

KLEA® 134a



## Thermodynamic Property Data SI Units

---

# Klea 134a

## Saturation Properties

KLEA134a SATURATION PROPERTIES (SI Units)

August 1998 Version 3

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K}

Temp C	Absolute Pressure bar	Density		Enthalpy			Entropy		Temp K
		kg/m <sup>3</sup>		kJ/kg			kJ/(kg K)		
		Liquid	Vapour	Liquid	Latent	Vapour	Liquid	Vapour}	
-80	0.0369	1524	0.2355	0.007	249.047	249.054	0.56903	1.85843	193.15
-79	0.04004	1521.5	0.2543	1.206	248.462	249.668	0.57522	1.85497	194.15
-78	0.04341	1518.9	0.2743	2.405	247.878	250.283	0.58138	1.85158	195.15
-77	0.04702	1516.4	0.2957	3.605	247.294	250.899	0.58752	1.84826	196.15
-76	0.05087	1513.8	0.3184	4.805	246.711	251.516	0.59362	1.84501	197.15
-75	0.05499	1511.2	0.3426	6.006	246.128	252.134	0.59969	1.84182	198.15
-74	0.05939	1508.7	0.3683	7.208	245.545	252.753	0.60574	1.83871	199.15
-73	0.06408	1506.1	0.3955	8.41	244.963	253.373	0.61176	1.83566	200.15
-72	0.06908	1503.5	0.4244	9.613	244.381	253.994	0.61775	1.83267	201.15
-71	0.0744	1500.9	0.455	10.817	243.798	254.615	0.62372	1.82975	202.15
-70	0.08006	1498.3	0.4874	12.021	243.216	255.237	0.62966	1.82689	203.15
-69	0.08608	1495.7	0.5217	13.226	242.634	255.86	0.63558	1.82409	204.15
-68	0.09247	1493.1	0.5579	14.432	242.052	256.483	0.64147	1.82134	205.15
-67	0.09926	1490.5	0.5962	15.638	241.469	257.107	0.64733	1.81866	206.15
-66	0.10645	1487.9	0.6366	16.846	240.886	257.732	0.65317	1.81603	207.15
-65	0.11408	1485.2	0.6793	18.054	240.303	258.357	0.65899	1.81346	208.15
-64	0.12215	1482.6	0.7242	19.263	239.72	258.983	0.66478	1.81094	209.15
-63	0.13069	1479.9	0.7716	20.473	239.136	259.609	0.67055	1.80848	210.15
-62	0.13973	1477.3	0.8214	21.684	238.552	260.236	0.6763	1.80607	211.15
-61	0.14927	1474.6	0.8739	22.896	237.967	260.863	0.68202	1.80371	212.15
-60	0.15935	1472	0.9291	24.109	237.381	261.491	0.68772	1.8014	213.15
-59	0.16999	1469.3	0.987	25.323	236.795	262.119	0.6934	1.79915	214.15
-58	0.1812	1466.6	1.0479	26.539	236.208	262.747	0.69906	1.79694	215.15
-57	0.19302	1463.9	1.1117	27.755	235.62	263.375	0.70469	1.79477	216.15
-56	0.20546	1461.2	1.1787	28.972	235.032	264.004	0.71031	1.79266	217.15
-55	0.21856	1458.5	1.2489	30.191	234.442	264.633	0.7159	1.79059	218.15
-54	0.23234	1455.8	1.3225	31.411	233.851	265.262	0.72148	1.78856	219.15
-53	0.24682	1453.1	1.3995	32.632	233.26	265.891	0.72703	1.78658	220.15
-52	0.26204	1450.4	1.4801	33.854	232.667	266.52	0.73257	1.78464	221.15
-51	0.27801	1447.6	1.5645	35.077	232.072	267.15	0.73808	1.78275	222.15
-50	0.29477	1444.9	1.6526	36.302	231.477	267.779	0.74358	1.7809	223.15
-49	0.31234	1442.1	1.7447	37.529	230.88	268.409	0.74906	1.77908	224.15
-48	0.33076	1439.4	1.8409	38.756	230.282	269.038	0.75452	1.77731	225.15
-47	0.35006	1436.6	1.9412	39.985	229.682	269.668	0.75996	1.77558	226.15
-46	0.37026	1433.8	2.046	41.216	229.081	270.297	0.76538	1.77388	227.15
-45	0.39139	1431	2.1552	42.448	228.478	270.926	0.77078	1.77222	228.15
-44	0.4135	1428.2	2.269	43.681	227.874	271.555	0.77617	1.7706	229.15
-43	0.4366	1425.4	2.3876	44.916	227.267	272.184	0.78154	1.76902	230.15
-42	0.46074	1422.6	2.5111	46.153	226.659	272.812	0.7869	1.76747	231.15
-41	0.48595	1419.8	2.6396	47.391	226.049	273.44	0.79224	1.76596	232.15

Temp C	Absolute Pressure bar	Density		Enthalpy			Entropy		Temp K
		kg/m <sup>3</sup>		kJ/kg			kJ/(kg K)		
		Liquid	Vapour	Liquid	Latent	Vapour	Liquid	Vapour	
-40	0.51225	1417	2.7733	48.631	225.437	274.068	0.79756	1.76448	233.15
-39	0.5397	1414.2	2.9124	49.873	224.823	274.696	0.80286	1.76303	234.15
-38	0.56831	1411.3	3.057	51.116	224.207	275.323	0.80815	1.76162	235.15
-37	0.59813	1408.5	3.2072	52.362	223.589	275.95	0.81343	1.76024	236.15
-36	0.62919	1405.6	3.3632	53.609	222.968	276.577	0.81869	1.75889	237.15
-35	0.66153	1402.7	3.5252	54.857	222.345	277.203	0.82393	1.75757	238.15
-34	0.69519	1399.8	3.6934	56.108	221.72	277.828	0.82916	1.75628	239.15
-33	0.73021	1396.9	3.8678	57.361	221.093	278.453	0.83438	1.75502	240.15
-32	0.76662	1394	4.0487	58.615	220.462	279.077	0.83958	1.7538	241.15
-31	0.80447	1391.1	4.2363	59.871	219.83	279.701	0.84477	1.7526	242.15
-30	0.84379	1388.2	4.4307	61.13	219.194	280.324	0.84995	1.75142	243.15
-29	0.88462	1385.3	4.6321	62.39	218.556	280.947	0.85511	1.75028	244.15
-28	0.92701	1382.3	4.8406	63.653	217.916	281.569	0.86026	1.74916	245.15
-27	0.97099	1379.4	5.0566	64.918	217.272	282.19	0.86539	1.74807	246.15
-26	1.01662	1376.4	5.28	66.185	216.625	282.81	0.87051	1.74701	247.15
-25	1.06392	1373.4	5.5113	67.454	215.976	283.429	0.87562	1.74597	248.15
-24	1.11295	1370.5	5.7504	68.725	215.323	284.048	0.88072	1.74495	249.15
-23	1.16375	1367.5	5.9977	69.998	214.667	284.666	0.88581	1.74396	250.15
-22	1.21636	1364.4	6.2533	71.274	214.008	285.282	0.89088	1.743	251.15
-21	1.27083	1361.4	6.5174	72.552	213.346	285.898	0.89595	1.74205	252.15
-20	1.32719	1358.4	6.7903	73.833	212.68	286.513	0.901	1.74113	253.15
-19	1.38551	1355.4	7.0721	75.116	212.011	287.127	0.90604	1.74024	254.15
-18	1.44582	1352.3	7.363	76.401	211.338	287.739	0.91107	1.73936	255.15
-17	1.50817	1349.2	7.6633	77.689	210.662	288.351	0.91609	1.73851	256.15
-16	1.5726	1346.2	7.9733	78.98	209.982	288.961	0.9211	1.73767	257.15
-15	1.63917	1343.1	8.293	80.273	209.298	289.571	0.9261	1.73686	258.15
-14	1.70793	1340	8.6228	81.568	208.611	290.179	0.93109	1.73607	259.15
-13	1.77891	1336.9	8.9629	82.866	207.919	290.785	0.93607	1.73529	260.15
-12	1.85218	1333.7	9.3135	84.167	207.224	291.391	0.94104	1.73454	261.15
-11	1.92777	1330.6	9.6748	85.471	206.524	291.995	0.946	1.73381	262.15
-10	2.00575	1327.4	10.047	86.777	205.82	292.598	0.95095	1.73309	263.15
-9	2.08615	1324.3	10.431	88.086	205.112	293.199	0.95589	1.73239	264.15
-8	2.16904	1321.1	10.826	89.398	204.4	293.798	0.96082	1.73171	265.15
-7	2.25446	1317.9	11.233	90.713	203.683	294.396	0.96575	1.73105	266.15
-6	2.34246	1314.7	11.652	92.031	202.962	294.993	0.97067	1.7304	267.15
-5	2.4331	1311.5	12.083	93.351	202.236	295.588	0.97557	1.72977	268.15
-4	2.52643	1308.2	12.526	94.675	201.506	296.181	0.98047	1.72915	269.15
-3	2.6225	1305	12.983	96.002	200.771	296.772	0.98537	1.72855	270.15
-2	2.72136	1301.7	13.453	97.331	200.031	297.362	0.99025	1.72796	271.15
-1	2.82307	1298.4	13.936	98.664	199.286	297.95	0.99513	1.72739	272.15

Temp C	Absolute Pressure bar	Density		Enthalpy			Entropy		Temp K
		kg/m <sup>3</sup>		kJ/kg			kJ/(kg K)		
		Liquid	Vapour	Liquid	Latent	Vapour	Liquid	Vapour	
0	2.92769	1295.1	14.433	100	198.536	298.536	1	1.72684	273.15
1	3.03526	1291.8	14.944	101.339	197.78	299.12	1.00486	1.72629	274.15
2	3.14584	1288.5	15.469	102.681	197.02	299.701	1.00972	1.72577	275.15
3	3.2595	1285.1	16.009	104.027	196.254	300.281	1.01457	1.72525	276.15
4	3.37627	1281.8	16.564	105.376	195.483	300.859	1.01941	1.72474	277.15
5	3.49623	1278.4	17.134	106.728	194.706	301.434	1.02425	1.72425	278.15
6	3.61942	1275	17.719	108.083	193.924	302.008	1.02908	1.72377	279.15
7	3.74591	1271.6	18.321	109.442	193.136	302.578	1.0339	1.7233	280.15
8	3.87575	1268.2	18.939	110.805	192.342	303.147	1.03872	1.72285	281.15
9	4.009	1264.7	19.574	112.171	191.542	303.713	1.04353	1.7224	282.15
10	4.14571	1261.2	20.226	113.54	190.736	304.276	1.04834	1.72196	283.15
11	4.28595	1257.8	20.895	114.913	189.924	304.837	1.05314	1.72153	284.15
12	4.42978	1254.3	21.583	116.29	189.106	305.396	1.05793	1.72112	285.15
13	4.57725	1250.7	22.288	117.67	188.281	305.951	1.06273	1.72071	286.15
14	4.72842	1247.2	23.012	119.054	187.45	306.504	1.06751	1.72031	287.15
15	4.88336	1243.6	23.755	120.441	186.612	307.054	1.07229	1.71991	288.15
16	5.04212	1240	24.518	121.833	185.768	307.6	1.07707	1.71953	289.15
17	5.20477	1236.4	25.301	123.228	184.916	308.144	1.08184	1.71915	290.15
18	5.37137	1232.8	26.104	124.627	184.057	308.685	1.08661	1.71878	291.15
19	5.54197	1229.2	26.928	126.03	183.192	309.222	1.09137	1.71842	292.15
20	5.71665	1225.5	27.773	127.437	182.319	309.756	1.09613	1.71806	293.15
21	5.89546	1221.8	28.64	128.848	181.438	310.287	1.10089	1.71771	294.15
22	6.07846	1218.1	29.529	130.263	180.55	310.814	1.10564	1.71736	295.15
23	6.26573	1214.3	30.442	131.683	179.655	311.337	1.11039	1.71702	296.15
24	6.45732	1210.6	31.378	133.106	178.751	311.857	1.11513	1.71668	297.15
25	6.6533	1206.8	32.337	134.533	177.84	312.373	1.11987	1.71635	298.15
26	6.85374	1203	33.322	135.965	176.92	312.885	1.12461	1.71602	299.15
27	7.05869	1199.2	34.331	137.401	175.992	313.393	1.12935	1.71569	300.15
28	7.26823	1195.3	35.367	138.842	175.055	313.897	1.13408	1.71537	301.15
29	7.48241	1191.4	36.428	140.287	174.11	314.397	1.13881	1.71505	302.15
30	7.70132	1187.5	37.517	141.736	173.156	314.892	1.14354	1.71473	303.15
31	7.92501	1183.5	38.634	143.19	172.193	315.383	1.14826	1.71441	304.15
32	8.15355	1179.6	39.779	144.649	171.22	315.869	1.15299	1.71409	305.15
33	8.38701	1175.6	40.953	146.112	170.239	316.351	1.15771	1.71377	306.15
34	8.62545	1171.5	42.157	147.58	169.247	316.827	1.16243	1.71346	307.15
35	8.86896	1167.5	43.391	149.053	168.246	317.299	1.16715	1.71314	308.15
36	9.11759	1163.4	44.658	150.53	167.235	317.765	1.17187	1.71282	309.15
37	9.37142	1159.2	45.956	152.013	166.213	318.226	1.17659	1.7125	310.15
38	9.63052	1155.1	47.288	153.5	165.181	318.681	1.1813	1.71217	311.15
39	9.89496	1150.9	48.654	154.993	164.138	319.131	1.18602	1.71185	312.15

Temp C	Absolute Pressure bar	Density		Enthalpy			Entropy		Temp K
		kg/m <sup>3</sup>		kJ/kg			kJ/(kg K)		
		Liquid	Vapour	Liquid	Latent	Vapour	Liquid	Vapour	
40	10.1648	1146.7	50.055	156.491	163.084	319.575	1.19073	1.71152	313.15
41	10.4401	1142.4	51.492	157.994	162.019	320.013	1.19545	1.71119	314.15
42	10.721	1138.1	52.967	159.503	160.942	320.445	1.20017	1.71085	315.15
43	11.0076	1133.7	54.479	161.017	159.853	320.87	1.20488	1.71051	316.15
44	11.2998	1129.4	56.031	162.537	158.752	321.289	1.2096	1.71016	317.15
45	11.5978	1124.9	57.623	164.062	157.639	321.701	1.21432	1.70981	318.15
46	11.9017	1120.5	59.256	165.593	156.513	322.106	1.21904	1.70945	319.15
47	12.2115	1116	60.933	167.13	155.374	322.504	1.22376	1.70908	320.15
48	12.5273	1111.4	62.654	168.673	154.221	322.894	1.22848	1.7087	321.15
49	12.8492	1106.8	64.421	170.222	153.055	323.277	1.23321	1.70832	322.15
50	13.1773	1102.2	66.234	171.778	151.874	323.652	1.23794	1.70792	323.15
51	13.5116	1097.5	68.097	173.339	150.679	324.018	1.24267	1.70751	324.15
52	13.8523	1092.8	70.009	174.908	149.468	324.376	1.24741	1.7071	325.15
53	14.1993	1088	71.974	176.483	148.242	324.726	1.25215	1.70667	326.15
54	14.5529	1083.1	73.992	178.065	147	325.066	1.25689	1.70623	327.15
55	14.9131	1078.3	76.067	179.655	145.742	325.396	1.26164	1.70577	328.15
56	15.2799	1073.3	78.198	181.251	144.466	325.717	1.26639	1.7053	329.15
57	15.6535	1068.3	80.39	182.855	143.173	326.028	1.27115	1.70481	330.15
58	16.0339	1063.2	82.643	184.467	141.862	326.329	1.27592	1.70431	331.15
59	16.4213	1058.1	84.961	186.087	140.531	326.618	1.28069	1.70379	332.15
60	16.8156	1052.9	87.346	187.715	139.181	326.896	1.28548	1.70325	333.15
61	17.2171	1047.6	89.801	189.351	137.811	327.163	1.29027	1.70269	334.15
62	17.6258	1042.2	92.328	190.996	136.42	327.417	1.29507	1.70211	335.15
63	18.0418	1036.8	94.93	192.651	135.008	327.658	1.29987	1.7015	336.15
64	18.4653	1031.3	97.611	194.314	133.572	327.886	1.30469	1.70087	337.15
65	18.8962	1025.8	100.374	195.988	132.113	328.101	1.30953	1.70022	338.15
66	19.3347	1020.1	103.223	197.671	130.629	328.3	1.31437	1.69954	339.15
67	19.7809	1014.3	106.162	199.365	129.12	328.485	1.31923	1.69883	340.15
68	20.2349	1008.5	109.196	201.07	127.584	328.654	1.3241	1.69808	341.15
69	20.6968	1002.5	112.328	202.787	126.019	328.806	1.32899	1.69731	342.15
70	21.1668	996.49	115.564	204.515	124.426	328.941	1.3339	1.6965	343.15
71	21.6449	990.33	118.909	206.256	122.801	329.058	1.33883	1.69565	344.15
72	22.1312	984.06	122.37	208.01	121.144	329.155	1.34377	1.69476	345.15
73	22.6259	977.66	125.952	209.779	119.454	329.232	1.34874	1.69383	346.15
74	23.1291	971.14	129.663	211.561	117.727	329.288	1.35374	1.69286	347.15
75	23.6409	964.48	133.511	213.359	115.962	329.321	1.35876	1.69184	348.15
76	24.1614	957.67	137.504	215.174	114.156	329.33	1.3638	1.69076	349.15
77	24.6909	950.71	141.651	217.005	112.308	329.314	1.36888	1.68963	350.15
78	25.2293	943.58	145.963	218.855	110.415	329.27	1.374	1.68844	351.15
79	25.7768	936.28	150.452	220.725	108.473	329.198	1.37915	1.68718	352.15

