

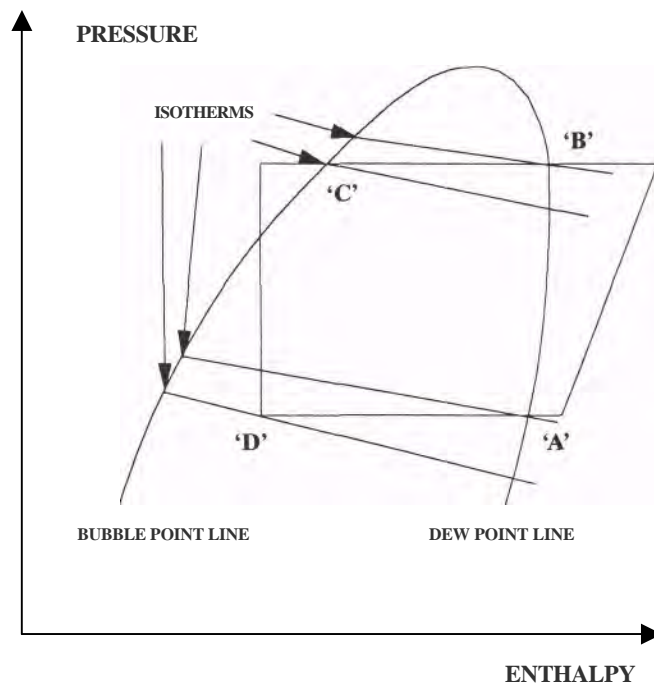
KLEA® 407A



Thermodynamic Property Data SI Units

SYSTEM PERFORMANCE WITH ZEOTROPIC REFRIGERANT BLENDS

- With a zeotropic refrigerant blend the composition of the vapour changes in the evaporator and the condenser.
- Evaporator inlet and outlet temperatures are different.
- Condenser inlet and outlet temperatures are different.
- At all other points in the system the fluid behaves as normal.
- System design path.
 - For a given mean condenser temperature, read off the condenser pressure using table 1.
 - Read off the evaporator pressure against the desired cold space temperature and the liquid temperature at the expansion valve using table 2.
 - Use the liquid temperature at the expansion valve and table 1 to obtain the liquid enthalpy at this point.
 - Use the saturation properties (table 3) and the superheated vapour properties (table 4) for other properties around the cycle.



Pressure-Enthalpy Diagram for zeotropic Refrigerant Blends

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Mean Temperature
Pressure Relationships for
Evaporator and Condenser

KLEA®407A Table 1 Sheet 1					
Condenser Pressures & Liquid Enthalpy at Expansion Valve					
Temperature °C	Condenser Pressure	Liquid Enthalpy at Expansion Valve	Temperature °C	Condenser Pressure	Liquid Enthalpy at Expansion Valve
	bara	kJ/kg		bara	kJ/kg
20	10.22	129.0	40	17.48	161.1
21	10.52	130.5	41	17.93	162.8
22	10.82	132.1	42	18.38	164.6
23	11.13	133.6	43	18.84	166.3
24	11.45	135.1	44	19.31	168.1
25	11.77	136.7	45	19.79	169.9
26	12.10	138.2	46	20.28	171.7
27	12.43	139.8	47	20.78	173.5
28	12.78	141.4	48	21.28	175.4
29	13.13	143.0	49	21.80	177.3
30	13.48	144.6	50	22.32	179.1
31	13.85	146.2	51	22.86	181.1
32	14.22	147.8	52	23.40	183.0
33	14.60	149.4	53	23.96	184.9
34	14.99	151.0	54	24.52	186.9
35	15.38	152.7	55	25.10	188.9
36	15.79	154.3	56	25.68	191.0
37	16.20	156.0	57	26.28	193.0
38	16.62	157.7	58	26.89	195.1
39	17.05	159.4	59	27.50	197.3
			60	28.13	199.4

Evaporator Pressures (bara)

