

Table Thermodynamique R 1234yf

	Liquide	Liquide	Vapeur	Liquide	Vapeur	Liquide	Vapeur
Temperature	Pression	Densité	Densité	Enthalpie	Enthalpie	Entropie	Entropie
(°C)	(bar abs)	(Kg/M ³)	(Kg/M ³)	(KJ/Kg)	(KJ/Kg)	(KJ/Kg-K)	(KJ/Kg-K)
-50	0.37423	1318.4	2.3545	139.63	329.85	0.75735	1.6098
-49	0.39477	1315.8	2.475	140.76	330.52	0.76239	1.609
-48	0.41622	1313.2	2.6003	141.9	331.19	0.76743	1.6082
-47	0.43859	1310.5	2.7306	143.03	331.86	0.77246	1.6074
-46	0.46192	1307.9	2.866	144.17	332.54	0.77747	1.6067
-45	0.48624	1305.2	3.0067	145.31	333.21	0.78248	1.606
-44	0.51157	1302.6	3.1528	146.46	333.88	0.78748	1.6054
-43	0.53795	1299.9	3.3045	147.61	334.56	0.79247	1.6048
-42	0.5654	1297.2	3.4619	148.76	335.23	0.79745	1.6042
-41	0.59397	1294.6	3.6252	149.91	335.9	0.80243	1.6036
-40	0.62367	1291.9	3.7945	151.07	336.58	0.80739	1.6031
-39	0.65454	1289.2	3.97	152.23	337.25	0.81235	1.6025
-38	0.68661	1286.5	4.1519	153.39	337.93	0.81729	1.602
-37	0.71992	1283.8	4.3402	154.56	338.6	0.82223	1.6016
-36	0.7545	1281	4.5353	155.73	339.28	0.82716	1.6011
-35	0.79039	1278.3	4.7372	156.9	339.95	0.83208	1.6007
-34	0.82761	1275.6	4.946	158.08	340.62	0.837	1.6003
-33	0.8662	1272.8	5.1621	159.26	341.3	0.8419	1.5999
-32	0.9062	1270.1	5.3856	160.44	341.97	0.8468	1.5996
-31	0.94764	1267.3	5.6165	161.62	342.65	0.85169	1.5993
-30	0.99056	1264.5	5.8553	162.81	343.32	0.85658	1.599
-29	1.035	1261.8	6.1019	164	344	0.86145	1.5987
-28	1.081	1259	6.3566	165.2	344.67	0.86632	1.5984
-27	1.1286	1256.2	6.6196	166.39	345.34	0.87118	1.5982
-26	1.1778	1253.4	6.8911	167.6	346.02	0.87604	1.598
-25	1.2286	1250.5	7.1712	168.8	346.69	0.88088	1.5978
-24	1.2812	1247.7	7.4602	170.01	347.36	0.88572	1.5976
-23	1.3355	1244.9	7.7584	171.22	348.04	0.89056	1.5974
-22	1.3916	1242	8.0658	172.43	348.71	0.89538	1.5973
-21	1.4495	1239.2	8.3826	173.65	349.38	0.9002	1.5971
-20	1.5092	1236.3	8.7093	174.87	350.05	0.90501	1.597
-19	1.5709	1233.4	9.0458	176.09	350.72	0.90982	1.5969
-18	1.6344	1230.5	9.3925	177.32	351.39	0.91462	1.5968
-17	1.7	1227.6	9.7495	178.55	352.06	0.91941	1.5968
-16	1.7676	1224.7	10.117	179.79	352.73	0.9242	1.5967
-15	1.8372	1221.8	10.496	181.02	353.4	0.92898	1.5967
-14	1.909	1218.8	10.885	182.27	354.06	0.93375	1.5967
-13	1.9829	1215.9	11.286	183.51	354.73	0.93852	1.5967
-12	2.059	1212.9	11.699	184.76	355.39	0.94328	1.5967
-11	2.1373	1209.9	12.123	186.01	356.06	0.94804	1.5967
-10	2.2178	1207	12.559	187.26	356.72	0.95279	1.5968
-9	2.3007	1203.9	13.008	188.52	357.38	0.95754	1.5968