Temp C	Absolute Pressure bar	Density		Enthalpy			Entropy		Temp K
		kg/m <sup>3</sup>		kJ/kg			kJ/(kg K)		
		Liquid	Vapour	Liquid	Latent	Vapour	Liquid	Vapour	
80	26.3336	928.78	155.13	222.616	106.479	329.095	1.38434	1.68585	353.15
81	26.8999	921.08	160.013	224.529	104.429	328.958	1.38958	1.68445	354.15
82	27.4758	913.15	165.116	226.467	102.319	328.786	1.39487	1.68297	355.15
83	28.0614	904.98	170.46	228.431	100.144	328.575	1.40021	1.68139	356.15
84	28.6569	896.54	176.064	230.424	97.898	328.322	1.40561	1.67972	357.15
85	29.2625	887.82	181.955	232.448	95.575	328.023	1.41108	1.67794	358.15
86	29.8784	878.77	188.162	234.506	93.168	327.674	1.41662	1.67603	359.15
87	30.5048	869.36	194.718	236.602	90.667	327.269	1.42225	1.674	360.15
88	31.1419	859.55	201.665	238.741	88.062	326.803	1.42798	1.67182	361.15
89	31.7898	849.29	209.051	240.927	85.34	326.268	1.43381	1.66946	362.15
90	32.4489	838.51	216.936	243.168	82.487	325.655	1.43978	1.66692	363.15
91	33.1194	827.13	225.394	245.47	79.484	324.953	1.44589	1.66416	364.15
92	33.8015	815.05	234.519	247.844	76.306	324.149	1.45217	1.66114	365.15
93	34.4956	802.15	244.431	250.302	72.923	323.225	1.45866	1.65782	366.15
94	35.202	788.23	255.292	252.863	69.295	322.158	1.4654	1.65414	367.15
95	35.921	773.06	267.322	255.551	65.365	320.915	1.47246	1.65001	368.15
96	36.6531	756.27	280.838	258.4	61.053	319.453	1.47993	1.64531	369.15
97	37.3988	737.29	296.326	261.467	56.235	317.702	1.48795	1.63988	370.15
98	38.1588	715.11	314.581	264.846	50.708	315.554	1.49679	1.63341	371.15
99	38.9339	687.74	337.073	268.731	44.078	312.809	1.50694	1.62539	372.15
100	39.7254	649.71	367.064	273.641	35.396	309.037	1.5198	1.61466	373.15
101	40.5363	550.28	414.754	284.636	18.321	302.957	1.54886	1.59783	374.15
101.03	40.5611	508	508	290.57	0	290.57	1.56471	1.56471	374.18
<b>(Critical)</b>									

# Klea 134a

Superheated Vapour Properties



KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	0.1			0.2			0.3			0.4			0.5			0.6			
	Satn. Temp. = 206.26K -66.89C			Satn. Temp. = 216.72K -56.43C			Satn. Temp. = 223.45K -49.70C			Satn. Temp. = 228.54K -44.61C			Satn. Temp. = 232.69K -40.46C			Satn. Temp. = 236.21K -36.94C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	0.6	257.2	1.818	1.149	263.7	1.794	1.68	268	1.78	2.2	271.2	1.772	2.711	273.8	1.765	3.217	276	1.76	Satn.
-66	0.598	257.8	1.821																207.15
-64	0.592	259.1	1.828																209.15
-62	0.586	260.5	1.834																211.15
-60	0.58	261.8	1.841																213.15
-58	0.575	263.2	1.847																215.15
-56	0.569	264.6	1.853	1.147	264	1.795													217.15
-54	0.564	266	1.86	1.136	265.4	1.801													219.15
-52	0.559	267.4	1.866	1.125	266.9	1.808													221.15
-50	0.553	268.8	1.872	1.114	268.3	1.814													223.15
-48	0.548	270.2	1.879	1.104	269.7	1.821	1.666	269.2	1.786										225.15
-46	0.543	271.6	1.885	1.094	271.1	1.827	1.65	270.6	1.792										227.15
-44	0.539	273	1.891	1.083	272.6	1.833	1.635	272.1	1.799	2.193	271.6	1.774							229.15
-42	0.534	274.4	1.897	1.074	274	1.839	1.62	273.6	1.805	2.172	273.1	1.78							231.15
-40	0.529	275.9	1.904	1.064	275.5	1.846	1.605	275	1.811	2.152	274.6	1.786	2.705	274.1	1.767				233.15
-38	0.525	277.3	1.91	1.055	276.9	1.852	1.59	276.5	1.817	2.132	276.1	1.793	2.679	275.6	1.773				235.15
-36	0.52	278.8	1.916	1.045	278.4	1.858	1.576	278	1.824	2.112	277.5	1.799	2.654	277.1	1.779	3.202	276.7	1.763	237.15
-34	0.516	280.2	1.922	1.036	279.8	1.864	1.562	279.4	1.83	2.093	279	1.805	2.63	278.6	1.786	3.172	278.2	1.77	239.15
-32	0.511	281.7	1.928	1.027	281.3	1.87	1.548	280.9	1.836	2.074	280.5	1.811	2.605	280.1	1.792	3.142	279.8	1.776	241.15
-30	0.507	283.2	1.934	1.018	282.8	1.877	1.535	282.4	1.842	2.056	282	1.818	2.582	281.7	1.798	3.113	281.3	1.782	243.15
-28	0.503	284.6	1.94	1.01	284.3	1.883	1.521	283.9	1.848	2.038	283.6	1.824	2.559	283.2	1.805	3.085	282.8	1.789	245.15

Temp C	Absolute Pressure (bar)																		Temp K
	0.1			0.2			0.3			0.4			0.5			0.6			
	Satn. Temp. = 206.26K -66.89C			Satn. Temp. = 216.72K -56.43C			Satn. Temp. = 223.45K -49.70C			Satn. Temp. = 228.54K -44.61C			Satn. Temp. = 232.69K -40.46C			Satn. Temp. = 236.21K -36.94C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
-26	0.499	286.1	1.946	1.001	285.8	1.889	1.509	285.4	1.855	2.02	285.1	1.83	2.536	284.7	1.811	3.057	284.4	1.795	247.15
-24	0.495	287.6	1.952	0.993	287.3	1.895	1.496	286.9	1.861	2.003	286.6	1.836	2.514	286.3	1.817	3.03	285.9	1.801	249.15
-22	0.491	289.1	1.958	0.985	288.8	1.901	1.483	288.5	1.867	1.986	288.1	1.842	2.492	287.8	1.823	3.003	287.5	1.807	251.15
-20	0.487	290.6	1.964	0.977	290.3	1.907	1.471	290	1.873	1.969	289.7	1.848	2.471	289.3	1.829	2.977	289	1.813	253.15
-18	0.483	292.1	1.97	0.969	291.8	1.913	1.459	291.5	1.879	1.953	291.2	1.854	2.45	290.9	1.835	2.951	290.6	1.82	255.15
-16	0.479	293.7	1.976	0.961	293.4	1.919	1.447	293.1	1.885	1.936	292.7	1.86	2.43	292.4	1.841	2.926	292.1	1.826	257.15
-14	0.475	295.2	1.982	0.954	294.9	1.925	1.435	294.6	1.891	1.921	294.3	1.866	2.409	294	1.847	2.902	293.7	1.832	259.15
-12	0.471	296.7	1.988	0.946	296.4	1.931	1.424	296.1	1.897	1.905	295.9	1.872	2.39	295.6	1.853	2.878	295.3	1.838	261.15
-10	0.468	298.3	1.994	0.939	298	1.937	1.413	297.7	1.903	1.89	297.4	1.878	2.37	297.1	1.859	2.854	296.9	1.844	263.15
-8	0.464	299.8	2	0.931	299.5	1.942	1.402	299.3	1.909	1.875	299	1.884	2.351	298.7	1.865	2.831	298.4	1.85	265.15
-6	0.461	301.4	2.006	0.924	301.1	1.948	1.391	300.8	1.915	1.86	300.6	1.89	2.332	300.3	1.871	2.808	300	1.856	267.15
-4	0.457	302.9	2.011	0.917	302.7	1.954	1.38	302.4	1.92	1.846	302.2	1.896	2.314	301.9	1.877	2.785	301.6	1.862	269.15
-2	0.454	304.5	2.017	0.91	304.2	1.96	1.37	304	1.926	1.831	303.7	1.902	2.296	303.5	1.883	2.763	303.2	1.868	271.15
0	0.451	306.1	2.023	0.904	305.8	1.966	1.359	305.6	1.932	1.817	305.3	1.908	2.278	305.1	1.889	2.742	304.8	1.874	273.15
2	0.447	307.7	2.029	0.897	307.4	1.972	1.349	307.2	1.938	1.804	306.9	1.914	2.261	306.7	1.895	2.721	306.5	1.879	275.15
4	0.444	309.2	2.034	0.89	309	1.977	1.339	308.8	1.944	1.79	308.6	1.92	2.244	308.3	1.901	2.7	308.1	1.885	277.15
6	0.441	310.8	2.04	0.884	310.6	1.983	1.329	310.4	1.949	1.777	310.2	1.925	2.227	309.9	1.907	2.679	309.7	1.891	279.15
8	0.438	312.4	2.046	0.877	312.2	1.989	1.319	312	1.955	1.764	311.8	1.931	2.21	311.6	1.912	2.659	311.3	1.897	281.15
10	0.434	314.1	2.052	0.871	313.8	1.995	1.31	313.6	1.961	1.751	313.4	1.937	2.194	313.2	1.918	2.639	313	1.903	283.15
12	0.431	315.7	2.057	0.865	315.5	2	1.3	315.3	1.967	1.738	315	1.943	2.178	314.8	1.924	2.619	314.6	1.909	285.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K	
	0.7			0.8			0.9			1			1.1			1.2				
	Satn. Temp. = 239.29K -33.86C			Satn. Temp. = 242.03K -31.12C			Satn. Temp. = 244.52K -28.63C			Satn. Temp. = 246.79K -26.36C			Satn. Temp. = 248.89K -24.26C			Satn. Temp. = 250.84K -22.31C				
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
Satn.	3.717	277.9	1.756	4.214	279.6	1.753	4.708	281.2	1.75	5.199	282.6	1.747	5.687	283.9	1.745	6.174	285.1	1.743	Satn.	
-32	3.684	279.3	1.762																	241.15
-30	3.65	280.9	1.768	4.192	280.5	1.756														243.15
-28	3.616	282.4	1.775	4.152	282.1	1.763	4.693	281.7	1.752											245.15
-26	3.583	284	1.781	4.113	283.6	1.769	4.649	283.2	1.758	5.19	282.9	1.749								247.15
-24	3.55	285.5	1.787	4.075	285.2	1.775	4.605	284.8	1.765	5.14	284.5	1.755	5.68	284.1	1.746					249.15
-22	3.518	287.1	1.794	4.038	286.8	1.782	4.562	286.4	1.771	5.092	286.1	1.761	5.626	285.7	1.752	6.165	285.3	1.744		251.15
-20	3.487	288.7	1.8	4.002	288.3	1.788	4.521	288	1.777	5.044	287.7	1.768	5.572	287.3	1.759	6.105	287	1.751		253.15
-18	3.457	290.2	1.806	3.966	289.9	1.794	4.48	289.6	1.784	4.998	289.3	1.774	5.52	288.9	1.765	6.047	288.6	1.757		255.15
-16	3.427	291.8	1.812	3.932	291.5	1.8	4.44	291.2	1.79	4.953	290.9	1.78	5.47	290.5	1.772	5.991	290.2	1.763		257.15
-14	3.398	293.4	1.818	3.897	293.1	1.806	4.401	292.8	1.796	4.909	292.5	1.786	5.42	292.2	1.778	5.936	291.8	1.77		259.15
-12	3.369	295	1.824	3.864	294.7	1.813	4.363	294.4	1.802	4.865	294.1	1.793	5.372	293.8	1.784	5.882	293.5	1.776		261.15
-10	3.341	296.6	1.83	3.831	296.3	1.819	4.325	296	1.808	4.823	295.7	1.799	5.324	295.4	1.79	5.829	295.1	1.782		263.15
-8	3.313	298.2	1.836	3.799	297.9	1.825	4.289	297.6	1.814	4.782	297.3	1.805	5.278	297	1.796	5.778	296.7	1.788		265.15
-6	3.286	299.8	1.842	3.768	299.5	1.831	4.253	299.2	1.82	4.741	298.9	1.811	5.233	298.7	1.802	5.728	298.4	1.795		267.15
-4	3.26	301.4	1.848	3.737	301.1	1.837	4.218	300.8	1.826	4.701	300.6	1.817	5.188	300.3	1.809	5.678	300	1.801		269.15
-2	3.234	303	1.854	3.707	302.7	1.843	4.183	302.5	1.832	4.662	302.2	1.823	5.145	301.9	1.815	5.63	301.7	1.807		271.15
0	3.208	304.6	1.86	3.677	304.3	1.849	4.149	304.1	1.838	4.624	303.8	1.829	5.102	303.6	1.821	5.583	303.3	1.813		273.15
2	3.183	306.2	1.866	3.648	306	1.855	4.116	305.7	1.844	4.587	305.5	1.835	5.06	305.2	1.827	5.536	305	1.819		275.15
4	3.158	307.8	1.872	3.619	307.6	1.861	4.083	307.4	1.85	4.55	307.1	1.841	5.019	306.9	1.833	5.491	306.6	1.825		277.15
6	3.134	309.5	1.878	3.591	309.2	1.867	4.051	309	1.856	4.514	308.8	1.847	4.979	308.5	1.839	5.446	308.3	1.831		279.15

Temp C	Absolute Pressure (bar)																		Temp K
	0.7			0.8			0.9			1			1.1			1.2			
	Satn. Temp. = 239.29K -33.86C			Satn. Temp. = 242.03K -31.12C			Satn. Temp. = 244.52K -28.63C			Satn. Temp. = 246.79K -26.36C			Satn. Temp. = 248.89K -24.26C			Satn. Temp. = 250.84K -22.31C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
8	3.11	311.1	1.884	3.564	310.9	1.872	4.02	310.7	1.862	4.478	310.4	1.853	4.939	310.2	1.845	5.403	310	1.837	281.15
10	3.087	312.8	1.89	3.536	312.5	1.878	3.989	312.3	1.868	4.443	312.1	1.859	4.9	311.9	1.851	5.36	311.6	1.843	283.15
12	3.063	314.4	1.895	3.51	314.2	1.884	3.958	314	1.874	4.409	313.8	1.865	4.862	313.5	1.856	5.318	313.3	1.849	285.15
14	3.041	316.1	1.901	3.483	315.9	1.89	3.928	315.6	1.88	4.376	315.4	1.871	4.825	315.2	1.862	5.276	315	1.855	287.15
16	3.018	317.7	1.907	3.458	317.5	1.896	3.899	317.3	1.886	4.342	317.1	1.876	4.788	316.9	1.868	5.236	316.7	1.86	289.15
18	2.996	319.4	1.913	3.432	319.2	1.901	3.87	319	1.891	4.31	318.8	1.882	4.752	318.6	1.874	5.196	318.4	1.866	291.15
20	2.975	321.1	1.919	3.407	320.9	1.907	3.842	320.7	1.897	4.278	320.5	1.888	4.717	320.3	1.88	5.157	320.1	1.872	293.15
25	2.922	325.3	1.933	3.346	325.1	1.921	3.773	324.9	1.911	4.201	324.7	1.902	4.63	324.5	1.894	5.062	324.3	1.887	298.15
30	2.871	329.5	1.947	3.288	329.3	1.936	3.706	329.2	1.926	4.126	329	1.917	4.548	328.8	1.908	4.971	328.6	1.901	303.15
35	2.823	333.8	1.961	3.232	333.6	1.95	3.642	333.5	1.94	4.054	333.3	1.931	4.468	333.1	1.922	4.883	333	1.915	308.15
40	2.776	338.1	1.975	3.177	338	1.964	3.581	337.8	1.954	3.986	337.7	1.945	4.392	337.5	1.936	4.799	337.3	1.929	313.15
45	2.73	342.5	1.989	3.125	342.3	1.977	3.521	342.2	1.967	3.919	342	1.959	4.318	341.9	1.95	4.718	341.7	1.943	318.15
50	2.686	346.9	2.002	3.075	346.7	1.991	3.464	346.6	1.981	3.855	346.5	1.972	4.247	346.3	1.964	4.64	346.2	1.957	323.15
55	2.644	351.3	2.016	3.026	351.2	2.005	3.409	351.1	1.995	3.793	350.9	1.986	4.179	350.8	1.978	4.565	350.6	1.971	328.15
60	2.603	355.8	2.03	2.979	355.7	2.018	3.355	355.5	2.008	3.733	355.4	2	4.112	355.3	1.992	4.492	355.2	1.984	333.15
65	2.563	360.3	2.043	2.933	360.2	2.032	3.304	360.1	2.022	3.676	359.9	2.013	4.048	359.8	2.005	4.422	359.7	1.998	338.15
70	2.524	364.9	2.056	2.889	364.8	2.045	3.254	364.6	2.035	3.62	364.5	2.027	3.986	364.4	2.019	4.354	364.3	2.011	343.15
75	2.487	369.5	2.07	2.846	369.4	2.059	3.205	369.3	2.049	3.565	369.1	2.04	3.927	369	2.032	4.288	368.9	2.025	348.15
80	2.451	374.1	2.083	2.804	374	2.072	3.158	373.9	2.062	3.513	373.8	2.053	3.868	373.7	2.045	4.225	373.6	2.038	353.15
85	2.416	378.8	2.096	2.764	378.7	2.085	3.113	378.6	2.075	3.462	378.5	2.066	3.812	378.4	2.058	4.163	378.3	2.051	358.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	1.3			1.4			1.5			1.6			1.7			1.8			
	Satn. Temp. = 252.67K -20.48C			Satn. Temp. = 254.39K -18.76C			Satn. Temp. = 256.02K -17.13C			Satn. Temp. = 257.57K -15.58C			Satn. Temp. = 259.04K -14.11C			Satn. Temp. = 260.44K -12.71C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	6.659	286.2	1.742	7.142	287.3	1.74	7.624	288.3	1.739	8.105	289.2	1.737	8.585	290.1	1.736	9.064	291	1.735	Satn.
-20	6.643	286.6	1.743																253.15
-18	6.579	288.2	1.75	7.116	287.9	1.742													255.15
-16	6.517	289.9	1.756	7.047	289.5	1.749	7.582	289.2	1.742										257.15
-14	6.456	291.5	1.762	6.98	291.2	1.755	7.509	290.9	1.749	8.042	290.5	1.742	8.58	290.2	1.737				259.15
-12	6.396	293.2	1.769	6.915	292.8	1.762	7.437	292.5	1.755	7.964	292.2	1.749	8.496	291.9	1.743	9.032	291.6	1.737	261.15
-10	6.338	294.8	1.775	6.851	294.5	1.768	7.368	294.2	1.761	7.889	293.9	1.755	8.414	293.6	1.749	8.944	293.3	1.744	263.15
-8	6.281	296.4	1.781	6.789	296.2	1.774	7.3	295.9	1.768	7.815	295.6	1.762	8.334	295.3	1.756	8.857	294.9	1.75	265.15
-6	6.226	298.1	1.787	6.728	297.8	1.78	7.234	297.5	1.774	7.743	297.2	1.768	8.256	296.9	1.762	8.774	296.6	1.757	267.15
-4	6.172	299.7	1.793	6.669	299.5	1.787	7.169	299.2	1.78	7.673	298.9	1.774	8.181	298.6	1.768	8.692	298.3	1.763	269.15
-2	6.119	301.4	1.8	6.61	301.1	1.793	7.106	300.9	1.786	7.604	300.6	1.78	8.106	300.3	1.775	8.612	300	1.769	271.15
0	6.067	303.1	1.806	6.554	302.8	1.799	7.044	302.5	1.793	7.537	302.3	1.787	8.034	302	1.781	8.534	301.7	1.775	273.15
2	6.016	304.7	1.812	6.498	304.5	1.805	6.983	304.2	1.799	7.472	304	1.793	7.963	303.7	1.787	8.458	303.4	1.782	275.15
4	5.966	306.4	1.818	6.443	306.1	1.811	6.924	305.9	1.805	7.408	305.6	1.799	7.894	305.4	1.793	8.384	305.1	1.788	277.15
6	5.917	308.1	1.824	6.39	307.8	1.817	6.866	307.6	1.811	7.345	307.3	1.805	7.827	307.1	1.799	8.311	306.8	1.794	279.15
8	5.869	309.7	1.83	6.338	309.5	1.823	6.809	309.3	1.817	7.283	309	1.811	7.76	308.8	1.805	8.24	308.5	1.8	281.15
10	5.822	311.4	1.836	6.286	311.2	1.829	6.753	311	1.823	7.223	310.7	1.817	7.696	310.5	1.811	8.171	310.3	1.806	283.15
12	5.776	313.1	1.842	6.236	312.9	1.835	6.699	312.7	1.829	7.164	312.4	1.823	7.632	312.2	1.817	8.103	312	1.812	285.15
14	5.73	314.8	1.848	6.187	314.6	1.841	6.645	314.4	1.835	7.106	314.1	1.829	7.57	313.9	1.823	8.036	313.7	1.818	287.15
16	5.686	316.5	1.853	6.138	316.3	1.847	6.593	316.1	1.841	7.05	315.8	1.835	7.509	315.6	1.829	7.971	315.4	1.824	289.15
18	5.642	318.2	1.859	6.091	318	1.853	6.541	317.8	1.847	6.994	317.6	1.841	7.449	317.3	1.835	7.907	317.1	1.83	291.15