Evaporator Temp (°C)	Liquid Temperature at Expansion Valve					Evaporator Temp (°C)	Liquid Temperature at Expansion Valve					Evaporator Temp (°C)	Liquid Temperature at Expansion Valve				
	20°C	30°C	40°C	50°C	60°C		20°C	30°C	40°C	50°C	60°C		20°C	30°C	40°C	50°C	60°C
-50	0.64	0.63	0.62	0.61	0.60	-26	2.04	2.02	2.00	1.98	1.95	-2	5.09	5.06	5.02	4.98	4.93
-49	0.68	0.67	0.66	0.65	0.64	-25	2.12	2.11	2.09	2.06	2.04	-1	5.27	5.23	5.20	5.15	5.10
-48	0.71	0.71	0.70	0.69	0.67	-24	2.21	2.20	2.18	2.15	2.12	0	5.45	5.42	5.38	5.33	5.28
-47	0.75	0.74	0.73	0.72	0.71	-23	2.31	2.29	2.27	2.24	2.22	1	5.64	4.60	5.56	5.52	5.46
-46	0.79	0.78	0.77	0.76	0.75	-22	2.41	2.39	2.36	2.34	2.31	2	5.83	5.79	5.75	5.70	5.65
-45	0.84	0.83	0.82	0.8	0.79	-21	2.51	2.49	2.46	2.44	2.41	3	6.03	5.99	5.95	5.90	5.84
-44	0.88	0.87	0.86	0.85	0.83	-20	2.61	2.59	2.56	2.54	2.51	4	6.23	6.19	6.15	6.10	6.04
-43	0.93	0.92	0.90	0.89	0.88	-19	2.72	2.69	2.67	2.64	2.61	5	6.43	6.39	6.35	6.30	6.24
-42	0.97	0.96	0.95	0.94	0.92	-18	2.83	2.80	2.78	2.75	2.72	6	6.64	6.60	6.56	6.51	6.45
-41	1.02	1.01	1.00	0.99	0.97	-17	2.94	2.92	2.89	2.86	2.83	7	6.86	6.82	6.77	6.72	6.66
-40	1.07	1.06	1.05	1.04	1.02	-16	3.05	3.03	3.01	2.98	2.94	8	7.08	7.04	6.99	6.94	6.88
-39	1.13	1.12	1.10	1.09	1.07	-15	3.18	3.15	3.12	3.09	3.06	9	7.31	7.27	7.22	7.17	7.10
-38	1.18	1.17	1.16	1.14	1.13	-14	3.30	3.27	3.25	3.22	3.18	10	7.55	7.50	7.45	7.40	7.33
-37	1.24	1.23	1.22	1.20	1.18	-13	3.43	3.40	3.37	3.34	3.30	11	7.78	7.74	7.69	7.63	7.57
-36	1.30	1.29	1.27	1.26	1.24	-12	3.56	3.53	3.50	3.47	3.43	12	8.03	7.98	7.93	7.87	7.81
-35	1.36	1.35	1.34	1.32	1.30	-11	3.69	3.67	3.64	3.60	3.56	13	8.28	8.23	8.18	8.12	8.05
-34	1.43	1.42	1.40	1.38	1.36	-10	3.83	3.80	3.77	3.74	3.70	14	8.54	8.49	8.44	8.37	8.30
-33	1.50	1.48	1.47	1.45	1.43	-9	3.97	3.95	3.91	3.88	3.84	15	8.80	8.75	8.70	8.63	8.56
-32	1.57	1.55	1.53	1.52	1.49	-8	4.12	4.09	4.06	4.02	3.98	16	9.07	9.02	8.96	8.90	8.83
-31	1.64	1.62	1.61	1.59	1.56	-7	4.27	4.24	4.21	4.17	4.13	17	9.34	9.29	9.24	9.17	9.10
-30	1.71	1.70	1.68	1.66	1.64	-6	4.43	4.40	4.36	4.32	4.28	18	9.62	9.57	9.51	9.45	9.37
-29	1.79	1.77	1.75	1.73	1.71	-5	4.59	4.56	4.52	4.48	4.44	19	9.91	9.86	9.80	9.73	9.65
-28	1.87	1.85	1.83	1.81	1.79	-4	4.75	4.72	4.68	4.64	4.60	20	10.21	10.15	10.09	10.02	9.94
-27	1.95	1.93	1.91	1.89	1.87	-3	4.92	4.89	4.85	4.81	4.76						

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Saturated Liquid and
Saturated Vapour Properties