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-8	2.386	1200.9	13.469	189.78	358.04	0.96228	1.5969
-7	2.4736	1197.9	13.943	191.05	358.7	0.96701	1.5969
-6	2.5637	1194.9	14.431	192.31	359.36	0.97174	1.597
-5	2.6563	1191.8	14.931	193.59	360.02	0.97646	1.5971
-4	2.7514	1188.7	15.446	194.86	360.68	0.98118	1.5973
-3	2.8491	1185.6	15.974	196.14	361.33	0.98589	1.5974
-2	2.9495	1182.5	16.517	197.42	361.99	0.9906	1.5975
-1	3.0525	1179.4	17.074	198.71	362.64	0.9953	1.5977
0	3.1582	1176.3	17.647	200	363.29	1	1.5978
1	3.2667	1173.1	18.234	201.29	363.94	1.0047	1.598
2	3.378	1170	18.837	202.59	364.59	1.0094	1.5981
3	3.4922	1166.8	19.457	203.89	365.23	1.0141	1.5983
4	3.6092	1163.6	20.092	205.2	365.88	1.0187	1.5985
5	3.7292	1160.4	20.744	206.5	366.52	1.0234	1.5987
6	3.8523	1157.2	21.413	207.82	367.16	1.0281	1.5989
7	3.9783	1153.9	22.1	209.13	367.8	1.0328	1.5991
8	4.1075	1150.6	22.804	210.45	368.44	1.0374	1.5993
9	4.2398	1147.3	23.526	211.78	369.07	1.0421	1.5996
10	4.3753	1144	24.267	213.1	369.7	1.0467	1.5998
11	4.5141	1140.7	25.027	214.43	370.33	1.0514	1.6
12	4.6561	1137.4	25.807	215.77	370.96	1.056	1.6003
13	4.8015	1134	26.606	217.11	371.59	1.0607	1.6005
14	4.9503	1130.6	27.425	218.45	372.21	1.0653	1.6008
15	5.1025	1127.2	28.266	219.8	372.83	1.0699	1.601
16	5.2583	1123.8	29.127	221.15	373.45	1.0746	1.6013
17	5.4176	1120.3	30.011	222.51	374.06	1.0792	1.6016
18	5.5804	1116.9	30.916	223.87	374.67	1.0838	1.6018
19	5.747	1113.4	31.845	225.23	375.28	1.0885	1.6021
20	5.9172	1109.9	32.796	226.6	375.89	1.0931	1.6024
21	6.0912	1106.3	33.772	227.97	376.49	1.0977	1.6026
22	6.269	1102.8	34.772	229.34	377.09	1.1023	1.6029
23	6.4507	1099.2	35.797	230.73	377.69	1.1069	1.6032
24	6.6363	1095.5	36.848	232.11	378.28	1.1115	1.6034
25	6.8258	1091.9	37.925	233.5	378.87	1.1162	1.6037
26	7.0194	1088.2	39.029	234.89	379.45	1.1208	1.604
27	7.2171	1084.5	40.161	236.29	380.03	1.1254	1.6043
28	7.4189	1080.8	41.321	237.69	380.61	1.13	1.6045
29	7.6249	1077.1	42.51	239.1	381.18	1.1346	1.6048
30	7.8351	1073.3	43.729	240.51	381.75	1.1392	1.6051
31	8.0497	1069.5	44.979	241.93	382.31	1.1438	1.6053
32	8.2686	1065.7	46.26	243.35	382.87	1.1484	1.6056
33	8.4919	1061.8	47.573	244.78	383.43	1.153	1.6059