Temp C	Absolute Pressure (bar)																		Temp K
	1.3			1.4			1.5			1.6			1.7			1.8			
	Satn. Temp. = 252.67K -20.48C			Satn. Temp. = 254.39K -18.76C			Satn. Temp. = 256.02K -17.13C			Satn. Temp. = 257.57K -15.58C			Satn. Temp. = 259.04K -14.11C			Satn. Temp. = 260.44K -12.71C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
20	5.599	319.9	1.865	6.044	319.7	1.859	6.491	319.5	1.852	6.94	319.3	1.847	7.391	319.1	1.841	7.844	318.9	1.836	293.15
25	5.495	324.2	1.88	5.931	324	1.873	6.368	323.8	1.867	6.807	323.6	1.861	7.249	323.4	1.856	7.692	323.2	1.851	298.15
30	5.396	328.5	1.894	5.823	328.3	1.887	6.251	328.1	1.881	6.681	327.9	1.876	7.113	327.7	1.87	7.547	327.6	1.865	303.15
35	5.3	332.8	1.908	5.719	332.6	1.902	6.139	332.5	1.896	6.56	332.3	1.89	6.984	332.1	1.885	7.409	331.9	1.879	308.15
40	5.208	337.2	1.922	5.619	337	1.916	6.031	336.9	1.91	6.444	336.7	1.904	6.859	336.5	1.899	7.276	336.4	1.894	313.15
45	5.12	341.6	1.936	5.523	341.4	1.93	5.927	341.3	1.924	6.333	341.1	1.918	6.74	341	1.913	7.148	340.8	1.908	318.15
50	5.035	346	1.95	5.43	345.9	1.944	5.827	345.7	1.938	6.226	345.6	1.932	6.625	345.4	1.927	7.026	345.3	1.922	323.15
55	4.953	350.5	1.964	5.341	350.4	1.957	5.731	350.2	1.951	6.123	350.1	1.946	6.515	349.9	1.941	6.908	349.8	1.936	328.15
60	4.873	355	1.977	5.256	354.9	1.971	5.639	354.8	1.965	6.023	354.6	1.96	6.408	354.5	1.954	6.795	354.4	1.949	333.15
65	4.797	359.6	1.991	5.173	359.4	1.985	5.549	359.3	1.979	5.927	359.2	1.973	6.306	359.1	1.968	6.686	358.9	1.963	338.15
70	4.723	364.2	2.004	5.092	364	1.998	5.463	363.9	1.992	5.834	363.8	1.987	6.207	363.7	1.982	6.58	363.6	1.977	343.15
75	4.651	368.8	2.018	5.015	368.7	2.012	5.38	368.6	2.006	5.745	368.4	2	6.111	368.3	1.995	6.478	368.2	1.99	348.15
80	4.582	373.5	2.031	4.94	373.3	2.025	5.299	373.2	2.019	5.658	373.1	2.013	6.019	373	2.008	6.38	372.9	2.003	353.15
85	4.515	378.2	2.044	4.867	378.1	2.038	5.22	377.9	2.032	5.574	377.8	2.027	5.929	377.7	2.022	6.285	377.6	2.017	358.15
90	4.45	382.9	2.057	4.797	382.8	2.051	5.145	382.7	2.045	5.493	382.6	2.04	5.842	382.5	2.035	6.192	382.4	2.03	363.15
95	4.387	387.7	2.071	4.729	387.6	2.064	5.071	387.5	2.058	5.414	387.4	2.053	5.758	387.3	2.048	6.103	387.2	2.043	368.15
100	4.325	392.5	2.084	4.662	392.4	2.077	5	392.3	2.072	5.338	392.2	2.066	5.677	392.1	2.061	6.016	392	2.056	373.15
105	4.266	397.4	2.097	4.598	397.3	2.09	4.931	397.2	2.084	5.264	397.1	2.079	5.598	397	2.074	5.932	396.9	2.069	378.15
110	4.208	402.3	2.109	4.535	402.2	2.103	4.863	402.1	2.097	5.192	402	2.092	5.521	401.9	2.087	5.851	401.8	2.082	383.15
115	4.152	407.2	2.122	4.475	407.1	2.116	4.798	407	2.11	5.122	406.9	2.105	5.446	406.9	2.1	5.771	406.8	2.095	388.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	1.9			2			2.1			2.2			2.3			2.4			
	Satn. Temp. = 261.79K -11.36C			Satn. Temp. = 263.08K -10.07C			Satn. Temp. = 264.32K -8.83C			Satn. Temp. = 265.52K -7.63C			Satn. Temp. = 266.67K -6.48C			Satn. Temp. = 267.79K -5.36C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	9.542	291.8	1.734	10.02	292.6	1.733	10.5	293.3	1.732	10.973	294	1.731	11.449	294.7	1.731	11.925	295.4	1.73	Satn.
-10	9.478	292.9	1.738	10.02	292.6	1.733													263.15
-8	9.385	294.6	1.745	9.917	294.3	1.74	10.45	294	1.735										265.15
-6	9.295	296.3	1.751	9.82	296	1.746	10.35	295.7	1.741	10.883	295.4	1.737	11.422	295.1	1.732				267.15
-4	9.207	298	1.758	9.726	297.8	1.753	10.25	297.5	1.748	10.776	297.2	1.743	11.307	296.9	1.739	11.843	296.6	1.734	269.15
-2	9.121	299.8	1.764	9.634	299.5	1.759	10.15	299.2	1.754	10.672	298.9	1.75	11.196	298.6	1.745	11.725	298.3	1.741	271.15
0	9.038	301.5	1.77	9.545	301.2	1.765	10.06	300.9	1.761	10.57	300.6	1.756	11.088	300.4	1.752	11.611	300.1	1.747	273.15
2	8.956	303.2	1.777	9.458	302.9	1.772	9.963	302.6	1.767	10.471	302.4	1.762	10.983	302.1	1.758	11.499	301.8	1.754	275.15
4	8.877	304.9	1.783	9.373	304.6	1.778	9.872	304.4	1.773	10.375	304.1	1.769	10.881	303.8	1.764	11.39	303.6	1.76	277.15
6	8.799	306.6	1.789	9.29	306.3	1.784	9.784	306.1	1.779	10.281	305.8	1.775	10.781	305.6	1.771	11.285	305.3	1.766	279.15
8	8.723	308.3	1.795	9.209	308.1	1.79	9.697	307.8	1.786	10.189	307.6	1.781	10.684	307.3	1.777	11.181	307.1	1.773	281.15
10	8.649	310	1.801	9.129	309.8	1.796	9.613	309.5	1.792	10.099	309.3	1.787	10.588	309.1	1.783	11.081	308.8	1.779	283.15
12	8.576	311.7	1.807	9.052	311.5	1.802	9.53	311.3	1.798	10.011	311	1.793	10.495	310.8	1.789	10.982	310.6	1.785	285.15
14	8.504	313.5	1.813	8.976	313.2	1.808	9.449	313	1.804	9.926	312.8	1.799	10.405	312.6	1.795	10.886	312.3	1.791	287.15
16	8.435	315.2	1.819	8.901	315	1.814	9.37	314.8	1.81	9.842	314.5	1.805	10.316	314.3	1.801	10.793	314.1	1.797	289.15
18	8.366	316.9	1.825	8.828	316.7	1.82	9.293	316.5	1.816	9.76	316.3	1.811	10.229	316.1	1.807	10.701	315.8	1.803	291.15
20	8.299	318.7	1.831	8.757	318.4	1.826	9.217	318.2	1.822	9.679	318	1.817	10.144	317.8	1.813	10.611	317.6	1.809	293.15
25	8.137	323	1.846	8.585	322.8	1.841	9.034	322.6	1.837	9.486	322.4	1.832	9.939	322.2	1.828	10.395	322	1.824	298.15
30	7.983	327.4	1.86	8.42	327.2	1.856	8.86	327	1.851	9.301	326.8	1.847	9.745	326.6	1.843	10.19	326.4	1.839	303.15
35	7.835	331.8	1.875	8.264	331.6	1.87	8.694	331.4	1.866	9.125	331.2	1.861	9.559	331.1	1.857	9.994	330.9	1.854	308.15
40	7.694	336.2	1.889	8.113	336	1.884	8.535	335.9	1.88	8.957	335.7	1.876	9.382	335.5	1.872	9.808	335.4	1.868	313.15

Temp C	Absolute Pressure (bar)																		Temp K
	1.9			2			2.1			2.2			2.3			2.4			
	Satn. Temp. = 261.79K -11.36C			Satn. Temp. = 263.08K -10.07C			Satn. Temp. = 264.32K -8.83C			Satn. Temp. = 265.52K -7.63C			Satn. Temp. = 266.67K -6.48C			Satn. Temp. = 267.79K -5.36C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
45	7.558	340.7	1.903	7.97	340.5	1.899	8.382	340.3	1.894	8.797	340.2	1.89	9.212	340	1.886	9.629	339.9	1.882	318.15
50	7.428	345.1	1.917	7.832	345	1.913	8.236	344.8	1.908	8.642	344.7	1.904	9.05	344.5	1.9	9.459	344.4	1.896	323.15
55	7.303	349.7	1.931	7.699	349.5	1.926	8.096	349.4	1.922	8.494	349.2	1.918	8.894	349.1	1.914	9.295	349	1.91	328.15
60	7.183	354.2	1.945	7.571	354.1	1.94	7.961	353.9	1.936	8.352	353.8	1.932	8.744	353.7	1.928	9.138	353.5	1.924	333.15
65	7.067	358.8	1.958	7.448	358.7	1.954	7.831	358.5	1.95	8.215	358.4	1.946	8.6	358.3	1.942	8.986	358.2	1.938	338.15
70	6.955	363.4	1.972	7.33	363.3	1.967	7.706	363.2	1.963	8.083	363.1	1.959	8.461	362.9	1.955	8.841	362.8	1.952	343.15
75	6.846	368.1	1.985	7.215	368	1.981	7.585	367.8	1.977	7.956	367.7	1.973	8.328	367.6	1.969	8.7	367.5	1.965	348.15
80	6.742	372.8	1.999	7.105	372.7	1.994	7.468	372.5	1.99	7.833	372.4	1.986	8.198	372.3	1.982	8.565	372.2	1.979	353.15
85	6.641	377.5	2.012	6.998	377.4	2.008	7.356	377.3	2.003	7.714	377.2	1.999	8.074	377.1	1.996	8.434	377	1.992	358.15
90	6.543	382.3	2.025	6.894	382.2	2.021	7.246	382.1	2.017	7.599	382	2.013	7.953	381.9	2.009	8.307	381.7	2.005	363.15
95	6.448	387.1	2.038	6.794	387	2.034	7.141	386.9	2.03	7.488	386.8	2.026	7.836	386.7	2.022	8.185	386.6	2.018	368.15
100	6.356	391.9	2.052	6.697	391.8	2.047	7.038	391.7	2.043	7.38	391.6	2.039	7.723	391.5	2.035	8.066	391.4	2.032	373.15
105	6.267	396.8	2.064	6.603	396.7	2.06	6.939	396.6	2.056	7.276	396.5	2.052	7.613	396.4	2.048	7.951	396.3	2.045	378.15
110	6.181	401.7	2.077	6.511	401.6	2.073	6.843	401.5	2.069	7.174	401.4	2.065	7.507	401.4	2.061	7.84	401.3	2.058	383.15
115	6.097	406.7	2.09	6.423	406.6	2.086	6.749	406.5	2.082	7.076	406.4	2.078	7.404	406.3	2.074	7.732	406.2	2.07	388.15
120	6.015	411.7	2.103	6.336	411.6	2.099	6.658	411.5	2.095	6.981	411.4	2.091	7.303	411.3	2.087	7.627	411.2	2.083	393.15
125	5.936	416.7	2.116	6.253	416.6	2.111	6.57	416.6	2.107	6.888	416.5	2.103	7.206	416.4	2.1	7.525	416.3	2.096	398.15
130	5.858	421.8	2.128	6.171	421.7	2.124	6.484	421.6	2.12	6.797	421.6	2.116	7.111	421.5	2.112	7.426	421.4	2.109	403.15
135	5.783	426.9	2.141	6.092	426.8	2.137	6.401	426.8	2.133	6.71	426.7	2.129	7.019	426.6	2.125	7.329	426.5	2.121	408.15
140	5.71	432.1	2.154	6.015	432	2.149	6.319	431.9	2.145	6.624	431.8	2.141	6.93	431.8	2.138	7.236	431.7	2.134	413.15



KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K	
	2.5			2.6			2.7			2.8			2.9			3				
	Satn. Temp. = 268.87K -4.28C			Satn. Temp. = 269.92K -3.23C			Satn. Temp. = 270.94K -2.21C			Satn. Temp. = 271.93K -1.22C			Satn. Temp. = 272.89K -0.26C			Satn. Temp. = 273.83K 0.68C				
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
Satn.	12.4	296	1.729	12.88	296.6	1.729	13.35	297.2	1.728	13.826	297.8	1.728	14.301	298.4	1.727	14.776	298.9	1.726	Satn.	
-4	12.38	296.3	1.73																	269.15
-2	12.26	298	1.737	12.8	297.7	1.733	13.34	297.4	1.729											271.15
0	12.14	299.8	1.743	12.67	299.5	1.739	13.2	299.2	1.735	13.739	298.9	1.732	14.282	298.6	1.728					273.15
2	12.02	301.5	1.75	12.54	301.3	1.746	13.07	301	1.742	13.6	300.7	1.738	14.135	300.4	1.734	14.674	300.1	1.731		275.15
4	11.9	303.3	1.756	12.42	303	1.752	12.94	302.8	1.748	13.465	302.5	1.745	13.993	302.2	1.741	14.525	301.9	1.737		277.15
6	11.79	305.1	1.762	12.3	304.8	1.758	12.82	304.5	1.755	13.333	304.3	1.751	13.855	304	1.747	14.38	303.7	1.744		279.15
8	11.68	306.8	1.769	12.19	306.6	1.765	12.7	306.3	1.761	13.206	306	1.757	13.72	305.8	1.754	14.238	305.5	1.75		281.15
10	11.58	308.6	1.775	12.08	308.3	1.771	12.58	308.1	1.767	13.081	307.8	1.764	13.59	307.6	1.76	14.101	307.3	1.757		283.15
12	11.47	310.3	1.781	11.97	310.1	1.777	12.46	309.9	1.773	12.96	309.6	1.77	13.462	309.4	1.766	13.968	309.1	1.763		285.15
14	11.37	312.1	1.787	11.86	311.9	1.783	12.35	311.6	1.78	12.842	311.4	1.776	13.338	311.2	1.773	13.838	310.9	1.769		287.15
16	11.27	313.9	1.793	11.75	313.6	1.79	12.24	313.4	1.786	12.727	313.2	1.782	13.217	312.9	1.779	13.711	312.7	1.775		289.15
18	11.18	315.6	1.799	11.65	315.4	1.796	12.13	315.2	1.792	12.614	315	1.788	13.099	314.7	1.785	13.587	314.5	1.782		291.15
20	11.08	317.4	1.805	11.55	317.2	1.802	12.03	317	1.798	12.505	316.7	1.795	12.984	316.5	1.791	13.467	316.3	1.788		293.15
25	10.85	321.8	1.82	11.31	321.6	1.817	11.78	321.4	1.813	12.241	321.2	1.81	12.708	321	1.806	13.177	320.8	1.803		298.15
30	10.64	326.3	1.835	11.09	326.1	1.832	11.54	325.9	1.828	11.991	325.7	1.825	12.446	325.5	1.821	12.904	325.3	1.818		303.15
35	10.43	330.7	1.85	10.87	330.5	1.846	11.31	330.4	1.843	11.754	330.2	1.839	12.199	330	1.836	12.645	329.8	1.833		308.15
40	10.24	335.2	1.864	10.67	335	1.861	11.1	334.9	1.857	11.528	334.7	1.854	11.963	334.5	1.851	12.399	334.4	1.847		313.15
45	10.05	339.7	1.878	10.47	339.6	1.875	10.89	339.4	1.871	11.313	339.2	1.868	11.738	339.1	1.865	12.165	338.9	1.862		318.15
50	9.869	344.2	1.893	10.28	344.1	1.889	10.69	343.9	1.886	11.108	343.8	1.882	11.524	343.6	1.879	11.941	343.5	1.876		323.15
55	9.697	348.8	1.907	10.1	348.7	1.903	10.51	348.5	1.9	10.911	348.4	1.896	11.318	348.2	1.893	11.727	348.1	1.89		328.15