KLEA®407A

Table 3 Sheet1

Saturation Properties vs. Pressure

PRESSURE BARA	SATURATED TEMPERATURE		DENSITY		ENTHALPY		ENTROPY	PRESSURE BARA
	LIQUID °C	VAPOUR °C	LIQUID kg/m ³	VAPOUR kg/m ³	LIQUID kJ/kg	VAPOUR kJ/kg	VAPOUR kJ/kg.K	
0.70	-52.91	-46.14	1426.5	3.417	28.4	271.0	1.797	0.70
0.75	-51.58	-44.84	1422.4	3.644	30.2	271.8	1.794	0.75
0.80	-50.31	-43.60	1418.5	3.871	31.9	272.6	1.792	0.80
0.85	-49.11	-42.43	1414.8	4.097	33.5	273.3	1.790	0.85
0.90	-47.96	-41.31	1411.2	4.322	35.1	274.1	1.788	0.90
0.95	-46.87	-40.23	1407.8	4.546	36.5	274.7	1.786	0.95
1.00	-45.81	-39.20	1404.5	4.770	38.0	275.4	1.784	1.00
1.05	-44.80	-38.21	1401.3	4.993	39.3	276.0	1.782	1.05
1.10	-43.82	-37.25	1398.2	5.216	40.6	276.6	1.781	1.10
1.15	-42.88	-36.33	1395.2	5.437	41.9	277.2	1.779	1.15
1.20	-41.97	-35.44	1392.3	5.659	43.1	277.8	1.778	1.20
1.25	-41.09	-34.58	1389.5	5.880	44.3	278.3	1.776	1.25
1.30	-40.24	-33.74	1386.8	6.100	45.4	278.8	1.775	1.30
1.35	-39.41	-32.93	1384.1	6.320	46.5	279.3	1.774	1.35
1.40	-38.61	-32.14	1381.5	6.540	47.6	279.8	1.773	1.40
1.45	-37.82	-31.38	1379.0	6.759	48.7	280.3	1.772	1.45
1.50	-37.06	-30.63	1376.6	6.978	49.7	280.8	1.770	1.50
1.55	-36.32	-29.90	1374.2	7.197	50.7	281.2	1.769	1.55
1.60	-35.60	-29.20	1371.8	7.415	51.6	281.7	1.768	1.60
1.65	-34.89	-28.50	1369.5	7.633	52.6	282.1	1.767	1.65
1.70	-34.20	-27.83	1367.3	7.851	53.5	282.5	1.767	1.70
1.75	-33.53	-27.17	1365.1	8.068	54.4	282.9	1.766	1.75
1.80	-32.87	-26.52	1362.9	8.285	55.3	283.3	1.765	1.80
1.85	-32.22	-25.89	1360.8	8.502	56.1	283.7	1.764	1.85
1.90	-31.59	-25.27	1358.7	8.719	57.0	284.1	1.763	1.90
1.95	-30.97	-24.66	1356.6	8.935	57.8	284.5	1.762	1.95
2.00	-30.37	-24.07	1354.6	9.151	58.6	284.8	1.762	2.00
2.10	-29.19	-22.91	1350.7	9.583	60.2	285.5	1.760	2.00
2.20	-28.05	-21.80	1346.9	10.014	61.7	286.2	1.759	2.10
2.30	-26.95	-20.73	1343.3	10.445	63.2	286.9	1.757	2.20
2.40	-25.89	-19.69	1339.7	10.875	64.6	287.5	1.756	2.40