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(°C)	(bar abs)	(Kg/M ³)	(Kg/M ³)	(KJ/Kg)	(KJ/Kg)	(KJ/Kg-K)	(KJ/Kg-K)
34	8.7197	1057.9	48.92	246.21	383.98	1.1576	1.6061
35	8.9521	1054	50.301	247.64	384.52	1.1622	1.6064
36	9.189	1050	51.717	249.09	385.06	1.1668	1.6066
37	9.4306	1046	53.169	250.53	385.6	1.1714	1.6068
38	9.6769	1042	54.658	251.98	386.13	1.1759	1.6071
39	9.928	1037.9	56.186	253.44	386.65	1.1805	1.6073
40	10.184	1033.8	57.753	254.9	387.17	1.1851	1.6075
41	10.445	1029.6	59.36	256.37	387.68	1.1897	1.6077
42	10.711	1025.5	61.01	257.84	388.19	1.1943	1.6079
43	10.981	1021.2	62.702	259.32	388.69	1.1989	1.6081
44	11.257	1017	64.44	260.81	389.18	1.2035	1.6083
45	11.538	1012.6	66.223	262.3	389.66	1.2082	1.6085
46	11.825	1008.3	68.053	263.8	390.14	1.2128	1.6087
47	12.116	1003.9	69.933	265.3	390.61	1.2174	1.6088
48	12.413	999.44	71.863	266.81	391.08	1.222	1.6089
49	12.715	994.94	73.846	268.33	391.53	1.2266	1.6091
50	13.023	990.38	75.884	269.85	391.98	1.2312	1.6092
51	13.337	985.77	77.978	271.38	392.42	1.2359	1.6093
52	13.656	981.1	80.13	272.92	392.85	1.2405	1.6094
53	13.98	976.38	82.343	274.47	393.27	1.2452	1.6094
54	14.311	971.59	84.619	276.02	393.68	1.2498	1.6095
55	14.647	966.73	86.961	277.58	394.08	1.2545	1.6095
56	14.989	961.8	89.371	279.15	394.48	1.2592	1.6095
57	15.338	956.81	91.852	280.73	394.86	1.2638	1.6095
58	15.692	951.73	94.407	282.32	395.23	1.2685	1.6095
59	16.052	946.58	97.04	283.92	395.58	1.2732	1.6094
60	16.419	941.34	99.754	285.53	395.93	1.2779	1.6093
61	16.792	936.02	102.55	287.14	396.26	1.2827	1.6092
62	17.171	930.6	105.44	288.77	396.58	1.2874	1.6091
63	17.557	925.08	108.42	290.41	396.89	1.2922	1.6089
64	17.949	919.46	111.5	292.06	397.18	1.2969	1.6087
65	18.348	913.73	114.68	293.72	397.46	1.3017	1.6085
66	18.754	907.89	117.96	295.39	397.71	1.3065	1.6082
67	19.166	901.93	121.37	297.08	397.96	1.3114	1.6079
68	19.586	895.83	124.89	298.78	398.18	1.3162	1.6076
69	20.012	889.6	128.54	300.49	398.38	1.3211	1.6072
70	20.445	883.23	132.33	302.22	398.57	1.326	1.6068
71	20.886	876.7	136.27	303.96	398.73	1.3309	1.6063
72	21.334	870.01	140.36	305.72	398.87	1.3359	1.6058
73	21.789	863.15	144.61	307.5	398.98	1.3409	1.6052
74	22.252	856.1	149.04	309.3	399.07	1.3459	1.6045
75	22.723	848.85	153.67	311.11	399.13	1.351	1.6038

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76	23.201	841.38	158.51	312.95	399.16	1.3561	1.603
77	23.687	833.68	163.57	314.81	399.15	1.3612	1.6021
78	24.181	825.73	168.87	316.69	399.11	1.3664	1.6011
79	24.684	817.51	174.45	318.6	399.03	1.3717	1.6001
80	25.194	808.98	180.33	320.54	398.9	1.377	1.5989
81	25.714	800.13	186.55	322.52	398.73	1.3824	1.5976
82	26.241	790.9	193.13	324.52	398.5	1.3879	1.5962
83	26.778	781.25	200.14	326.57	398.21	1.3934	1.5946
84	27.324	771.12	207.63	328.67	397.85	1.3991	1.5928
85	27.879	760.45	215.67	330.81	397.4	1.4049	1.5909
86	28.444	749.13	224.37	333.02	396.87	1.4109	1.5886
87	29.018	737.05	233.85	335.3	396.22	1.417	1.5862
88	29.602	724.02	244.28	337.68	395.44	1.4234	1.5833
89	30.197	709.82	255.91	340.16	394.49	1.43	1.58
90	30.803	694.07	269.1	342.79	393.32	1.437	1.5762