Temp C	Absolute Pressure (bar)																		Temp K
	2.5			2.6			2.7			2.8			2.9			3			
	Satn. Temp. = 268.87K -4.28C			Satn. Temp. = 269.92K -3.23C			Satn. Temp. = 270.94K -2.21C			Satn. Temp. = 271.93K -1.22C			Satn. Temp. = 272.89K -0.26C			Satn. Temp. = 273.83K 0.68C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
60	9.532	353.4	1.921	9.928	353.3	1.917	10.33	353.1	1.914	10.723	353	1.91	11.122	352.9	1.907	11.522	352.7	1.904	333.15
65	9.374	358	1.934	9.762	357.9	1.931	10.15	357.8	1.927	10.542	357.6	1.924	10.933	357.5	1.921	11.326	357.4	1.918	338.15
70	9.221	362.7	1.948	9.602	362.6	1.945	9.984	362.4	1.941	10.367	362.3	1.938	10.752	362.2	1.935	11.137	362.1	1.932	343.15
75	9.074	367.4	1.962	9.448	367.3	1.958	9.823	367.1	1.955	10.2	367	1.952	10.577	366.9	1.948	10.955	366.8	1.945	348.15
80	8.932	372.1	1.975	9.3	372	1.972	9.669	371.9	1.968	10.038	371.7	1.965	10.409	371.6	1.962	10.78	371.5	1.959	353.15
85	8.795	376.8	1.988	9.156	376.7	1.985	9.519	376.6	1.982	9.882	376.5	1.978	10.247	376.4	1.975	10.612	376.3	1.972	358.15
90	8.662	381.6	2.002	9.018	381.5	1.998	9.375	381.4	1.995	9.732	381.3	1.992	10.09	381.2	1.989	10.449	381.1	1.986	363.15
95	8.534	386.5	2.015	8.884	386.4	2.011	9.235	386.3	2.008	9.586	386.2	2.005	9.939	386.1	2.002	10.291	386	1.999	368.15
100	8.41	391.3	2.028	8.755	391.2	2.025	9.1	391.1	2.021	9.446	391	2.018	9.792	390.9	2.015	10.139	390.8	2.012	373.15
105	8.29	396.2	2.041	8.629	396.1	2.038	8.969	396	2.034	9.309	395.9	2.031	9.65	395.8	2.028	9.992	395.7	2.025	378.15
110	8.173	401.2	2.054	8.507	401.1	2.051	8.842	401	2.047	9.177	400.9	2.044	9.513	400.8	2.041	9.85	400.7	2.038	383.15
115	8.06	406.1	2.067	8.389	406.1	2.064	8.719	406	2.06	9.049	405.9	2.057	9.38	405.8	2.054	9.711	405.7	2.051	388.15
120	7.951	411.2	2.08	8.275	411.1	2.076	8.6	411	2.073	8.925	410.9	2.07	9.251	410.8	2.067	9.577	410.7	2.064	393.15
125	7.844	416.2	2.093	8.164	416.1	2.089	8.484	416	2.086	8.805	416	2.083	9.126	415.9	2.08	9.447	415.8	2.077	398.15
130	7.74	421.3	2.105	8.056	421.2	2.102	8.371	421.1	2.099	8.687	421.1	2.096	9.004	421	2.093	9.321	420.9	2.09	403.15
135	7.64	426.4	2.118	7.951	426.4	2.115	8.262	426.3	2.111	8.574	426.2	2.108	8.886	426.1	2.105	9.198	426	2.102	408.15
140	7.542	431.6	2.13	7.848	431.5	2.127	8.155	431.5	2.124	8.463	431.4	2.121	8.771	431.3	2.118	9.079	431.2	2.115	413.15
145	7.446	436.8	2.143	7.749	436.7	2.14	8.052	436.7	2.136	8.355	436.6	2.133	8.659	436.5	2.13	8.963	436.4	2.127	418.15
150	7.354	442.1	2.156	7.652	442	2.152	7.951	441.9	2.149	8.25	441.9	2.146	8.55	441.8	2.143	8.85	441.7	2.14	423.15
155	7.263	447.4	2.168	7.558	447.3	2.165	7.853	447.2	2.161	8.148	447.2	2.158	8.444	447.1	2.155	8.74	447	2.152	428.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K	
	3.1			3.2			3.3			3.4			3.5			3.6				
	Satn. Temp. = 274.74K 1.59C			Satn. Temp. = 275.63K 2.48C			Satn. Temp. = 276.50K 3.35C			Satn. Temp. = 277.35K 4.20C			Satn. Temp. = 278.18K 5.03C			Satn. Temp. = 278.99K 5.84C				
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
Satn.	15.25	299.5	1.726	15.73	300	1.726	16.2	300.5	1.725	16.676	301	1.725	17.152	301.5	1.724	17.627	301.9	1.724	Satn.	
2	15.22	299.8	1.727																275.15	
4	15.06	301.6	1.734	15.6	301.4	1.731	16.15	301.1	1.727										277.15	
6	14.91	303.5	1.74	15.44	303.2	1.737	15.98	302.9	1.734	16.518	302.6	1.731	17.063	302.3	1.727	17.612	302.1	1.724	279.15	
8	14.76	305.3	1.747	15.29	305	1.744	15.82	304.7	1.74	16.348	304.5	1.737	16.885	304.2	1.734	17.426	303.9	1.731	281.15	
10	14.62	307.1	1.753	15.14	306.8	1.75	15.66	306.6	1.747	16.183	306.3	1.744	16.712	306	1.741	17.245	305.8	1.738	283.15	
12	14.48	308.9	1.76	14.99	308.6	1.756	15.5	308.4	1.753	16.022	308.1	1.75	16.544	307.9	1.747	17.07	307.6	1.744	285.15	
14	14.34	310.7	1.766	14.85	310.4	1.763	15.35	310.2	1.76	15.866	309.9	1.756	16.382	309.7	1.753	16.9	309.4	1.75	287.15	
16	14.21	312.5	1.772	14.71	312.2	1.769	15.21	312	1.766	15.715	311.8	1.763	16.223	311.5	1.76	16.735	311.3	1.757	289.15	
18	14.08	314.3	1.778	14.57	314	1.775	15.07	313.8	1.772	15.567	313.6	1.769	16.069	313.4	1.766	16.575	313.1	1.763	291.15	
20	13.95	316.1	1.785	14.44	315.9	1.781	14.93	315.6	1.778	15.423	315.4	1.775	15.92	315.2	1.772	16.419	315	1.769	293.15	
25	13.65	320.6	1.8	14.12	320.4	1.797	14.6	320.2	1.794	15.08	320	1.791	15.562	319.8	1.788	16.046	319.5	1.785	298.15	
30	13.36	325.1	1.815	13.83	324.9	1.812	14.29	324.7	1.809	14.756	324.5	1.806	15.225	324.3	1.803	15.696	324.1	1.8	303.15	
35	13.09	329.6	1.83	13.54	329.5	1.827	14	329.3	1.824	14.451	329.1	1.821	14.907	328.9	1.818	15.366	328.7	1.815	308.15	
40	12.84	334.2	1.844	13.28	334	1.841	13.72	333.8	1.838	14.161	333.7	1.836	14.606	333.5	1.833	15.053	333.3	1.83	313.15	
45	12.59	338.7	1.859	13.02	338.6	1.856	13.45	338.4	1.853	13.886	338.3	1.85	14.321	338.1	1.847	14.757	337.9	1.845	318.15	
50	12.36	343.3	1.873	12.78	343.2	1.87	13.2	343	1.867	13.625	342.9	1.864	14.049	342.7	1.862	14.476	342.6	1.859	323.15	
55	12.14	347.9	1.887	12.55	347.8	1.884	12.96	347.6	1.881	13.375	347.5	1.879	13.79	347.4	1.876	14.207	347.2	1.873	328.15	
60	11.92	352.6	1.901	12.33	352.4	1.898	12.73	352.3	1.895	13.136	352.2	1.893	13.543	352	1.89	13.951	351.9	1.887	333.15	
65	11.72	357.2	1.915	12.11	357.1	1.912	12.51	357	1.909	12.908	356.8	1.907	13.306	356.7	1.904	13.706	356.6	1.901	338.15	
70	11.52	361.9	1.929	11.91	361.8	1.926	12.3	361.7	1.923	12.688	361.5	1.921	13.079	361.4	1.918	13.47	361.3	1.915	343.15	

Temp C	Absolute Pressure (bar)																		Temp K
	3.1			3.2			3.3			3.4			3.5			3.6			
	Satn. Temp. = 274.74K 1.59C			Satn. Temp. = 275.63K 2.48C			Satn. Temp. = 276.50K 3.35C			Satn. Temp. = 277.35K 4.20C			Satn. Temp. = 278.18K 5.03C			Satn. Temp. = 278.99K 5.84C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
75	11.33	366.6	1.943	11.72	366.5	1.94	12.1	366.4	1.937	12.478	366.3	1.934	12.861	366.2	1.932	13.245	366	1.929	348.15
80	11.15	371.4	1.956	11.53	371.3	1.953	11.9	371.2	1.95	12.275	371	1.948	12.651	370.9	1.945	13.028	370.8	1.943	353.15
85	10.98	376.2	1.97	11.34	376.1	1.967	11.71	376	1.964	12.08	375.8	1.961	12.449	375.7	1.959	12.819	375.6	1.956	358.15
90	10.81	381	1.983	11.17	380.9	1.98	11.53	380.8	1.977	11.892	380.7	1.975	12.254	380.6	1.972	12.618	380.5	1.97	363.15
95	10.65	385.8	1.996	11	385.7	1.993	11.35	385.6	1.991	11.71	385.5	1.988	12.067	385.4	1.985	12.424	385.3	1.983	368.15
100	10.49	390.7	2.009	10.84	390.6	2.007	11.19	390.5	2.004	11.535	390.4	2.001	11.885	390.3	1.999	12.236	390.2	1.996	373.15
105	10.33	395.7	2.022	10.68	395.6	2.02	11.02	395.5	2.017	11.365	395.4	2.014	11.71	395.3	2.012	12.055	395.2	2.009	378.15
110	10.19	400.6	2.035	10.52	400.5	2.033	10.86	400.4	2.03	11.201	400.3	2.027	11.54	400.2	2.025	11.88	400.1	2.022	383.15
115	10.04	405.6	2.048	10.38	405.5	2.046	10.71	405.4	2.043	11.042	405.3	2.04	11.376	405.2	2.038	11.71	405.1	2.035	388.15
120	9.904	410.6	2.061	10.23	410.5	2.058	10.56	410.5	2.056	10.888	410.4	2.053	11.217	410.3	2.051	11.546	410.2	2.048	393.15
125	9.769	415.7	2.074	10.09	415.6	2.071	10.42	415.5	2.069	10.738	415.4	2.066	11.062	415.4	2.064	11.387	415.3	2.061	398.15
130	9.638	420.8	2.087	9.956	420.7	2.084	10.27	420.6	2.081	10.593	420.6	2.079	10.912	420.5	2.076	11.232	420.4	2.074	403.15
135	9.511	426	2.099	9.824	425.9	2.097	10.14	425.8	2.094	10.452	425.7	2.092	10.767	425.6	2.089	11.082	425.6	2.087	408.15
140	9.387	431.1	2.112	9.696	431.1	2.109	10.01	431	2.107	10.315	430.9	2.104	10.626	430.8	2.102	10.936	430.7	2.099	413.15
145	9.267	436.4	2.125	9.572	436.3	2.122	9.877	436.2	2.119	10.182	436.1	2.117	10.488	436.1	2.114	10.794	436	2.112	418.15
150	9.15	441.6	2.137	9.451	441.6	2.134	9.752	441.5	2.132	10.053	441.4	2.129	10.355	441.3	2.127	10.657	441.3	2.124	423.15
155	9.036	446.9	2.15	9.333	446.9	2.147	9.63	446.8	2.144	9.927	446.7	2.142	10.225	446.6	2.139	10.523	446.6	2.137	428.15
160	8.925	452.3	2.162	9.218	452.2	2.159	9.511	452.1	2.157	9.804	452.1	2.154	10.098	452	2.152	10.392	451.9	2.149	433.15
165	8.817	457.7	2.174	9.106	457.6	2.172	9.395	457.5	2.169	9.685	457.5	2.167	9.975	457.4	2.164	10.265	457.3	2.162	438.15
170	8.712	463.1	2.187	8.997	463	2.184	9.282	463	2.181	9.568	462.9	2.179	9.854	462.8	2.176	10.141	462.8	2.174	443.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	3.7			3.8			3.9			4			4.1			4.2			
	Satn. Temp. = 279.79K 6.64C			Satn. Temp. = 280.57K 7.42C			Satn. Temp. = 281.33K 8.18C			Satn. Temp. = 282.08K 8.93C			Satn. Temp. = 282.82K 9.67C			Satn. Temp. = 283.54K 10.39C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	18.1	302.4	1.723	18.58	302.8	1.723	19.06	303.3	1.723	19.531	303.7	1.722	20.008	304.1	1.722	20.485	304.5	1.722	Satn.
8	17.97	303.6	1.728	18.52	303.4	1.725													281.15
10	17.78	305.5	1.735	18.32	305.2	1.732	18.87	305	1.729	19.418	304.7	1.726	19.972	304.4	1.723				283.15
12	17.6	307.3	1.741	18.13	307.1	1.738	18.67	306.8	1.735	19.211	306.6	1.733	19.756	306.3	1.73	20.305	306	1.727	285.15
14	17.42	309.2	1.748	17.95	308.9	1.745	18.48	308.7	1.742	19.011	308.4	1.739	19.548	308.2	1.736	20.088	307.9	1.734	287.15
16	17.25	311	1.754	17.77	310.8	1.751	18.29	310.5	1.748	18.817	310.3	1.746	19.346	310.1	1.743	19.878	309.8	1.74	289.15
18	17.08	312.9	1.76	17.6	312.6	1.758	18.11	312.4	1.755	18.628	312.2	1.752	19.15	311.9	1.749	19.675	311.7	1.747	291.15
20	16.92	314.7	1.767	17.43	314.5	1.764	17.93	314.3	1.761	18.445	314	1.758	18.96	313.8	1.756	19.478	313.6	1.753	293.15
25	16.53	319.3	1.782	17.02	319.1	1.779	17.52	318.9	1.777	18.01	318.7	1.774	18.508	318.5	1.772	19.009	318.2	1.769	298.15
30	16.17	323.9	1.797	16.65	323.7	1.795	17.12	323.5	1.792	17.603	323.3	1.79	18.086	323.1	1.787	18.571	322.9	1.785	303.15
35	15.83	328.5	1.813	16.29	328.3	1.81	16.75	328.2	1.807	17.221	328	1.805	17.69	327.8	1.802	18.161	327.6	1.8	308.15
40	15.5	333.1	1.827	15.95	333	1.825	16.41	332.8	1.822	16.86	332.6	1.82	17.317	332.4	1.817	17.775	332.2	1.815	313.15
45	15.2	337.8	1.842	15.64	337.6	1.839	16.08	337.4	1.837	16.519	337.3	1.834	16.964	337.1	1.832	17.411	336.9	1.83	318.15
50	14.9	342.4	1.856	15.33	342.2	1.854	15.76	342.1	1.851	16.196	341.9	1.849	16.63	341.8	1.847	17.066	341.6	1.844	323.15
55	14.63	347.1	1.871	15.05	346.9	1.868	15.47	346.8	1.866	15.888	346.6	1.863	16.312	346.5	1.861	16.738	346.3	1.859	328.15
60	14.36	351.7	1.885	14.77	351.6	1.882	15.18	351.4	1.88	15.595	351.3	1.878	16.01	351.2	1.875	16.426	351	1.873	333.15
65	14.11	356.4	1.899	14.51	356.3	1.896	14.91	356.2	1.894	15.315	356	1.892	15.721	355.9	1.889	16.128	355.8	1.887	338.15
70	13.86	361.2	1.913	14.26	361	1.91	14.65	360.9	1.908	15.048	360.8	1.906	15.445	360.6	1.903	15.843	360.5	1.901	343.15
75	13.63	365.9	1.927	14.02	365.8	1.924	14.4	365.7	1.922	14.791	365.5	1.919	15.18	365.4	1.917	15.57	365.3	1.915	348.15
80	13.41	370.7	1.94	13.78	370.6	1.938	14.16	370.5	1.935	14.545	370.3	1.933	14.926	370.2	1.931	15.309	370.1	1.929	353.15
85	13.19	375.5	1.954	13.56	375.4	1.951	13.93	375.3	1.949	14.308	375.2	1.947	14.682	375.1	1.944	15.057	374.9	1.942	358.15