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

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Table 3 Sheet 2

Saturation Properties vs. Pressure

PRESSURE BARA	SATURATED TEMPERATURE		DENSITY		ENTHALPY		ENTROPY	PRESSURE BARA
	LIQUID °C	VAPOUR °C	LIQUID kg/m ³	VAPOUR kg/m ³	LIQUID kJ/kg	VAPOUR kJ/kg	VAPOUR kJ/kg.K	
2.50	-24.86	-18.68	1336.2	11.304	66.0	288.1	1.755	2.50
2.60	-23.87	-17.70	1332.8	11.733	67.3	288.7	1.754	2.60
2.70	-22.90	-16.76	1329.5	12.162	68.7	289.2	1.753	2.70
2.80	-21.96	-15.83	1326.3	12.590	69.9	289.8	1.752	2.80
2.90	-21.04	-14.94	1323.2	13.018	71.1	290.3	1.751	2.90
3.00	-20.15	-14.07	1320.1	13.446	72.4	290.8	1.750	3.00
3.10	-19.29	-13.22	1317.1	13.874	73.5	291.3	1.749	3.10
3.20	-18.44	-12.39	1314.2	14.301	74.7	291.8	1.748	3.20
3.30	-17.61	-11.58	1311.3	14.728	75.8	292.3	1.747	3.30
3.40	-16.80	-10.79	1308.4	15.155	76.9	292.8	1.747	3.40
3.50	-16.01	-10.01	1305.7	15.582	78.0	293.2	1.746	3.50
3.60	-15.24	-9.26	1302.9	16.009	79.0	293.6	1.745	3.60
3.70	-14.48	-8.52	1300.3	16.436	80.0	294.1	1.744	3.70
3.80	-13.74	-7.79	1297.6	16.863	81.0	294.5	1.744	3.80
3.90	-13.02	-7.08	1295.0	17.290	82.0	294.9	1.743	3.90
4.00	-12.30	-6.38	1292.5	17.717	83.0	295.3	1.742	4.00
4.10	-11.61	-5.70	1290.0	18.144	84.0	295.7	1.742	4.10
4.20	-10.92	-5.03	1287.5	18.571	84.9	296.1	1.741	4.20
4.30	-10.25	-4.37	1285.1	18.998	85.8	296.4	1.741	4.30
4.40	-9.58	-3.72	1282.7	19.426	86.7	296.8	1.740	4.40
4.50	-8.93	-3.09	1280.3	19.853	87.6	297.2	1.739	4.50
4.60	-8.29	-2.46	1278.0	20.281	88.5	297.5	1.739	4.60
4.70	-7.66	-1.85	1275.7	20.709	89.4	297.8	1.738	4.70
4.80	-7.05	-1.24	1273.4	21.137	90.2	298.2	1.738	4.80
4.90	-6.44	-0.65	1271.1	21.565	91.0	298.5	1.737	4.90
5.00	-5.84	-0.06	1268.9	21.994	91.9	298.8	1.737	5.00
5.10	-5.25	0.52	1266.7	22.422	92.7	299.1	1.736	5.10
5.20	-4.66	1.09	1264.5	22.851	93.5	299.4	1.736	5.20

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

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Table 3 Sheet 3

Saturation Properties vs. Pressure

PRESSURE BARA	SATURATED TEMPERATURE		DENSITY		ENTHALPY		ENTROPY	PRESSURE BARA
	LIQUID °C	VAPOUR °C	LIQUID kg/m ³	VAPOUR kg/m ³	LIQUID kJ/kg	VAPOUR kJ/kg	VAPOUR kJ/kg.K	
5.30	-4.09	1.65	1262.4	23.280	94.3	299.8	1.735	5.30
5.40	-3.52	2.20	1260.3	23.710	95.1	300.0	1.735	5.40
5.50	-2.97	2.74	1258.2	24.140	95.9	300.3	1.734	5.50
5.60	-2.42	3.28	1256.1	24.570	96.6	300.6	1.734	5.60
5.70	-1.87	3.81	1254.0	25.000	97.4	300.9	1.733	5.70
5.80	-1.34	4.33	1252.0	25.431	98.1	301.2	1.733	5.80
5.90	-0.81	4.85	1250.0	25.862	98.9	301.5	1.733	5.90
6.00	-0.29	5.36	1248.0	26.293	99.6	301.7	1.732	6.00
6.50	2.22	7.81	1238.3	28.456	103.1	303.0	1.730	6.50
7.00	4.60	10.12	1229.0	30.629	106.5	304.2	1.728	7.00
7.50	6.84	12.31	1220.0	32.814	109.7	305.2	1.727	7.50
8.00	8.98	14.39	1211.4	35.010	112.8	306.2	1.725	8.00
8.50	11.02	16.38	1203.0	37.221	115.7	307.2	1.723	8.50
9.00	12.97	18.27	1194.9	39.445	118.6	308.0	1.722	9.00
9.50	14.84	20.09	1187.0	41.685	121.3	308.8	1.720	9.50
10.00	16.63	21.83	1179.2	43.940	124.0	309.6	1.719	10.00
10.50	18.37	23.51	1171.7	46.212	126.6	310.3	1.718	10.50
11.00	20.04	25.13	1164.3	48.502	129.1	311.0	1.716	11.00
11.50	21.65	26.70	1157.0	50.809	131.5	311.6	1.715	11.50
12.00	23.21	28.21	1149.8	53.136	133.9	312.2	1.714	12.00
12.50	24.73	29.67	1142.8	55.482	136.3	312.7	1.712	12.50
13.00	26.19	31.09	1135.9	57.849	138.5	313.2	1.711	13.00
13.50	27.62	32.47	1129.0	60.237	140.8	313.7	1.710	13.50
14.00	29.01	33.81	1122.2	62.647	143.0	314.1	1.709	14.00
14.50	30.36	35.11	1115.5	65.079	145.1	314.5	1.707	14.50
15.00	31.68	36.38	1108.9	67.535	147.3	314.9	1.706	15.00
15.50	32.97	37.62	1102.3	70.015	149.3	315.2	1.705	15.50
16.00	34.22	38.82	1095.8	72.520	151.4	315.5	1.704	16.00
16.50	35.45	40.00	1089.3	75.051	153.4	315.8	1.703	16.50
17.00	36.64	41.15	1082.8	77.609	155.4	316.1	1.701	17.00

