.0237	236.6	117.7	1.6	1.6
82	2747.3	0.0011	0.0061	326.2	428.5	1.39	1.68	2.15	2.14	1.02	1.06	86.5	16.12	0.0562	0.0246	225.2	115.9	1.4	1.4
84	2865.3	0.0011	0.0057	330.2	428.1	1.40	1.68	2.25	2.30	1.03	1.07	83.1	16.50	0.0553	0.0256	213.4	114.1	1.2	1.2
86	2987.4	0.0011	0.0053	334.3	427.4	1.42	1.68	2.37	2.50	1.04	1.08	79.6	16.94	0.0544	0.0268	201.3	112.1	1.1	1.1
88	3113.6	0.0012	0.0050	338.5	426.6	1.43	1.67	2.54	2.77	1.04	1.09	76.1	17.44	0.0536	0.0282	188.8	110.1	0.9	0.9
90	3244.2	0.0012	0.0046	342.9	425.4	1.44	1.67	2.76	3.12	1.06	1.11	72.5	18.02	0.0528	0.0298	175.9	107.9	0.7	0.7
92	3379.3	0.0012	0.0043	347.6	423.9	1.45	1.66	3.07	3.63	1.07	1.12	68.6	18.72	0.0520	0.0318	162.4	105.6	0.6	0.6
94	3519.3	0.0013	0.0039	352.6	421.9	1.46	1.65	3.57	4.43	1.08	1.14	64.6	19.59	0.0516	0.0344	148.4	103.2	0.4	0.4
96	3664.5	0.0013	0.0036	358.1	419.2	1.48	1.64	4.46	5.85	1.10	1.16	60.1	20.73	0.0515	0.0381	133.7	100.6	0.3	0.3

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