Temp C	Absolute Pressure (bar)																		Temp K
	3.7			3.8			3.9			4			4.1			4.2			
	Satn. Temp. = 279.79K 6.64C			Satn. Temp. = 280.57K 7.42C			Satn. Temp. = 281.33K 8.18C			Satn. Temp. = 282.08K 8.93C			Satn. Temp. = 282.82K 9.67C			Satn. Temp. = 283.54K 10.39C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
90	12.98	380.3	1.967	13.35	380.2	1.965	13.71	380.1	1.962	14.08	380	1.96	14.447	379.9	1.958	14.816	379.8	1.956	363.15
95	12.78	385.2	1.98	13.14	385.1	1.978	13.5	385	1.976	13.86	384.9	1.973	14.221	384.8	1.971	14.583	384.7	1.969	368.15
100	12.59	390.1	1.994	12.94	390	1.991	13.29	389.9	1.989	13.648	389.8	1.987	14.003	389.7	1.985	14.358	389.6	1.982	373.15
105	12.4	395.1	2.007	12.75	395	2.004	13.1	394.9	2.002	13.444	394.8	2	13.792	394.7	1.998	14.142	394.6	1.996	378.15
110	12.22	400	2.02	12.56	400	2.018	12.9	399.9	2.015	13.246	399.8	2.013	13.589	399.7	2.011	13.932	399.6	2.009	383.15
115	12.05	405.1	2.033	12.38	405	2.031	12.72	404.9	2.028	13.054	404.8	2.026	13.392	404.7	2.024	13.73	404.6	2.022	388.15
120	11.88	410.1	2.046	12.21	410	2.044	12.54	409.9	2.041	12.869	409.8	2.039	13.201	409.8	2.037	13.534	409.7	2.035	393.15
125	11.71	415.2	2.059	12.04	415.1	2.056	12.36	415	2.054	12.69	414.9	2.052	13.016	414.8	2.05	13.344	414.8	2.048	398.15
130	11.55	420.3	2.071	11.87	420.2	2.069	12.19	420.1	2.067	12.515	420.1	2.065	12.837	420	2.063	13.16	419.9	2.06	403.15
135	11.4	425.5	2.084	11.71	425.4	2.082	12.03	425.3	2.08	12.347	425.2	2.077	12.664	425.1	2.075	12.981	425.1	2.073	408.15
140	11.25	430.7	2.097	11.56	430.6	2.095	11.87	430.5	2.092	12.183	430.4	2.09	12.495	430.4	2.088	12.808	430.3	2.086	413.15
145	11.1	435.9	2.109	11.41	435.8	2.107	11.72	435.8	2.105	12.023	435.7	2.103	12.331	435.6	2.101	12.64	435.5	2.098	418.15
150	10.96	441.2	2.122	11.26	441.1	2.12	11.57	441	2.117	11.868	441	2.115	12.172	440.9	2.113	12.476	440.8	2.111	423.15
155	10.82	446.5	2.135	11.12	446.4	2.132	11.42	446.4	2.13	11.718	446.3	2.128	12.017	446.2	2.126	12.317	446.1	2.124	428.15
160	10.69	451.9	2.147	10.98	451.8	2.145	11.28	451.7	2.142	11.571	451.6	2.14	11.867	451.6	2.138	12.163	451.5	2.136	433.15
165	10.56	457.3	2.159	10.85	457.2	2.157	11.14	457.1	2.155	11.428	457	2.153	11.72	457	2.15	12.012	456.9	2.148	438.15
170	10.43	462.7	2.172	10.72	462.6	2.169	11	462.6	2.167	11.289	462.5	2.165	11.577	462.4	2.163	11.865	462.4	2.161	443.15
175	10.3	468.2	2.184	10.59	468.1	2.182	10.87	468	2.179	11.154	468	2.177	11.438	467.9	2.175	11.723	467.8	2.173	448.15
180	10.18	473.7	2.196	10.46	473.6	2.194	10.74	473.6	2.192	11.022	473.5	2.19	11.303	473.4	2.187	11.583	473.4	2.185	453.15
185	10.06	479.3	2.208	10.34	479.2	2.206	10.62	479.1	2.204	10.893	479.1	2.202	11.17	479	2.2	11.448	479	2.198	458.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	4.3			4.4			4.5			4.6			4.7			4.8			
	Satn. Temp. = 284.25K 11.10C			Satn. Temp. = 284.94K 11.79C			Satn. Temp. = 285.63K 12.48C			Satn. Temp. = 286.30K 13.15C			Satn. Temp. = 286.96K 13.81C			Satn. Temp. = 287.62K 14.47C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	20.96	304.9	1.721	21.44	305.3	1.721	21.92	305.7	1.721	22.397	306	1.721	22.876	306.4	1.72	23.355	306.8	1.72	Satn.
12	20.86	305.8	1.725	21.42	305.5	1.722													285.15
14	20.63	307.7	1.731	21.18	307.4	1.729	21.73	307.1	1.726	22.291	306.9	1.723	22.852	306.6	1.721				287.15
16	20.42	309.5	1.738	20.96	309.3	1.735	21.5	309	1.733	22.047	308.8	1.73	22.598	308.5	1.728	23.154	308.2	1.725	289.15
18	20.2	311.4	1.744	20.74	311.2	1.742	21.27	310.9	1.739	21.81	310.7	1.737	22.354	310.4	1.734	22.901	310.2	1.732	291.15
20	20	313.3	1.751	20.52	313.1	1.748	21.05	312.8	1.746	21.582	312.6	1.743	22.117	312.4	1.741	22.655	312.1	1.739	293.15
25	19.51	318	1.767	20.02	317.8	1.764	20.53	317.6	1.762	21.041	317.3	1.759	21.557	317.1	1.757	22.076	316.9	1.755	298.15
30	19.06	322.7	1.782	19.55	322.5	1.78	20.04	322.3	1.777	20.539	322.1	1.775	21.037	321.9	1.773	21.539	321.7	1.771	303.15
35	18.64	327.4	1.797	19.11	327.2	1.795	19.59	327	1.793	20.07	326.8	1.791	20.553	326.6	1.788	21.038	326.4	1.786	308.15
40	18.24	332.1	1.813	18.7	331.9	1.81	19.16	331.7	1.808	19.63	331.5	1.806	20.099	331.3	1.804	20.57	331.1	1.801	313.15
45	17.86	336.8	1.827	18.31	336.6	1.825	18.76	336.4	1.823	19.216	336.2	1.821	19.672	336.1	1.819	20.13	335.9	1.816	318.15
50	17.5	341.4	1.842	17.94	341.3	1.84	18.38	341.1	1.838	18.825	341	1.835	19.269	340.8	1.833	19.715	340.6	1.831	323.15
55	17.17	346.2	1.856	17.59	346	1.854	18.02	345.8	1.852	18.454	345.7	1.85	18.887	345.5	1.848	19.322	345.4	1.846	328.15
60	16.84	350.9	1.871	17.26	350.7	1.869	17.68	350.6	1.866	18.102	350.4	1.864	18.525	350.3	1.862	18.949	350.1	1.86	333.15
65	16.54	355.6	1.885	16.95	355.5	1.883	17.36	355.3	1.881	17.767	355.2	1.879	18.18	355.1	1.876	18.594	354.9	1.874	338.15
70	16.24	360.4	1.899	16.64	360.3	1.897	17.04	360.1	1.895	17.447	360	1.893	17.851	359.9	1.891	18.256	359.7	1.889	343.15
75	15.96	365.2	1.913	16.35	365	1.911	16.75	364.9	1.909	17.141	364.8	1.906	17.537	364.7	1.904	17.933	364.5	1.902	348.15
80	15.69	370	1.926	16.08	369.9	1.924	16.46	369.7	1.922	16.848	369.6	1.92	17.236	369.5	1.918	17.624	369.4	1.916	353.15
85	15.43	374.8	1.94	15.81	374.7	1.938	16.19	374.6	1.936	16.567	374.5	1.934	16.947	374.4	1.932	17.327	374.2	1.93	358.15
90	15.19	379.7	1.954	15.56	379.6	1.951	15.93	379.5	1.949	16.297	379.4	1.947	16.669	379.2	1.945	17.043	379.1	1.943	363.15
95	14.95	384.6	1.967	15.31	384.5	1.965	15.67	384.4	1.963	16.037	384.3	1.961	16.403	384.2	1.959	16.769	384.1	1.957	368.15

Temp C	Absolute Pressure (bar)																		Temp K
	4.3			4.4			4.5			4.6			4.7			4.8			
	Satn. Temp. = 284.25K 11.10C			Satn. Temp. = 284.94K 11.79C			Satn. Temp. = 285.63K 12.48C			Satn. Temp. = 286.30K 13.15C			Satn. Temp. = 286.96K 13.81C			Satn. Temp. = 287.62K 14.47C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
100	14.71	389.5	1.98	15.07	389.4	1.978	15.43	389.3	1.976	15.787	389.2	1.974	16.146	389.1	1.972	16.505	389	1.97	373.15
105	14.49	394.5	1.993	14.84	394.4	1.991	15.19	394.3	1.989	15.545	394.2	1.987	15.898	394.1	1.985	16.251	394	1.984	378.15
110	14.28	399.5	2.007	14.62	399.4	2.005	14.97	399.3	2.003	15.312	399.2	2.001	15.659	399.1	1.999	16.006	399	1.997	383.15
115	14.07	404.5	2.02	14.41	404.4	2.018	14.75	404.3	2.016	15.087	404.2	2.014	15.428	404.1	2.012	15.769	404	2.01	388.15
120	13.87	409.6	2.033	14.2	409.5	2.031	14.54	409.4	2.029	14.869	409.3	2.027	15.205	409.2	2.025	15.54	409.1	2.023	393.15
125	13.67	414.7	2.046	14	414.6	2.043	14.33	414.5	2.041	14.658	414.4	2.04	14.988	414.3	2.038	15.319	414.2	2.036	398.15
130	13.48	419.8	2.058	13.81	419.7	2.056	14.13	419.6	2.054	14.454	419.6	2.052	14.779	419.5	2.05	15.104	419.4	2.049	403.15
135	13.3	425	2.071	13.62	424.9	2.069	13.94	424.8	2.067	14.256	424.7	2.065	14.576	424.7	2.063	14.896	424.6	2.061	408.15
140	13.12	430.2	2.084	13.44	430.1	2.082	13.75	430	2.08	14.064	430	2.078	14.379	429.9	2.076	14.695	429.8	2.074	413.15
145	12.95	435.4	2.096	13.26	435.4	2.094	13.57	435.3	2.092	13.878	435.2	2.09	14.188	435.1	2.089	14.499	435.1	2.087	418.15
150	12.78	440.7	2.109	13.09	440.7	2.107	13.39	440.6	2.105	13.697	440.5	2.103	14.003	440.4	2.101	14.309	440.4	2.099	423.15
155	12.62	446.1	2.121	12.92	446	2.119	13.22	445.9	2.118	13.521	445.8	2.116	13.822	445.8	2.114	14.124	445.7	2.112	428.15
160	12.46	451.4	2.134	12.76	451.4	2.132	13.05	451.3	2.13	13.349	451.2	2.128	13.647	451.1	2.126	13.945	451.1	2.124	433.15
165	12.3	456.8	2.146	12.6	456.8	2.144	12.89	456.7	2.142	13.183	456.6	2.141	13.476	456.6	2.139	13.77	456.5	2.137	438.15
170	12.15	462.3	2.159	12.44	462.2	2.157	12.73	462.2	2.155	13.021	462.1	2.153	13.31	462	2.151	13.6	461.9	2.149	443.15
175	12.01	467.8	2.171	12.29	467.7	2.169	12.58	467.6	2.167	12.863	467.6	2.165	13.149	467.5	2.163	13.435	467.4	2.162	448.15
180	11.86	473.3	2.183	12.15	473.2	2.181	12.43	473.2	2.179	12.709	473.1	2.178	12.991	473.1	2.176	13.273	473	2.174	453.15
185	11.73	478.9	2.196	12	478.8	2.194	12.28	478.8	2.192	12.559	478.7	2.19	12.838	478.6	2.188	13.116	478.6	2.186	458.15
190	11.59	484.5	2.208	11.86	484.4	2.206	12.14	484.4	2.204	12.413	484.3	2.202	12.688	484.3	2.2	12.963	484.2	2.198	463.15
195	11.46	490.2	2.22	11.73	490.1	2.218	12	490	2.216	12.27	490	2.214	12.542	489.9	2.212	12.814	489.9	2.21	468.15



KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	4.9			5			5.1			5.2			5.3			5.4			
	Satn. Temp. = 288.26K 15.11C			Satn. Temp. = 288.89K 15.74C			Satn. Temp. = 289.51K 16.36C			Satn. Temp. = 290.12K 16.97C			Satn. Temp. = 290.72K 17.57C			Satn. Temp. = 291.32K 18.17C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	23.84	307.1	1.72	24.32	307.5	1.72	24.8	307.8	1.719	25.278	308.1	1.719	25.759	308.5	1.719	26.242	308.8	1.719	Satn.
16	23.72	308	1.723	24.28	307.7	1.721													289.15
18	23.45	309.9	1.73	24.01	309.7	1.727	24.57	309.4	1.725	25.129	309.1	1.723	25.696	308.9	1.72				291.15
20	23.2	311.9	1.736	23.74	311.6	1.734	24.29	311.4	1.732	24.847	311.1	1.729	25.404	310.8	1.727	25.966	310.6	1.725	293.15
25	22.6	316.7	1.752	23.12	316.4	1.75	23.65	316.2	1.748	24.184	316	1.746	24.719	315.7	1.744	25.258	315.5	1.742	298.15
30	22.04	321.4	1.768	22.55	321.2	1.766	23.06	321	1.764	23.572	320.8	1.762	24.088	320.6	1.76	24.607	320.4	1.758	303.15
35	21.53	326.2	1.784	22.02	326	1.782	22.51	325.8	1.78	23.005	325.6	1.778	23.503	325.4	1.776	24.004	325.2	1.774	308.15
40	21.04	331	1.799	21.52	330.8	1.797	22	330.6	1.795	22.476	330.4	1.793	22.959	330.2	1.791	23.443	330	1.789	313.15
45	20.59	335.7	1.814	21.05	335.5	1.812	21.52	335.4	1.81	21.981	335.2	1.808	22.449	335	1.806	22.919	334.8	1.804	318.15
50	20.16	340.5	1.829	20.61	340.3	1.827	21.06	340.1	1.825	21.515	340	1.823	21.97	339.8	1.821	22.427	339.6	1.819	323.15
55	19.76	345.2	1.844	20.2	345.1	1.842	20.64	344.9	1.84	21.076	344.8	1.838	21.518	344.6	1.836	21.963	344.4	1.834	328.15
60	19.38	350	1.858	19.8	349.9	1.856	20.23	349.7	1.854	20.66	349.6	1.852	21.091	349.4	1.85	21.524	349.3	1.849	333.15
65	19.01	354.8	1.872	19.43	354.6	1.87	19.85	354.5	1.869	20.265	354.4	1.867	20.685	354.2	1.865	21.108	354.1	1.863	338.15
70	18.66	359.6	1.887	19.07	359.5	1.885	19.48	359.3	1.883	19.889	359.2	1.881	20.3	359.1	1.879	20.712	358.9	1.877	343.15
75	18.33	364.4	1.9	18.73	364.3	1.899	19.13	364.2	1.897	19.53	364	1.895	19.932	363.9	1.893	20.335	363.8	1.891	348.15
80	18.01	369.3	1.914	18.4	369.1	1.912	18.8	369	1.911	19.187	368.9	1.909	19.581	368.8	1.907	19.975	368.7	1.905	353.15
85	17.71	374.1	1.928	18.09	374	1.926	18.48	373.9	1.924	18.859	373.8	1.922	19.244	373.7	1.921	19.63	373.5	1.919	358.15
90	17.42	379	1.942	17.79	378.9	1.94	18.17	378.8	1.938	18.544	378.7	1.936	18.922	378.6	1.934	19.3	378.5	1.933	363.15
95	17.14	384	1.955	17.5	383.8	1.953	17.87	383.7	1.951	18.242	383.6	1.95	18.612	383.5	1.948	18.983	383.4	1.946	368.15
100	16.87	388.9	1.968	17.23	388.8	1.967	17.59	388.7	1.965	17.951	388.6	1.963	18.314	388.5	1.961	18.678	388.4	1.959	373.15
105	16.61	393.9	1.982	16.96	393.8	1.98	17.32	393.7	1.978	17.671	393.6	1.976	18.028	393.5	1.975	18.385	393.4	1.973	378.15

Temp C	Absolute Pressure (bar)																		Temp K
	4.9			5			5.1			5.2			5.3			5.4			
	Satn. Temp. = 288.26K 15.11C			Satn. Temp. = 288.89K 15.74C			Satn. Temp. = 289.51K 16.36C			Satn. Temp. = 290.12K 16.97C			Satn. Temp. = 290.72K 17.57C			Satn. Temp. = 291.32K 18.17C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
110	16.35	398.9	1.995	16.7	398.8	1.993	17.05	398.7	1.991	17.401	398.6	1.989	17.752	398.5	1.988	18.103	398.4	1.986	383.15
115	16.11	404	2.008	16.45	403.9	2.006	16.8	403.8	2.004	17.141	403.7	2.003	17.485	403.6	2.001	17.83	403.5	1.999	388.15
120	15.88	409	2.021	16.21	408.9	2.019	16.55	408.9	2.017	16.889	408.8	2.016	17.227	408.7	2.014	17.567	408.6	2.012	393.15
125	15.65	414.2	2.034	15.98	414.1	2.032	16.31	414	2.03	16.646	413.9	2.029	16.979	413.8	2.027	17.312	413.7	2.025	398.15
130	15.43	419.3	2.047	15.76	419.2	2.045	16.08	419.1	2.043	16.41	419.1	2.041	16.738	419	2.04	17.066	418.9	2.038	403.15
135	15.22	424.5	2.06	15.54	424.4	2.058	15.86	424.3	2.056	16.182	424.2	2.054	16.504	424.2	2.053	16.827	424.1	2.051	408.15
140	15.01	429.7	2.072	15.33	429.6	2.07	15.64	429.6	2.069	15.961	429.5	2.067	16.278	429.4	2.065	16.596	429.3	2.064	413.15
145	14.81	435	2.085	15.12	434.9	2.083	15.43	434.8	2.081	15.746	434.7	2.08	16.059	434.7	2.078	16.372	434.6	2.076	418.15
150	14.62	440.3	2.098	14.92	440.2	2.096	15.23	440.1	2.094	15.538	440.1	2.092	15.846	440	2.091	16.155	439.9	2.089	423.15
155	14.43	445.6	2.11	14.73	445.5	2.108	15.03	445.5	2.107	15.336	445.4	2.105	15.639	445.3	2.103	15.944	445.3	2.102	428.15
160	14.24	451	2.123	14.54	450.9	2.121	14.84	450.9	2.119	15.139	450.8	2.117	15.439	450.7	2.116	15.738	450.6	2.114	433.15
165	14.06	456.4	2.135	14.36	456.4	2.133	14.65	456.3	2.132	14.948	456.2	2.13	15.243	456.1	2.128	15.539	456.1	2.126	438.15
170	13.89	461.9	2.147	14.18	461.8	2.146	14.47	461.7	2.144	14.762	461.7	2.142	15.053	461.6	2.141	15.345	461.5	2.139	443.15
175	13.72	467.4	2.16	14.01	467.3	2.158	14.29	467.2	2.156	14.581	467.2	2.155	14.869	467.1	2.153	15.156	467	2.151	448.15
180	13.56	472.9	2.172	13.84	472.9	2.17	14.12	472.8	2.169	14.405	472.7	2.167	14.689	472.7	2.165	14.972	472.6	2.164	453.15
185	13.4	478.5	2.184	13.67	478.4	2.183	13.95	478.4	2.181	14.233	478.3	2.179	14.513	478.2	2.177	14.793	478.2	2.176	458.15
190	13.24	484.1	2.197	13.51	484.1	2.195	13.79	484	2.193	14.066	483.9	2.191	14.342	483.9	2.19	14.619	483.8	2.188	463.15
195	13.09	489.8	2.209	13.36	489.7	2.207	13.63	489.7	2.205	13.903	489.6	2.204	14.176	489.6	2.202	14.449	489.5	2.2	468.15
200	12.94	495.5	2.221	13.21	495.4	2.219	13.47	495.4	2.217	13.744	495.3	2.216	14.013	495.3	2.214	14.283	495.2	2.212	473.15
205	12.79	501.3	2.233	13.06	501.2	2.231	13.32	501.1	2.229	13.588	501.1	2.228	13.854	501	2.226	14.121	501	2.225	478.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	5.5			5.6			5.7			5.8			5.9			6			
	Satn. Temp. = 291.91K 18.76C			Satn. Temp. = 292.48K 19.33C			Satn. Temp. = 293.06K 19.91C			Satn. Temp. = 293.62K 20.47C			Satn. Temp. = 294.18K 21.03C			Satn. Temp. = 294.72K 21.57C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	26.73	309.1	1.719	27.21	309.4	1.718	27.69	309.7	1.718	28.177	310	1.718	28.662	310.3	1.718	29.148	310.6	1.718	Satn.
20	26.53	310.3	1.723	27.1	310.1	1.721	27.68	309.8	1.718										293.15
25	25.8	315.3	1.739	26.35	315	1.737	26.9	314.8	1.735	27.449	314.5	1.733	28.007	314.3	1.731	28.568	314	1.729	298.15
30	25.13	320.1	1.756	25.65	319.9	1.754	26.18	319.7	1.752	26.713	319.5	1.75	27.247	319.2	1.748	27.785	319	1.746	303.15
35	24.51	325	1.772	25.01	324.8	1.77	25.52	324.6	1.768	26.034	324.4	1.766	26.549	324.2	1.764	27.066	324	1.762	308.15
40	23.93	329.8	1.787	24.42	329.6	1.785	24.91	329.4	1.783	25.405	329.3	1.781	25.902	329.1	1.779	26.401	328.9	1.778	313.15
45	23.39	334.7	1.802	23.87	334.5	1.8	24.34	334.3	1.799	24.82	334.1	1.797	25.3	333.9	1.795	25.783	333.7	1.793	318.15
50	22.89	339.5	1.817	23.35	339.3	1.816	23.81	339.1	1.814	24.272	339	1.812	24.738	338.8	1.81	25.206	338.6	1.808	323.15
55	22.41	344.3	1.832	22.86	344.1	1.83	23.31	344	1.829	23.756	343.8	1.827	24.209	343.6	1.825	24.664	343.5	1.823	328.15
60	21.96	349.1	1.847	22.39	349	1.845	22.83	348.8	1.843	23.27	348.7	1.841	23.711	348.5	1.84	24.153	348.4	1.838	333.15
65	21.53	353.9	1.861	21.96	353.8	1.859	22.38	353.7	1.858	22.81	353.5	1.856	23.24	353.4	1.854	23.67	353.2	1.853	338.15
70	21.13	358.8	1.875	21.54	358.7	1.874	21.96	358.5	1.872	22.374	358.4	1.87	22.793	358.2	1.868	23.213	358.1	1.867	343.15
75	20.74	363.6	1.889	21.15	363.5	1.888	21.55	363.4	1.886	21.959	363.3	1.884	22.368	363.1	1.883	22.778	363	1.881	348.15
80	20.37	368.5	1.903	20.77	368.4	1.902	21.16	368.3	1.9	21.563	368.2	1.898	21.963	368	1.897	22.363	367.9	1.895	353.15
85	20.02	373.4	1.917	20.41	373.3	1.915	20.8	373.2	1.914	21.185	373.1	1.912	21.576	373	1.91	21.968	372.8	1.909	358.15
90	19.68	378.4	1.931	20.06	378.2	1.929	20.44	378.1	1.927	20.823	378	1.926	21.205	377.9	1.924	21.589	377.8	1.923	363.15
95	19.36	383.3	1.944	19.73	383.2	1.943	20.1	383.1	1.941	20.475	383	1.939	20.851	382.9	1.938	21.227	382.8	1.936	368.15
100	19.04	388.3	1.958	19.41	388.2	1.956	19.78	388.1	1.954	20.142	388	1.953	20.51	387.9	1.951	20.879	387.8	1.95	373.15
105	18.74	393.3	1.971	19.1	393.2	1.969	19.46	393.1	1.968	19.822	393	1.966	20.183	392.9	1.965	20.544	392.8	1.963	378.15
110	18.45	398.3	1.984	18.81	398.2	1.983	19.16	398.1	1.981	19.513	398	1.979	19.867	397.9	1.978	20.222	397.8	1.976	383.15
115	18.18	403.4	1.997	18.52	403.3	1.996	18.87	403.2	1.994	19.216	403.1	1.993	19.563	403	1.991	19.912	402.9	1.99	388.15