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

KLEA®407A

Table 3 Sheet 4

Saturation Properties vs. Pressure

PRESSURE BARA	SATURATED TEMPERATURE		DENSITY		ENTHALPY		ENTROPY	PRESSURE BARA
	LIQUID °C	VAPOUR °C	LIQUID kg/m ³	VAPOUR kg/m ³	LIQUID kJ/kg	VAPOUR kJ/kg	VAPOUR kJ/kg.K	
17.50	37.82	42.27	1076.3	80.194	157.4	316.3	1.700	17.50
18.00	38.96	43.37	1069.9	82.808	159.3	316.5	1.699	18.00
18.50	40.09	44.45	1063.5	85.452	161.3	316.7	1.698	18.50
19.00	41.19	45.50	1057.1	88.126	163.2	316.9	1.696	19.00
19.50	42.27	46.53	1050.7	90.831	165.1	317.1	1.695	19.50
20.00	43.33	47.54	1044.2	93.570	166.9	317.2	1.694	20.00
20.50	44.37	48.53	1037.8	96.341	168.8	317.3	1.692	20.50
21.00	45.39	49.50	1031.3	99.148	170.6	317.4	1.691	21.00
21.50	46.40	50.46	1024.8	101.991	172.4	317.5	1.690	21.50
22.00	47.38	51.39	1018.3	104.872	174.3	317.5	1.688	22.00
22.50	48.35	52.31	1011.7	107.791	176.1	317.5	1.687	22.50
23.00	49.31	53.22	1005.1	110.751	177.8	317.5	1.686	23.00
23.50	50.25	54.11	998.4	113.752	179.6	317.5	1.684	23.50
24.00	51.17	54.98	991.6	116.797	181.4	317.5	1.683	24.00
24.50	52.08	55.84	984.7	119.886	183.2	317.4	1.681	24.50
25.00	52.98	56.68	977.7	123.023	184.9	317.4	1.680	25.00
25.50	53.86	57.52	970.6	126.208	186.7	317.3	1.678	25.50
26.00	54.74	58.33	963.3	129.445	188.4	317.2	1.677	26.00
26.50	55.60	59.14	955.9	132.734	190.1	317.0	1.675	26.50
27.00	56.44	59.93	948.3	136.078	191.9	316.9	1.674	27.00
27.50	57.28	60.72	940.5	139.481	193.6	316.7	1.672	27.50
28.00	58.10	61.49	932.5	142.943	195.4	316.5	1.671	28.00
28.50	58.92	62.25	924.1	146.470	197.1	316.3	1.669	28.50
29.00	59.72	62.99	915.3	150.062	198.8	316.1	1.667	29.00
29.50	60.52	63.73	906.2	153.724	200.6	315.8	1.665	29.50
30.00	61.30	64.46	896.4	157.460	202.3	315.5	1.664	30.00

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

KLEA®407A

Superheated Vapour Properties

Absolute Pressure (Bara)																			
Temp °C	0.7 bara			0.8 bara			0.9 bara			1.01325 bara			1.1 bara			1.2 bara			Temp °C
	Dew Point -46.14C			Dew Point -43.60C			Dew Point -41.31C			Dew Point -38.93C			Dew Point -37.25C			Dew Point -35.44C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
-46	3.414	271.1	1.797	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	-46
-44	3.383	272.5	1.804	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	-44
-42	3.352	273.9	1.810	3.842	273.7	1.797	****	****	****	****	****	****	****	****	****	****	****	****	-42
-40	3.321	275.3	1.816	3.807	275.2	1.803	4.296	275.0	1.792	****	****	****	****	****	****	****	****	****	-40
-38	3.291	276.6	1.822	3.772	276.6	1.809	4.257	276.4	1.796	4.808	276.2	1.786	****	****	****	****	****	****	-38
-36	3.262	278.2	1.828	3.739	278.0	1.815	4.218	277.9	1.804	4.764	277.7	1.793	5.185	277.5	1.785	****	****	****	-36
-34	3.233	279.7	1.834	3.705	279.5	1.821	4.180	279.3	1.810	4.721	279.1	1.799	5.138	279.0	1.791	5.621	278.8	1.782	-34
-32	3.205	281.1	1.840	3.673	281.0	1.828	4.143	280.8	1.816	4.679	280.6	1.805	5.092	280.4	1.797	5.570	280.3	1.788	-32
-30	3.177	282.6	1.846	3.641	282.4	1.834	4.107	282.2	1.822	4.637	282.1	1.811	5.046	281.9	1.803	5.520	281.7	1.794	-30
-28	3.150	284.0	1.852	3.609	283.9	1.840	4.071	283.7	1.828	4.597	283.5	1.817	5.002	283.4	1.809	5.471	283.2	1.800	-28
-26	3.123	285.5	1.858	3.578	285.4	1.846	4.036	285.2	1.834	4.557	285.0	1.823	4.958	284.9	1.815	5.423	284.7	1.806	-26
-24	3.097	287.0	1.864	3.548	286.8	1.852	4.001	286.7	1.840	4.517	286.5	1.829	4.915	286.4	1.821	5.375	286.2	1.812	-24
-22	3.071	288.5	1.870	3.518	288.3	1.858	3.967	288.2	1.846	4.479	288.0	1.835	4.873	287.9	1.827	5.329	287.7	1.818	-22
-20	3.045	290.0	1.876	3.489	289.8	1.863	3.934	289.7	1.852	4.441	289.5	1.841	4.831	289.4	1.833	5.283	289.2	1.824	-20
-18	3.020	291.5	1.882	3.460	291.3	1.869	3.901	291.2	1.858	4.404	291.0	1.847	4.791	290.9	1.839	5.238	290.7	1.830	-18
-16	2.996	293.0	1.888	3.432	292.8	1.875	3.869	292.7	1.864	4.367	292.5	1.853	4.751	292.4	1.845	5.194	292.2	1.836	-16
-14	2.972	294.5	1.894	3.404	294.4	1.881	3.838	294.2	1.870	4.331	294.0	1.859	4.711	293.9	1.851	5.151	293.7	1.842	-14
-12	2.948	296.0	1.900	3.376	295.9	1.887	3.807	295.7	1.876	4.296	295.6	1.864	4.673	295.4	1.856	5.109	295.3	1.848	-12