Temp C	Absolute Pressure (bar)																		Temp K
	5.5			5.6			5.7			5.8			5.9			6			
	Satn. Temp. = 291.91K 18.76C			Satn. Temp. = 292.48K 19.33C			Satn. Temp. = 293.06K 19.91C			Satn. Temp. = 293.62K 20.47C			Satn. Temp. = 294.18K 21.03C			Satn. Temp. = 294.72K 21.57C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
120	17.91	408.5	2.011	18.25	408.4	2.009	18.59	408.3	2.007	18.928	408.2	2.006	19.27	408.1	2.004	19.613	408	2.003	393.15
125	17.65	413.6	2.024	17.98	413.5	2.022	18.32	413.5	2.02	18.651	413.4	2.019	18.987	413.3	2.017	19.324	413.2	2.016	398.15
130	17.39	418.8	2.036	17.72	418.7	2.035	18.05	418.6	2.033	18.383	418.5	2.032	18.714	418.5	2.03	19.045	418.4	2.029	403.15
135	17.15	424	2.049	17.48	423.9	2.048	17.8	423.8	2.046	18.124	423.8	2.044	18.449	423.7	2.043	18.775	423.6	2.041	408.15
140	16.92	429.2	2.062	17.23	429.2	2.06	17.55	429.1	2.059	17.872	429	2.057	18.192	428.9	2.056	18.513	428.8	2.054	413.15
145	16.69	434.5	2.075	17	434.4	2.073	17.31	434.4	2.072	17.629	434.3	2.07	17.944	434.2	2.068	18.26	434.1	2.067	418.15
150	16.46	439.8	2.087	16.77	439.8	2.086	17.08	439.7	2.084	17.393	439.6	2.083	17.703	439.5	2.081	18.014	439.4	2.08	423.15
155	16.25	445.2	2.1	16.55	445.1	2.098	16.86	445	2.097	17.163	445	2.095	17.469	444.9	2.094	17.775	444.8	2.092	428.15
160	16.04	450.6	2.112	16.34	450.5	2.111	16.64	450.4	2.109	16.941	450.4	2.108	17.242	450.3	2.106	17.544	450.2	2.105	433.15
165	15.84	456	2.125	16.13	455.9	2.123	16.43	455.9	2.122	16.724	455.8	2.12	17.021	455.7	2.119	17.319	455.6	2.117	438.15
170	15.64	461.5	2.137	15.93	461.4	2.136	16.22	461.3	2.134	16.514	461.3	2.133	16.807	461.2	2.131	17.1	461.1	2.13	443.15
175	15.44	467	2.15	15.73	466.9	2.148	16.02	466.8	2.147	16.309	466.8	2.145	16.598	466.7	2.143	16.888	466.6	2.142	448.15
180	15.26	472.5	2.162	15.54	472.5	2.16	15.83	472.4	2.159	16.11	472.3	2.157	16.395	472.3	2.156	16.681	472.2	2.154	453.15
185	15.07	478.1	2.174	15.35	478.1	2.173	15.64	478	2.171	15.916	477.9	2.17	16.197	477.9	2.168	16.479	477.8	2.167	458.15
190	14.9	483.8	2.186	15.17	483.7	2.185	15.45	483.6	2.183	15.727	483.6	2.182	16.005	483.5	2.18	16.283	483.4	2.179	463.15
195	14.72	489.4	2.199	15	489.4	2.197	15.27	489.3	2.196	15.543	489.2	2.194	15.817	489.2	2.193	16.091	489.1	2.191	468.15
200	14.55	495.1	2.211	14.82	495.1	2.209	15.09	495	2.208	15.363	495	2.206	15.634	494.9	2.205	15.905	494.8	2.203	473.15
205	14.39	500.9	2.223	14.65	500.9	2.221	14.92	500.8	2.22	15.188	500.7	2.218	15.456	500.7	2.217	15.723	500.6	2.215	478.15
210	14.23	506.7	2.235	14.49	506.7	2.233	14.75	506.6	2.232	15.017	506.5	2.23	15.281	506.5	2.229	15.546	506.4	2.227	483.15
215	14.07	512.6	2.247	14.33	512.5	2.245	14.59	512.5	2.244	14.85	512.4	2.242	15.111	512.3	2.241	15.372	512.3	2.24	488.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	6.5			7			7.5			8			8.5			9			
	Satn. Temp. = 297.37K 24.22C			Satn. Temp. = 299.87K 26.72C			Satn. Temp. = 302.23K 29.08C			Satn. Temp. = 304.48K 31.33C			Satn. Temp. = 306.63K 33.48C			Satn. Temp. = 308.68K 35.53C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	31.59	312	1.717	34.04	313.2	1.716	36.52	314.4	1.715	39.009	315.5	1.714	41.523	316.6	1.714	44.058	317.5	1.713	Satn.
26	31.25	313.8	1.723																299.15
30	30.53	317.9	1.736	33.36	316.7	1.727	36.3	315.4	1.718										303.15
35	29.7	322.9	1.753	32.41	321.8	1.744	35.21	320.6	1.735	38.104	319.5	1.727	41.104	318.2	1.719				308.15
40	28.94	327.9	1.769	31.54	326.8	1.76	34.22	325.8	1.752	36.979	324.7	1.744	39.826	323.6	1.736	42.769	322.4	1.729	313.15
45	28.23	332.8	1.784	30.74	331.9	1.776	33.31	330.9	1.768	35.956	329.9	1.76	38.673	328.9	1.753	41.47	327.8	1.746	318.15
50	27.58	337.7	1.8	30	336.9	1.792	32.48	336	1.784	35.019	335	1.776	37.623	334.1	1.769	40.295	333.1	1.762	323.15
55	26.96	342.7	1.815	29.31	341.8	1.807	31.71	341	1.799	34.154	340.1	1.792	36.658	339.2	1.785	39.222	338.3	1.778	328.15
60	26.39	347.6	1.83	28.66	346.8	1.822	30.98	346	1.814	33.351	345.2	1.807	35.767	344.4	1.801	38.235	343.5	1.794	333.15
65	25.85	352.5	1.844	28.06	351.8	1.837	30.31	351	1.829	32.602	350.2	1.822	34.938	349.5	1.816	37.32	348.7	1.809	338.15
70	25.33	357.4	1.859	27.49	356.7	1.851	29.67	356	1.844	31.9	355.3	1.837	34.164	354.5	1.831	36.468	353.8	1.824	343.15
75	24.85	362.3	1.873	26.94	361.7	1.866	29.08	361	1.859	31.239	360.3	1.852	33.437	359.6	1.845	35.671	358.9	1.839	348.15
80	24.38	367.3	1.887	26.43	366.6	1.88	28.51	366	1.873	30.615	365.4	1.866	32.752	364.7	1.86	34.923	364	1.854	353.15
85	23.94	372.2	1.901	25.94	371.6	1.894	27.97	371	1.887	30.023	370.4	1.88	32.105	369.8	1.874	34.217	369.1	1.868	358.15
90	23.52	377.2	1.915	25.48	376.6	1.908	27.46	376.1	1.901	29.462	375.5	1.894	31.492	374.9	1.888	33.549	374.3	1.882	363.15
95	23.12	382.2	1.929	25.03	381.7	1.921	26.97	381.1	1.915	28.927	380.5	1.908	30.909	380	1.902	32.915	379.4	1.896	368.15
100	22.73	387.2	1.942	24.61	386.7	1.935	26.5	386.2	1.928	28.417	385.6	1.922	30.354	385.1	1.916	32.313	384.5	1.91	373.15
105	22.36	392.3	1.956	24.2	391.8	1.949	26.06	391.3	1.942	27.93	390.7	1.936	29.824	390.2	1.93	31.738	389.7	1.924	378.15
110	22.01	397.4	1.969	23.81	396.9	1.962	25.63	396.4	1.955	27.463	395.9	1.949	29.317	395.4	1.943	31.19	394.9	1.938	383.15
115	21.66	402.5	1.982	23.43	402	1.975	25.22	401.5	1.969	27.015	401	1.962	28.831	400.5	1.957	30.665	400	1.951	388.15
120	21.33	407.6	1.995	23.07	407.1	1.988	24.82	406.7	1.982	26.584	406.2	1.976	28.365	405.7	1.97	30.161	405.3	1.964	393.15

Temp C	Absolute Pressure (bar)																		Temp K
	6.5			7			7.5			8			8.5			9			
	Satn. Temp. = 297.37K 24.22C			Satn. Temp. = 299.87K 26.72C			Satn. Temp. = 302.23K 29.08C			Satn. Temp. = 304.48K 31.33C			Satn. Temp. = 306.63K 33.48C			Satn. Temp. = 308.68K 35.53C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
125	21.02	412.7	2.008	22.72	412.3	2.001	24.44	411.9	1.995	26.17	411.4	1.989	27.917	411	1.983	29.678	410.5	1.978	398.15
130	20.71	417.9	2.021	22.38	417.5	2.014	24.07	417.1	2.008	25.772	416.6	2.002	27.486	416.2	1.996	29.213	415.8	1.991	403.15
135	20.41	423.2	2.034	22.06	422.8	2.027	23.72	422.3	2.021	25.387	421.9	2.015	27.07	421.5	2.009	28.766	421.1	2.004	408.15
140	20.12	428.4	2.047	21.74	428	2.04	23.37	427.6	2.034	25.016	427.2	2.028	26.67	426.8	2.022	28.335	426.4	2.017	413.15
145	19.84	433.7	2.06	21.44	433.3	2.053	23.04	432.9	2.047	24.657	432.5	2.041	26.283	432.1	2.035	27.919	431.7	2.03	418.15
150	19.57	439.1	2.072	21.14	438.7	2.066	22.72	438.3	2.059	24.31	437.9	2.053	25.909	437.5	2.048	27.517	437.1	2.042	423.15
155	19.31	444.4	2.085	20.86	444.1	2.078	22.41	443.7	2.072	23.974	443.3	2.066	25.547	442.9	2.061	27.129	442.6	2.055	428.15
160	19.06	449.8	2.098	20.58	449.5	2.091	22.11	449.1	2.085	23.649	448.8	2.079	25.197	448.4	2.073	26.753	448	2.068	433.15
165	18.81	455.3	2.11	20.31	454.9	2.103	21.82	454.6	2.097	23.334	454.2	2.091	24.857	453.9	2.086	26.389	453.5	2.08	438.15
170	18.57	460.8	2.123	20.05	460.4	2.116	21.54	460.1	2.11	23.028	459.7	2.104	24.528	459.4	2.098	26.037	459	2.093	443.15
175	18.34	466.3	2.135	19.8	466	2.128	21.26	465.6	2.122	22.731	465.3	2.116	24.209	465	2.111	25.695	464.6	2.106	448.15
180	18.11	471.9	2.147	19.55	471.5	2.141	20.99	471.2	2.134	22.442	470.9	2.129	23.899	470.6	2.123	25.363	470.2	2.118	453.15
185	17.89	477.5	2.16	19.31	477.2	2.153	20.73	476.8	2.147	22.162	476.5	2.141	23.598	476.2	2.136	25.04	475.9	2.13	458.15
190	17.68	483.1	2.172	19.07	482.8	2.165	20.48	482.5	2.159	21.889	482.2	2.153	23.305	481.9	2.148	24.727	481.5	2.143	463.15
195	17.47	488.8	2.184	18.85	488.5	2.178	20.23	488.2	2.171	21.623	487.9	2.166	23.02	487.6	2.16	24.422	487.3	2.155	468.15
200	17.26	494.5	2.196	18.63	494.2	2.19	19.99	493.9	2.184	21.365	493.6	2.178	22.743	493.3	2.172	24.126	493	2.167	473.15
205	17.06	500.3	2.208	18.41	500	2.202	19.76	499.7	2.196	21.113	499.4	2.19	22.473	499.1	2.185	23.837	498.8	2.179	478.15
210	16.87	506.1	2.22	18.2	505.8	2.214	19.53	505.6	2.208	20.868	505.3	2.202	22.21	505	2.197	23.557	504.7	2.192	483.15
215	16.68	512	2.233	17.99	511.7	2.226	19.31	511.4	2.22	20.629	511.1	2.214	21.954	510.9	2.209	23.283	510.6	2.204	488.15
220	16.5	517.9	2.245	17.79	517.6	2.238	19.09	517.3	2.232	20.396	517.1	2.226	21.704	516.8	2.221	23.016	516.5	2.216	493.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	9.5			10			10.5			11			11.5			12			
	Satn. Temp. = 310.65K 37.50C			Satn. Temp. = 312.54K 39.39C			Satn. Temp. = 314.36K 41.21C			Satn. Temp. = 316.12K 42.97C			Satn. Temp. = 317.82K 44.67C			Satn. Temp. = 319.47K 46.32C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	46.62	318.5	1.712	49.2	319.3	1.712	51.81	320.1	1.711	54.439	320.9	1.711	57.099	321.6	1.71	59.787	322.2	1.709	Satn.
38	46.45	319	1.714																311.15
40	45.82	321.2	1.721	48.98	320	1.714													313.15
45	44.36	326.7	1.739	47.34	325.6	1.732	50.42	324.4	1.725	53.624	323.2	1.718	56.955	322	1.711				318.15
50	43.04	332.1	1.755	45.87	331.1	1.749	48.78	330	1.742	51.788	328.9	1.736	54.899	327.8	1.729	58.122	326.6	1.723	323.15
55	41.85	337.4	1.772	44.54	336.4	1.765	47.31	335.5	1.759	50.157	334.5	1.753	53.088	333.4	1.747	56.11	332.4	1.741	328.15
60	40.76	342.6	1.788	43.34	341.8	1.781	45.98	340.9	1.775	48.689	339.9	1.769	51.469	339	1.763	54.325	338	1.758	333.15
65	39.75	347.9	1.803	42.23	347	1.797	44.76	346.2	1.791	47.355	345.3	1.785	50.006	344.5	1.78	52.721	343.6	1.774	338.15
70	38.82	353	1.818	41.21	352.3	1.812	43.65	351.5	1.807	46.132	350.7	1.801	48.671	349.9	1.796	51.265	349	1.79	343.15
75	37.94	358.2	1.833	40.26	357.5	1.827	42.61	356.7	1.822	45.003	356	1.816	47.444	355.2	1.811	49.932	354.4	1.806	348.15
80	37.13	363.4	1.848	39.37	362.7	1.842	41.64	362	1.837	43.955	361.3	1.831	46.308	360.5	1.826	48.702	359.8	1.821	353.15
85	36.36	368.5	1.862	38.53	367.9	1.857	40.74	367.2	1.851	42.976	366.5	1.846	45.251	365.8	1.841	47.562	365.2	1.836	358.15
90	35.63	373.7	1.877	37.75	373	1.871	39.89	372.4	1.866	42.059	371.8	1.861	44.262	371.1	1.856	46.498	370.5	1.851	363.15
95	34.95	378.8	1.891	37	378.2	1.885	39.09	377.6	1.88	41.195	377	1.875	43.334	376.4	1.87	45.501	375.8	1.866	368.15
100	34.29	384	1.905	36.3	383.4	1.899	38.33	382.8	1.894	40.38	382.3	1.889	42.459	381.7	1.885	44.563	381.1	1.88	373.15
105	33.67	389.1	1.918	35.63	388.6	1.913	37.61	388.1	1.908	39.608	387.5	1.903	41.631	387	1.899	43.678	386.4	1.894	378.15
110	33.08	394.3	1.932	34.99	393.8	1.927	36.92	393.3	1.922	38.874	392.8	1.917	40.847	392.2	1.912	42.84	391.7	1.908	383.15
115	32.52	399.6	1.946	34.38	399.1	1.941	36.27	398.6	1.936	38.176	398.1	1.931	40.101	397.5	1.926	42.045	397	1.922	388.15
120	31.97	404.8	1.959	33.8	404.3	1.954	35.65	403.8	1.949	37.51	403.3	1.944	39.39	402.9	1.94	41.288	402.4	1.935	393.15
125	31.45	410	1.972	33.25	409.6	1.967	35.05	409.1	1.962	36.873	408.7	1.958	38.711	408.2	1.953	40.566	407.7	1.949	398.15
130	30.96	415.3	1.986	32.71	414.9	1.981	34.48	414.4	1.976	36.264	414	1.971	38.062	413.5	1.967	39.876	413.1	1.962	403.15