-10	2.925	297.5	1.905	3.349	297.4	1.893	3.776	297.3	1.882	4.261	297.1	1.870	4.635	297.0	1.862	5.067	296.8	1.854	-10
-8	2.902	299.1	1.911	3.323	298.9	1.899	3.746	298.8	1.887	4.227	298.6	1.876	4.597	298.5	1.868	5.026	298.4	1.860	-8
-6	2.879	300.6	1.917	3.297	300.5	1.904	3.716	300.3	1.893	4.194	300.2	1.882	4.561	300.0	1.874	4.985	299.9	1.866	-6
-4	2.857	302.2	1.923	3.271	302.0	1.910	3.687	301.9	1.899	4.161	301.7	1.888	4.525	301.6	1.880	4.946	301.5	1.871	-4
-2	2.835	303.7	1.929	3.246	303.6	1.916	3.659	303.4	1.905	4.128	303.3	1.893	4.489	303.2	1.886	4.907	303.0	1.877	-2
0	2.813	305.3	1.934	3.221	305.1	1.922	3.631	305.0	1.910	4.096	304.8	1.899	4.454	304.7	1.891	4.868	304.6	1.883	0
2	2.792	306.8	1.940	3.197	306.7	1.927	3.603	306.6	1.916	4.065	306.4	1.905	4.420	306.3	1.897	4.831	306.2	1.889	2
4	2.771	308.4	1.946	3.173	308.3	1.933	3.546	308.1	1.922	4.034	308.0	1.911	4.386	307.9	1.903	4.793	307.7	1.894	4
6	2.751	310.0	1.951	3.149	309.9	1.939	3.549	309.7	1.928	4.003	309.6	1.916	4.353	309.5	1.908	4.757	309.3	1.900	6
8	2.730	311.6	1.957	3.126	311.5	1.944	3.522	311.3	1.933	3.973	311.2	1.922	4.320	311.1	1.914	4.721	310.9	1.906	8
10	2.710	313.2	1.963	3.103	313.0	1.950	3.496	312.9	1.939	3.944	312.8	1.928	4.288	312.7	1.920	4.685	312.5	1.911	10
12	2.691	314.8	1.968	3.080	314.6	1.956	3.471	314.5	1.945	3.915	314.4	1.933	4.256	314.3	1.925	4.651	314.1	1.917	12
14	2.671	316.4	1.974	3.058	316.3	1.961	3.445	316.1	1.950	3.886	316.0	1.939	4.225	315.9	1.931	4.616	315.7	1.923	14
16	2.652	318.0	1.980	3.036	317.9	1.967	3.421	317.7	1.956	3.858	317.6	1.945	4.194	317.5	1.937	4.582	317.4	1.928	16
18	2.633	319.6	1.985	3.014	319.5	1.973	3.396	319.4	1.961	3.830	319.2	1.950	4.164	319.1	1.942	4.549	319.0	1.934	18
20	2.615	321.2	1.991	2.993	321.1	1.978	3.372	321.0	1.967	3.803	320.8	1.956	4.134	320.7	1.948	4.516	320.6	1.940	20
25	2.570	325.3	2.005	2.941	325.0	1.992	3.313	325.1	1.981	3.736	325.0	1.970	4.061	324.8	1.962	4.436	324.7	1.953	25
30	2.526	329.5	2.018	2.891	329.0	2.006	3.256	329.2	1.995	3.672	329.1	1.983	3.991	329.0	1.976	4.360	328.9	1.967	30
35	2.484	333.6	2.032	2.842	333.0	2.019	3.202	333.4	2.008	3.610	333.3	1.997	3.923	333.2	1.989	4.285	333.1	1.981	35
40	2.443	337.8	2.045	2.795	337.0	2.033	3.149	337.6	2.022	3.550	337.5	2.011	2.858	337.4	2.003	4.214	337.3	1.995	40
45	2.404	342.1	2.059	2.750	342.0	2.046	3.097	341.9	2.035	3.492	341.8	2.024	2.795	341.7	2.016	4.144	341.6	2.008	45
50	2.366	346.4	2.072	2.706	346.0	2.060	3.048	346.2	2.049	3.436	346.1	2.038	2.733	346.0	2.030	4.077	345.9	2.021	50