Temp C	Absolute Pressure (bar)																		Temp K
	9.5			10			10.5			11			11.5			12			
	Satn. Temp. = 310.65K 37.50C			Satn. Temp. = 312.54K 39.39C			Satn. Temp. = 314.36K 41.21C			Satn. Temp. = 316.12K 42.97C			Satn. Temp. = 317.82K 44.67C			Satn. Temp. = 319.47K 46.32C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
135	30.48	420.6	1.999	32.2	420.2	1.994	33.93	419.8	1.989	35.679	419.3	1.984	37.44	418.9	1.98	39.215	418.5	1.976	408.15
140	30.01	426	2.012	31.7	425.6	2.007	33.4	425.1	2.002	35.117	424.7	1.997	36.843	424.3	1.993	38.582	423.9	1.989	413.15
145	29.57	431.3	2.025	31.23	430.9	2.02	32.9	430.5	2.015	34.576	430.1	2.01	36.269	429.7	2.006	37.974	429.3	2.002	418.15
150	29.14	436.7	2.037	30.77	436.4	2.032	32.41	436	2.028	34.056	435.6	2.023	35.717	435.2	2.019	37.389	434.8	2.015	423.15
155	28.72	442.2	2.05	30.32	441.8	2.045	31.93	441.4	2.041	33.554	441	2.036	35.185	440.7	2.032	36.826	440.3	2.028	428.15
160	28.32	447.7	2.063	29.89	447.3	2.058	31.48	446.9	2.053	33.069	446.5	2.049	34.671	446.2	2.045	36.283	445.8	2.041	433.15
165	27.93	453.2	2.075	29.48	452.8	2.071	31.04	452.4	2.066	32.601	452.1	2.062	34.176	451.7	2.057	35.759	451.3	2.053	438.15
170	27.55	458.7	2.088	29.08	458.3	2.083	30.61	458	2.079	32.149	457.6	2.074	33.697	457.3	2.07	35.253	456.9	2.066	443.15
175	27.19	464.3	2.101	28.69	463.9	2.096	30.2	463.6	2.091	31.71	463.2	2.087	33.233	462.9	2.083	34.763	462.5	2.079	448.15
180	26.83	469.9	2.113	28.31	469.6	2.108	29.8	469.2	2.104	31.286	468.9	2.099	32.784	468.5	2.095	34.29	468.2	2.091	453.15
185	26.49	475.5	2.125	27.94	475.2	2.121	29.41	474.9	2.116	30.875	474.6	2.112	32.349	474.2	2.108	33.831	473.9	2.104	458.15
190	26.16	481.2	2.138	27.59	480.9	2.133	29.03	480.6	2.129	30.475	480.3	2.124	31.928	479.9	2.12	33.386	479.6	2.116	463.15
195	25.83	487	2.15	27.24	486.6	2.145	28.66	486.3	2.141	30.088	486	2.137	31.519	485.7	2.132	32.955	485.4	2.128	468.15
200	25.51	492.7	2.162	26.91	492.4	2.158	28.31	492.1	2.153	29.711	491.8	2.149	31.121	491.5	2.145	32.536	491.2	2.141	473.15
205	25.21	498.5	2.175	26.58	498.2	2.17	27.96	497.9	2.165	29.346	497.6	2.161	30.735	497.3	2.157	32.13	497	2.153	478.15
210	24.91	504.4	2.187	26.26	504.1	2.182	27.62	503.8	2.178	28.99	503.5	2.173	30.36	503.2	2.169	31.735	502.9	2.165	483.15
215	24.62	510.3	2.199	25.95	510	2.194	27.3	509.7	2.19	28.643	509.4	2.186	29.995	509.1	2.181	31.35	508.9	2.178	488.15
220	24.33	516.2	2.211	25.65	516	2.206	26.98	515.7	2.202	28.306	515.4	2.198	29.639	515.1	2.194	30.977	514.8	2.19	493.15
225	24.06	522.2	2.223	25.36	521.9	2.218	26.67	521.7	2.214	27.978	521.4	2.21	29.293	521.1	2.206	30.613	520.8	2.202	498.15
230	23.79	528.2	2.235	25.07	528	2.23	26.36	527.7	2.226	27.658	527.4	2.222	28.956	527.2	2.218	30.258	526.9	2.214	503.15



KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	12.5			13			13.5			14			14.5			15			
	Satn. Temp. = 321.06K 47.91C			Satn. Temp. = 322.61K 49.46C			Satn. Temp. = 324.12K 50.97C			Satn. Temp. = 325.58K 52.43C			Satn. Temp. = 327.00K 53.85C			Satn. Temp. = 328.39K 55.24C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	62.51	322.9	1.709	65.25	323.5	1.708	68.03	324	1.708	70.844	324.5	1.707	73.689	325	1.706	76.57	325.5	1.706	Satn.
48	62.46	323	1.709																321.15
50	61.47	325.4	1.717	64.96	324.1	1.71													323.15
55	59.23	331.3	1.735	62.46	330.1	1.729	65.82	329	1.723	69.302	327.8	1.717	72.937	326.5	1.711				328.15
60	57.26	337	1.752	60.29	336	1.746	63.41	334.9	1.741	66.637	333.8	1.735	69.978	332.7	1.73	73.446	331.5	1.724	333.15
65	55.5	342.6	1.769	58.36	341.7	1.763	61.3	340.7	1.758	64.316	339.7	1.753	67.426	338.7	1.748	70.636	337.7	1.742	338.15
70	53.92	348.2	1.785	56.63	347.3	1.78	59.41	346.4	1.775	62.259	345.5	1.77	65.182	344.6	1.765	68.186	343.6	1.76	343.15
75	52.47	353.7	1.801	55.06	352.8	1.796	57.71	352	1.791	60.412	351.2	1.786	63.18	350.3	1.781	66.013	349.5	1.777	348.15
80	51.14	359.1	1.816	53.62	358.3	1.812	56.16	357.6	1.807	58.737	356.8	1.802	61.372	356	1.797	64.062	355.2	1.793	353.15
85	49.91	364.5	1.831	52.3	363.8	1.827	54.73	363	1.822	57.205	362.3	1.818	59.724	361.6	1.813	62.291	360.8	1.809	358.15
90	48.77	369.8	1.846	51.07	369.2	1.842	53.41	368.5	1.837	55.792	367.8	1.833	58.21	367.1	1.829	60.67	366.4	1.824	363.15
95	47.7	375.2	1.861	49.93	374.5	1.856	52.19	373.9	1.852	54.481	373.3	1.848	56.81	372.6	1.844	59.175	371.9	1.839	368.15
100	46.7	380.5	1.875	48.85	379.9	1.871	51.04	379.3	1.867	53.26	378.7	1.862	55.508	378.1	1.858	57.788	377.4	1.854	373.15
105	45.75	385.8	1.89	47.85	385.3	1.885	49.97	384.7	1.881	52.116	384.1	1.877	54.292	383.5	1.873	56.496	382.9	1.869	378.15
110	44.86	391.2	1.904	46.89	390.6	1.899	48.96	390.1	1.895	51.04	389.5	1.891	53.15	389	1.887	55.285	388.4	1.883	383.15
115	44.01	396.5	1.917	45.99	396	1.913	48	395.5	1.909	50.026	394.9	1.905	52.074	394.4	1.901	54.146	393.9	1.897	388.15
120	43.2	401.9	1.931	45.14	401.4	1.927	47.09	400.9	1.923	49.065	400.4	1.919	51.058	399.9	1.915	53.072	399.3	1.911	393.15
125	42.44	407.2	1.945	44.33	406.8	1.941	46.23	406.3	1.937	48.154	405.8	1.933	50.095	405.3	1.929	52.055	404.8	1.925	398.15
130	41.71	412.6	1.958	43.55	412.2	1.954	45.41	411.7	1.95	47.287	411.2	1.946	49.18	410.8	1.943	51.09	410.3	1.939	403.15
135	41.01	418	1.971	42.81	417.6	1.967	44.63	417.1	1.964	46.46	416.7	1.96	48.308	416.2	1.956	50.172	415.8	1.952	408.15
140	40.33	423.4	1.985	42.1	423	1.981	43.88	422.6	1.977	45.67	422.1	1.973	47.476	421.7	1.969	49.297	421.3	1.966	413.15

Temp C	Absolute Pressure (bar)																		Temp K
	12.5			13			13.5			14			14.5			15			
	Satn. Temp. = 321.06K 47.91C			Satn. Temp. = 322.61K 49.46C			Satn. Temp. = 324.12K 50.97C			Satn. Temp. = 325.58K 52.43C			Satn. Temp. = 327.00K 53.85C			Satn. Temp. = 328.39K 55.24C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
145	39.69	428.9	1.998	41.42	428.5	1.994	43.16	428.1	1.99	44.914	427.6	1.986	46.681	427.2	1.983	48.46	426.8	1.979	418.15
150	39.07	434.4	2.011	40.77	434	2.007	42.47	433.6	2.003	44.19	433.2	1.999	45.919	432.8	1.996	47.66	432.3	1.992	423.15
155	38.48	439.9	2.024	40.14	439.5	2.02	41.81	439.1	2.016	43.494	438.7	2.012	45.188	438.3	2.009	46.893	437.9	2.005	428.15
160	37.9	445.4	2.037	39.54	445	2.033	41.18	444.7	2.029	42.825	444.3	2.025	44.486	443.9	2.022	46.156	443.5	2.018	433.15
165	37.35	451	2.049	38.95	450.6	2.046	40.56	450.2	2.042	42.182	449.9	2.038	43.81	449.5	2.035	45.448	449.1	2.031	438.15
170	36.82	456.6	2.062	38.39	456.2	2.058	39.97	455.9	2.055	41.561	455.5	2.051	43.159	455.1	2.047	44.767	454.8	2.044	443.15
175	36.3	462.2	2.075	37.85	461.9	2.071	39.4	461.5	2.067	40.962	461.2	2.064	42.532	460.8	2.06	44.11	460.5	2.057	448.15
180	35.8	467.9	2.087	37.32	467.5	2.083	38.85	467.2	2.08	40.384	466.8	2.076	41.926	466.5	2.073	43.476	466.2	2.07	453.15
185	35.32	473.6	2.1	36.81	473.2	2.096	38.32	472.9	2.092	39.825	472.6	2.089	41.341	472.2	2.085	42.864	471.9	2.082	458.15
190	34.85	479.3	2.112	36.32	479	2.108	37.8	478.7	2.105	39.284	478.3	2.101	40.775	478	2.098	42.272	477.7	2.095	463.15
195	34.4	485.1	2.125	35.85	484.8	2.121	37.3	484.4	2.117	38.76	484.1	2.114	40.227	483.8	2.11	41.699	483.5	2.107	468.15
200	33.96	490.9	2.137	35.38	490.6	2.133	36.82	490.3	2.13	38.253	490	2.126	39.696	489.7	2.123	41.145	489.3	2.12	473.15
205	33.53	496.7	2.149	34.94	496.4	2.146	36.35	496.1	2.142	37.761	495.8	2.139	39.181	495.5	2.135	40.607	495.2	2.132	478.15
210	33.11	502.6	2.162	34.5	502.3	2.158	35.89	502	2.154	37.283	501.8	2.151	38.682	501.5	2.148	40.086	501.2	2.144	483.15
215	32.71	508.6	2.174	34.08	508.3	2.17	35.45	508	2.167	36.819	507.7	2.163	38.197	507.4	2.16	39.581	507.1	2.157	488.15
220	32.32	514.5	2.186	33.66	514.3	2.182	35.01	514	2.179	36.368	513.7	2.175	37.726	513.4	2.172	39.089	513.1	2.169	493.15
225	31.94	520.6	2.198	33.26	520.3	2.194	34.59	520	2.191	35.929	519.7	2.188	37.269	519.5	2.184	38.612	519.2	2.181	498.15
230	31.56	526.6	2.21	32.87	526.4	2.207	34.19	526.1	2.203	35.503	525.8	2.2	36.824	525.5	2.196	38.148	525.3	2.193	503.15
235	31.2	532.7	2.222	32.49	532.5	2.219	33.79	532.2	2.215	35.088	531.9	2.212	36.391	531.7	2.208	37.697	531.4	2.205	508.15
240	30.85	538.9	2.234	32.12	538.6	2.231	33.4	538.4	2.227	34.684	538.1	2.224	35.969	537.8	2.221	37.257	537.6	2.217	513.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	15.5			16			16.5			17			17.5			18			
	Satn. Temp. = 329.74K 56.59C			Satn. Temp. = 331.06K 57.91C			Satn. Temp. = 332.35K 59.20C			Satn. Temp. = 333.61K 60.46C			Satn. Temp. = 334.84K 61.69C			Satn. Temp. = 336.05K 62.90C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	79.49	325.9	1.705	82.44	326.3	1.704	85.44	326.7	1.704	88.47	327	1.703	91.546	327.3	1.702	94.667	327.6	1.702	Satn.
58	78.45	327.8	1.711	82.37	326.4	1.705													331.15
60	77.05	330.3	1.718	80.82	329.1	1.713	84.76	327.8	1.707										333.15
65	73.95	336.6	1.737	77.39	335.5	1.732	80.95	334.3	1.727	84.664	333.1	1.721	88.533	331.9	1.716	92.583	330.6	1.71	338.15
70	71.28	342.7	1.755	74.46	341.7	1.75	77.74	340.6	1.745	81.132	339.6	1.74	84.643	338.5	1.735	88.285	337.3	1.73	343.15
75	68.92	348.6	1.772	71.9	347.7	1.767	74.96	346.7	1.763	78.101	345.8	1.758	81.339	344.8	1.753	84.678	343.8	1.749	348.15
80	66.81	354.4	1.788	69.62	353.5	1.784	72.5	352.7	1.78	75.446	351.8	1.775	78.468	350.9	1.771	81.57	350	1.766	353.15
85	64.91	360.1	1.804	67.58	359.3	1.8	70.3	358.5	1.796	73.085	357.7	1.792	75.929	356.9	1.788	78.838	356	1.783	358.15
90	63.17	365.7	1.82	65.72	365	1.816	68.31	364.2	1.812	70.958	363.5	1.808	73.653	362.7	1.804	76.402	361.9	1.8	363.15
95	61.58	371.3	1.835	64.02	370.6	1.831	66.5	369.9	1.827	69.023	369.2	1.823	71.591	368.5	1.82	74.204	367.8	1.816	368.15
100	60.1	376.8	1.85	62.45	376.2	1.846	64.83	375.5	1.843	67.249	374.9	1.839	69.706	374.2	1.835	72.202	373.5	1.831	373.15
105	58.73	382.3	1.865	60.99	381.7	1.861	63.29	381.1	1.857	65.611	380.5	1.854	67.97	379.9	1.85	70.364	379.2	1.847	378.15
110	57.45	387.8	1.879	59.63	387.3	1.876	61.85	386.7	1.872	64.09	386.1	1.868	66.362	385.5	1.865	68.665	384.9	1.861	383.15
115	56.24	393.3	1.894	58.36	392.8	1.89	60.5	392.2	1.886	62.671	391.7	1.883	64.865	391.1	1.879	67.085	390.5	1.876	388.15
120	55.11	398.8	1.908	57.16	398.3	1.904	59.24	397.8	1.901	61.34	397.2	1.897	63.463	396.7	1.894	65.61	396.2	1.89	393.15
125	54.03	404.3	1.922	56.03	403.8	1.918	58.05	403.3	1.915	60.088	402.8	1.911	62.146	402.3	1.908	64.226	401.8	1.905	398.15
130	53.02	409.8	1.935	54.96	409.3	1.932	56.93	408.8	1.928	58.905	408.4	1.925	60.905	407.9	1.922	62.924	407.4	1.919	403.15
135	52.05	415.3	1.949	53.95	414.9	1.945	55.86	414.4	1.942	57.786	413.9	1.939	59.731	413.5	1.936	61.693	413	1.932	408.15
140	51.13	420.8	1.962	52.98	420.4	1.959	54.84	419.9	1.956	56.723	419.5	1.952	58.618	419	1.949	60.528	418.6	1.946	413.15
145	50.25	426.4	1.976	52.06	425.9	1.972	53.88	425.5	1.969	55.712	425.1	1.966	57.559	424.7	1.963	59.421	424.2	1.96	418.15
150	49.41	431.9	1.989	51.18	431.5	1.986	52.96	431.1	1.982	54.747	430.7	1.979	56.55	430.3	1.976	58.367	429.8	1.973	423.15

Temp C	Absolute Pressure (bar)																		Temp K
	15.5			16			16.5			17			17.5			18			
	Satn. Temp. = 329.74K 56.59C			Satn. Temp. = 331.06K 57.91C			Satn. Temp. = 332.35K 59.20C			Satn. Temp. = 333.61K 60.46C			Satn. Temp. = 334.84K 61.69C			Satn. Temp. = 336.05K 62.90C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
155	48.61	437.5	2.002	50.34	437.1	1.999	52.08	436.7	1.996	53.825	436.3	1.992	55.587	435.9	1.989	57.361	435.5	1.986	428.15
160	47.84	443.1	2.015	49.53	442.7	2.012	51.23	442.3	2.009	52.943	442	2.005	54.666	441.6	2.002	56.4	441.2	1.999	433.15
165	47.1	448.7	2.028	48.75	448.4	2.025	50.42	448	2.022	52.097	447.6	2.018	53.783	447.2	2.015	55.48	446.9	2.013	438.15
170	46.38	454.4	2.041	48.01	454	2.038	49.64	453.7	2.034	51.284	453.3	2.031	52.936	452.9	2.028	54.598	452.6	2.025	443.15
175	45.7	460.1	2.054	47.29	459.7	2.05	48.89	459.4	2.047	50.503	459	2.044	52.122	458.7	2.041	53.751	458.3	2.038	448.15
180	45.03	465.8	2.066	46.6	465.5	2.063	48.17	465.1	2.06	49.751	464.8	2.057	51.339	464.4	2.054	52.936	464.1	2.051	453.15
185	44.39	471.6	2.079	45.93	471.2	2.076	47.48	470.9	2.073	49.026	470.6	2.07	50.585	470.2	2.067	52.151	469.9	2.064	458.15
190	43.78	477.4	2.091	45.29	477	2.088	46.8	476.7	2.085	48.327	476.4	2.082	49.857	476	2.079	51.395	475.7	2.077	463.15
195	43.18	483.2	2.104	44.66	482.9	2.101	46.15	482.5	2.098	47.651	482.2	2.095	49.155	481.9	2.092	50.665	481.6	2.089	468.15
200	42.6	489	2.116	44.06	488.7	2.113	45.53	488.4	2.11	46.998	488.1	2.107	48.476	487.8	2.104	49.959	487.5	2.102	473.15
205	42.04	494.9	2.129	43.48	494.6	2.126	44.92	494.3	2.123	46.366	494	2.12	47.819	493.7	2.117	49.278	493.4	2.114	478.15
210	41.5	500.9	2.141	42.91	500.6	2.138	44.33	500.3	2.135	45.754	500	2.132	47.183	499.7	2.129	48.618	499.4	2.127	483.15
215	40.97	506.8	2.153	42.36	506.5	2.15	43.76	506.3	2.147	45.16	506	2.145	46.567	505.7	2.142	47.979	505.4	2.139	488.15
220	40.46	512.9	2.166	41.83	512.6	2.163	43.21	512.3	2.16	44.585	512	2.157	45.97	511.7	2.154	47.36	511.4	2.151	493.15
225	39.96	518.9	2.178	41.31	518.6	2.175	42.67	518.3	2.172	44.027	518.1	2.169	45.391	517.8	2.166	46.759	517.5	2.164	498.15
230	39.48	525	2.19	40.81	524.7	2.187	42.15	524.5	2.184	43.485	524.2	2.181	44.828	523.9	2.178	46.176	523.6	2.176	503.15
235	39.01	531.1	2.202	40.32	530.9	2.199	41.64	530.6	2.196	42.958	530.3	2.193	44.282	530.1	2.191	45.61	529.8	2.188	508.15
240	38.55	537.3	2.214	39.84	537.1	2.211	41.14	536.8	2.208	42.445	536.5	2.206	43.751	536.3	2.203	45.06	536	2.2	513.15
245	38.1	543.5	2.226	39.38	543.3	2.223	40.66	543	2.221	41.947	542.8	2.218	43.234	542.5	2.215	44.525	542.3	2.212	518.15
250	37.67	549.8	2.238	38.93	549.6	2.235	40.2	549.3	2.233	41.462	549.1	2.23	42.731	548.8	2.227	44.004	548.5	2.224	523.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	18.5			19			19.5			20			20.5			21			
	Satn. Temp. = 337.23K 64.08C			Satn. Temp. = 338.39K 65.24C			Satn. Temp. = 339.52K 66.37C			Satn. Temp. = 340.63K 67.48C			Satn. Temp. = 341.73K 68.58C			Satn. Temp. = 342.80K 69.65C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	97.83	327.9	1.701	101	328.1	1.7	104.3	328.4	1.699	107.62	328.6	1.698	110.99	328.7	1.698	114.41	328.9	1.697	Satn.
66	95.8	330.6	1.709	100.2	329.3	1.703													339.15
70	92.07	336.1	1.725	96.02	334.9	1.72	100.1	333.7	1.715	104.48	332.3	1.709	109.05	330.9	1.704	113.88	329.5	1.698	343.15
75	88.13	342.7	1.744	91.69	341.6	1.739	95.39	340.5	1.735	99.227	339.4	1.73	103.22	338.2	1.725	107.4	336.9	1.72	348.15
80	84.76	349	1.762	88.04	348.1	1.758	91.41	347.1	1.753	94.895	346.1	1.749	98.495	345	1.744	102.22	343.9	1.74	353.15
85	81.82	355.2	1.779	84.87	354.3	1.775	88	353.4	1.771	91.209	352.5	1.767	94.511	351.5	1.763	97.908	350.6	1.759	358.15
90	79.21	361.1	1.796	82.08	360.3	1.792	85.01	359.5	1.788	88.001	358.7	1.784	91.069	357.8	1.78	94.212	357	1.776	363.15
95	76.87	367	1.812	79.58	366.3	1.808	82.34	365.5	1.805	85.161	364.8	1.801	88.039	364	1.797	90.977	363.2	1.793	368.15
100	74.74	372.8	1.828	77.32	372.2	1.824	79.94	371.5	1.82	82.614	370.7	1.817	85.333	370	1.813	88.103	369.3	1.81	373.15
105	72.79	378.6	1.843	75.26	377.9	1.839	77.76	377.3	1.836	80.305	376.6	1.833	82.889	375.9	1.829	85.516	375.3	1.826	378.15
110	71	384.3	1.858	73.36	383.7	1.855	75.76	383.1	1.851	78.193	382.4	1.848	80.661	381.8	1.845	83.165	381.2	1.841	383.15
115	69.33	390	1.873	71.61	389.4	1.869	73.91	388.8	1.866	76.249	388.2	1.863	78.614	387.6	1.86	81.011	387	1.856	388.15
120	67.78	395.6	1.887	69.98	395.1	1.884	72.2	394.5	1.881	74.447	394	1.878	76.721	393.4	1.874	79.024	392.8	1.871	393.15
125	66.33	401.3	1.901	68.45	400.7	1.898	70.6	400.2	1.895	72.768	399.7	1.892	74.961	399.1	1.889	77.179	398.6	1.886	398.15
130	64.96	406.9	1.915	67.02	406.4	1.912	69.1	405.9	1.909	71.197	405.4	1.906	73.317	404.9	1.903	75.459	404.4	1.9	403.15
135	63.67	412.5	1.929	65.67	412	1.926	67.69	411.6	1.923	69.721	411.1	1.92	71.775	410.6	1.917	73.848	410.1	1.914	408.15
140	62.45	418.1	1.943	64.4	417.7	1.94	66.35	417.2	1.937	68.33	416.8	1.934	70.322	416.3	1.931	72.332	415.8	1.928	413.15
145	61.3	423.8	1.957	63.19	423.3	1.954	65.09	422.9	1.951	67.014	422.4	1.948	68.95	422	1.945	70.902	421.6	1.942	418.15
150	60.2	429.4	1.97	62.04	429	1.967	63.9	428.6	1.964	65.766	428.1	1.961	67.651	427.7	1.959	69.549	427.3	1.956	423.15
155	59.15	435.1	1.983	60.95	434.7	1.98	62.76	434.3	1.978	64.58	433.9	1.975	66.416	433.4	1.972	68.265	433	1.969	428.15
160	58.15	440.8	1.997	59.9	440.4	1.994	61.67	440	1.991	63.45	439.6	1.988	65.241	439.2	1.985	67.044	438.8	1.983	433.15

Temp C	Absolute Pressure (bar)																		Temp K
	18.5			19			19.5			20			20.5			21			
	Satn. Temp. = 337.23K 64.08C			Satn. Temp. = 338.39K 65.24C			Satn. Temp. = 339.52K 66.37C			Satn. Temp. = 340.63K 67.48C			Satn. Temp. = 341.73K 68.58C			Satn. Temp. = 342.80K 69.65C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
165	57.19	446.5	2.01	58.91	446.1	2.007	60.63	445.7	2.004	62.371	445.3	2.001	64.12	444.9	1.999	65.88	444.6	1.996	438.15
170	56.27	452.2	2.023	57.95	451.8	2.02	59.64	451.5	2.017	61.339	451.1	2.014	63.049	450.7	2.012	64.768	450.3	2.009	443.15
175	55.39	458	2.036	57.03	457.6	2.033	58.69	457.2	2.03	60.351	456.9	2.027	62.023	456.5	2.025	63.705	456.1	2.022	448.15
180	54.54	463.7	2.048	56.15	463.4	2.046	57.77	463	2.043	59.402	462.7	2.04	61.039	462.3	2.038	62.685	462	2.035	453.15
185	53.73	469.5	2.061	55.31	469.2	2.058	56.89	468.9	2.056	58.491	468.5	2.053	60.095	468.2	2.05	61.707	467.8	2.048	458.15
190	52.94	475.4	2.074	54.49	475.1	2.071	56.05	474.7	2.068	57.614	474.4	2.066	59.187	474.1	2.063	60.766	473.7	2.061	463.15
195	52.18	481.3	2.086	53.7	480.9	2.084	55.23	480.6	2.081	56.769	480.3	2.078	58.312	480	2.076	59.861	479.6	2.073	468.15
200	51.45	487.2	2.099	52.95	486.9	2.096	54.45	486.5	2.094	55.955	486.2	2.091	57.469	485.9	2.088	58.989	485.6	2.086	473.15
205	50.74	493.1	2.111	52.21	492.8	2.109	53.69	492.5	2.106	55.169	492.2	2.104	56.656	491.9	2.101	58.148	491.6	2.099	478.15
210	50.06	499.1	2.124	51.5	498.8	2.121	52.95	498.5	2.119	54.409	498.2	2.116	55.87	497.9	2.114	57.337	497.6	2.111	483.15
215	49.4	505.1	2.136	50.82	504.8	2.134	52.24	504.5	2.131	53.674	504.2	2.128	55.111	503.9	2.126	56.552	503.6	2.124	488.15
220	48.75	511.1	2.149	50.15	510.9	2.146	51.56	510.6	2.143	52.963	510.3	2.141	54.376	510	2.138	55.793	509.7	2.136	493.15
225	48.13	517.2	2.161	49.51	517	2.158	50.89	516.7	2.156	52.274	516.4	2.153	53.664	516.1	2.151	55.058	515.8	2.148	498.15
230	47.53	523.4	2.173	48.88	523.1	2.17	50.24	522.8	2.168	51.607	522.5	2.165	52.974	522.3	2.163	54.346	522	2.161	503.15
235	46.94	529.5	2.185	48.28	529.3	2.183	49.62	529	2.18	50.959	528.7	2.178	52.305	528.5	2.175	53.656	528.2	2.173	508.15
240	46.37	535.7	2.197	47.69	535.5	2.195	49.01	535.2	2.192	50.33	535	2.19	51.656	534.7	2.187	52.986	534.4	2.185	513.15
245	45.82	542	2.21	47.12	541.7	2.207	48.42	541.5	2.205	49.719	541.2	2.202	51.026	541	2.2	52.336	540.7	2.197	518.15
250	45.28	548.3	2.222	46.56	548	2.219	47.84	547.8	2.217	49.125	547.5	2.214	50.413	547.3	2.212	51.704	547	2.209	523.15
255	44.76	554.6	2.234	46.02	554.4	2.231	47.28	554.1	2.229	48.547	553.9	2.226	49.817	553.7	2.224	51.09	553.4	2.222	528.15
260	44.25	561	2.246	45.49	560.8	2.243	46.74	560.5	2.241	47.986	560.3	2.238	49.238	560.1	2.236	50.492	559.8	2.234	533.15

KLEA134a : Properties of Superheated Vapour (SI Units)

Standard State: At 0 C, Liquid Enthalpy = 100 kJ/kg, Liquid Entropy = 1 kJ/kg.K

Temp C	Absolute Pressure (bar)																		Temp K
	21.5			22			25			30			35			40			
	Satn. Temp. = 343.85K 70.70C			Satn. Temp. = 344.88K 71.73C			Satn. Temp. = 350.73K 77.58C			Satn. Temp. = 359.35K 86.20C			Satn. Temp. = 366.87K 93.72C			Satn. Temp. = 373.49K 100.34C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
Satn.	117.9	329	1.696	121.4	329.1	1.695	144.1	329.3	1.689	189.41	327.6	1.676	252.1	322.5	1.655	380.37	307.3	1.61	Satn.
72	115.9	331.1	1.702	121	329.6	1.696													345.15
75	111.8	335.7	1.715	116.4	334.3	1.71													348.15
80	106.1	342.8	1.735	110.1	341.7	1.731	138.6	333.6	1.701										353.15
85	101.4	349.6	1.755	105	348.6	1.75	129.7	341.8	1.724										358.15
90	97.43	356.1	1.773	100.7	355.2	1.769	122.8	349.2	1.745	173.94	336	1.699							363.15
95	93.98	362.4	1.79	97.05	361.6	1.786	117.1	356.2	1.764	160.4	345.2	1.724	237.81	327.2	1.668				368.15
100	90.93	368.5	1.806	93.8	367.8	1.803	112.4	362.9	1.782	150.56	353.4	1.746	206.88	340.2	1.703				373.15
105	88.19	374.6	1.822	90.91	373.9	1.819	108.3	369.4	1.799	142.82	360.9	1.766	189.25	350.1	1.729	266.63	333.7	1.68	378.15
110	85.71	380.5	1.838	88.29	379.9	1.835	104.7	375.8	1.816	136.44	368	1.785	176.77	358.7	1.752	234	346.4	1.714	383.15
115	83.44	386.4	1.853	85.9	385.8	1.85	101.5	382	1.832	131.01	374.9	1.803	167.11	366.6	1.773	214.28	356.5	1.74	388.15
120	81.36	392.3	1.868	83.72	391.7	1.865	98.54	388.1	1.848	126.29	381.5	1.82	159.24	374.1	1.792	200.13	365.3	1.762	393.15
125	79.42	398.1	1.883	81.69	397.5	1.88	95.88	394.1	1.863	122.12	388	1.836	152.6	381.2	1.81	189.11	373.4	1.783	398.15
130	77.62	403.8	1.897	79.81	403.3	1.895	93.44	400.1	1.878	118.38	394.4	1.852	146.86	388.1	1.827	180.1	381.1	1.802	403.15
135	75.94	409.6	1.912	78.05	409.1	1.909	91.18	406	1.893	115	400.7	1.867	141.81	394.8	1.843	172.5	388.4	1.82	408.15
140	74.36	415.3	1.926	76.41	414.9	1.923	89.08	412	1.907	111.91	406.9	1.883	137.31	401.4	1.859	165.93	395.4	1.837	413.15
145	72.87	421.1	1.939	74.86	420.6	1.937	87.12	417.9	1.921	109.07	413	1.897	133.26	407.8	1.875	160.16	402.3	1.854	418.15
150	71.46	426.8	1.953	73.39	426.4	1.95	85.28	423.7	1.935	106.45	419.1	1.912	129.56	414.2	1.89	155.01	409	1.87	423.15
155	70.13	432.6	1.967	72	432.2	1.964	83.55	429.6	1.949	104	425.2	1.926	126.18	420.5	1.905	150.38	415.6	1.885	428.15
160	68.86	438.4	1.98	70.69	438	1.977	81.91	435.5	1.963	101.72	431.3	1.94	123.05	426.8	1.92	146.16	422.2	1.9	433.15
165	67.65	444.2	1.993	69.43	443.8	1.991	80.37	441.4	1.976	99.574	437.3	1.954	120.15	433.1	1.934	142.29	428.7	1.915	438.15

Temp C	Absolute Pressure (bar)																		Temp K
	21.5			22			25			30			35			40			
	Satn. Temp. = 343.85K 70.70C			Satn. Temp. = 344.88K 71.73C			Satn. Temp. = 350.73K 77.58C			Satn. Temp. = 359.35K 86.20C			Satn. Temp. = 366.87K 93.72C			Satn. Temp. = 373.49K 100.34C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
170	66.5	450	2.006	68.24	449.6	2.004	78.9	447.3	1.99	97.557	443.4	1.968	117.45	439.3	1.948	138.73	435.1	1.93	443.15
175	65.4	455.8	2.02	67.1	455.4	2.017	77.5	453.2	2.003	95.652	449.4	1.981	114.92	445.5	1.962	135.42	441.5	1.944	448.15
180	64.34	461.6	2.033	66	461.3	2.03	76.17	459.1	2.016	93.847	455.5	1.995	112.54	451.7	1.976	132.34	447.8	1.958	453.15
185	63.33	467.5	2.045	64.95	467.2	2.043	74.89	465.1	2.029	92.134	461.5	2.008	110.3	457.9	1.989	129.46	454.2	1.972	458.15
190	62.35	473.4	2.058	63.95	473.1	2.056	73.67	471	2.042	90.504	467.6	2.021	108.18	464.1	2.003	126.75	460.5	1.986	463.15
195	61.42	479.3	2.071	62.98	479	2.069	72.5	477	2.055	88.95	473.7	2.034	106.17	470.3	2.016	124.2	466.8	1.999	468.15
200	60.52	485.3	2.084	62.05	485	2.081	71.38	483	2.068	87.466	479.8	2.047	104.26	476.5	2.029	121.79	473.2	2.013	473.15
205	59.65	491.3	2.096	61.15	491	2.094	70.3	489.1	2.08	86.045	485.9	2.06	102.44	482.7	2.043	119.51	479.5	2.026	478.15
210	58.81	497.3	2.109	60.29	497	2.106	69.26	495.2	2.093	84.683	492.1	2.073	100.7	489	2.056	117.34	485.9	2.039	483.15
215	58	503.3	2.121	59.45	503	2.119	68.26	501.3	2.106	83.376	498.3	2.086	99.039	495.3	2.068	115.28	492.2	2.053	488.15
220	57.21	509.4	2.134	58.64	509.1	2.131	67.3	507.4	2.118	82.12	504.5	2.099	97.449	501.6	2.081	113.31	498.6	2.066	493.15
225	56.46	515.6	2.146	57.86	515.3	2.144	66.37	513.6	2.131	80.911	510.8	2.111	95.925	507.9	2.094	111.43	505	2.079	498.15
230	55.72	521.7	2.158	57.1	521.4	2.156	65.47	519.8	2.143	79.746	517	2.124	94.462	514.2	2.107	109.63	511.4	2.091	503.15
235	55.01	527.9	2.171	56.37	527.7	2.168	64.6	526	2.155	78.623	523.3	2.136	93.054	520.6	2.119	107.9	517.9	2.104	508.15
240	54.32	534.2	2.183	55.66	533.9	2.18	63.75	532.3	2.168	77.538	529.7	2.149	91.7	527	2.132	106.25	524.4	2.117	513.15
245	53.65	540.5	2.195	54.97	540.2	2.193	62.94	538.7	2.18	76.49	536.1	2.161	90.394	533.5	2.144	104.66	530.9	2.129	518.15
250	53	546.8	2.207	54.3	546.5	2.205	62.14	545	2.192	75.477	542.5	2.173	89.135	540	2.157	103.13	537.4	2.142	523.15
255	52.37	553.2	2.219	53.64	552.9	2.217	61.37	551.4	2.204	74.495	549	2.186	87.919	546.5	2.169	101.65	544	2.155	528.15
260	51.75	559.6	2.231	53.01	559.3	2.229	60.63	557.9	2.216	73.545	555.5	2.198	86.743	553	2.182	100.23	550.6	2.167	533.15
265	51.15	566	2.243	52.39	565.8	2.241	59.9	564.4	2.229	72.624	562	2.21	85.606	559.6	2.194	98.855	557.3	2.179	538.15



# KLEA® 134a



**Mexichem.**  
FLUOR

**Mexichem UK Limited, The Heath Business and Technical Park,  
Runcorn, Cheshire, WA7 4QX  
Telephone: +44 (0) 1928 514840  
[www.mexichemfluor.com](http://www.mexichemfluor.com)**

Information contained in this publication, or as otherwise supplied to the Users is believed to be accurate and given in good faith, but it is for the User to satisfy itself of the suitability for its own particular purpose. Mexichem Fluor gives no warranty as to the fitness of the Product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Mexichem Fluor accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patent, Copyright and Design cannot be assumed. KLEA® and Mexichem Fluor® are trademarks of Mexichem SAB de C.V.  
© Mexichem Fluor 2010. All rights reserved. Not to be reproduced without the consent of the copyright owner.