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

Temp °C	Absolute Pressure (Bara)																		Temp °C
	1.3 bara			1.4 bara			1.5 bara			1.6 bara			1.7 bara			1.8 bara			
	Dew Point -33.74C			Dew Point -32.14C			Dew Point -30.63C			Dew Point -29.20C			Dew Point -27.83C			Dew Point -26.52C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
-32	6.052	280.1	1.780	6.536	279.9	1.773	****	****	****	****	****	****	****	****	****	****	****	****	-32
-30	5.997	281.6	1.787	6.476	281.4	1.779	6.958	281.2	1.771	****	****	****	****	****	****	****	****	****	-30
-28	5.943	283.1	1.793	6.417	282.9	1.785	6.894	282.7	1.778	7.374	282.5	1.772	****	****	****	****	****	****	-28
-26	5.890	284.5	1.799	6.360	284.4	1.791	6.832	284.2	1.785	7.307	284.0	1.778	7.785	283.9	1.772	8.265	283.7	1.766	-26
-24	5.838	286.0	1.805	6.303	285.9	1.797	6.771	285.7	1.791	7.241	285.5	1.784	7.714	285.4	1.778	8.190	285.2	1.772	-24
-22	5.787	287.5	1.811	6.248	287.4	1.803	6.711	287.2	1.797	7.177	287.0	1.790	7.645	236.9	1.784	8.116	286.7	1.778	-22
-20	5.737	289.0	1.817	6.194	288.9	1.809	6.653	288.7	1.803	7.114	288.6	1.796	7.577	288.4	1.790	8.043	288.2	1.734	-20
-18	5.688	290.6	1.823	6.141	290.4	1.815	6.595	290.2	1.809	7.052	290.1	1.802	7.511	289.9	1.796	7.972	289.8	1.790	-18
-16	5.640	292.1	1.828	6.086	291.9	1.821	6.538	291.8	1.814	6.991	291.6	1.808	7.445	291.4	1.802	7.902	291.3	1.796	-16
-14	5.593	293.6	1.834	6.037	293.4	1.827	6.483	293.3	1.820	6.931	293.1	1.814	7.381	293.0	1.808	7.833	292.8	1.802	-14
-12	5.546	295.1	1.840	5.966	295.0	1.833	6.428	294.8	1.826	6.872	294.7	1.820	7.318	294.5	1.814	7.766	294.4	1.808	-12
-10	5.501	296.7	1.846	5.937	296.5	1.839	6.375	296.4	1.832	6.815	296.2	1.826	7.256	296.1	1.820	7.700	295.9	1.814	-10
-8	5.456	298.2	1.852	5.888	298.1	1.845	6.322	297.9	1.838	6.758	297.8	1.832	7.196	297.6	1.826	7.635	297.5	1.820	-8
-6	5.412	299.8	1.858	5.840	299.6	1.851	6.270	299.5	1.844	6.702	299.3	1.838	7.136	299.2	1.832	7.572	299.0	1.826	-6
-4	5.369	301.3	1.864	5.793	301.2	1.856	6.220	301.0	1.850	6.648	300.9	1.843	7.078	300.7	1.837	7.509	300.6	1.832	-4
-2	5.326	302.9	1.869	5.747	302.7	1.862	6.170	302.6	1.855	6.594	302.4	1.849	7.020	302.3	1.843	7.448	302.2	1.838	-2
0	5.284	304.4	1.875	5.701	304.3	1.868	6.120	304.2	1.861	6.541	304.0	1.855	6.964	303.9	1.849	7.388	303.7	1.843	0
2	5.243	306.0	1.881	5.657	305.9	1.874	6.072	305.7	1.867	6.469	305.6	1.861	6.908	305.5	1.855	7.328	305.3	1.849	2
4	5.202	307.6	1.887	5.613	307.5	1.879	6.025	307.3	1.873	6.438	307.2	1.866	6.853	307.1	1.861	7.270	306.9	1.855	4
6	5.162	309.2	1.892	5.569	309.1	1.885	5.978	308.9	1.879	6.388	308.8	1.872	6.800	308.6	1.866	7.213	308.5	1.861	6
8	5.123	310.8	1.898	5.527	310.7	1.891	5.932	310.5	1.864	6.339	310.4	1.878	6.747	310.3	1.872	7.157	310.1	1.866	8
10	5.085	312.4	1.904	5.485	312.3	1.897	5.887	312.1	1.890	6.290	312.0	1.884	6.695	311.9	1.878	7.101	311.7	1.872	10
12	5.046	314.0	1.909	5.444	313.9	1.902	5.842	313.7	1.896	6.242	313.6	1.889	6.644	313.5	1.883	7.047	313.0	1.878	12
14	5.009	315.6	1.915	5.403	315.5	1.908	5.799	315.4	1.901	6.195	315.2	1.895	6.594	315.1	1.889	6.993	315.0	1.883	14
16	4.972	317.2	1.921	5.363	317.1	1.914	5.756	317.0	1.907	6.149	316.8	1.901	6.544	316.7	1.895	6.940	316.6	1.889	16
18	4.936	318.9	1.926	5.324	318.7	1.919	5.713	318.6	1.912	6.104	318.5	1.906	6.495	318.4	1.900	6.888	318.2	1.895	18
20	4.900	320.5	1.932	5.285	320.4	1.925	5.671	320.2	1.918	6.059	320.1	1.912	6.447	320.0	1.906	6.837	319.9	1.900	20
25	4.813	324.6	1.946	5.191	324.5	1.939	5.570	324.4	1.932	5.950	324.2	1.926	6.331	324.1	1.920	6.713	324.0	1.914	25
30	4.729	328.8	1.960	5.100	328.6	1.952	5.472	328.5	1.946	5.845	328.4	1.940	6.219	328.3	1.934	6.593	328.2	1.928	30
35	4.648	332.9	1.973	5.102	332.8	1.966	5.377	332.7	1.960	5.743	332.6	1.953	6.110	332.5	1.947	6.467	332.4	1.942	35
40	4.570	337.2	1.987	4.928	337.1	1.980	5.286	337.0	1.973	5.646	336.8	1.967	6.006	336.7	1.961	6.367	336.6	1.956	40
45	4.495	341.4	2.000	4.846	341.3	1.993	5.199	341.2	1.987	5.552	341.1	1.981	5.905	341.0	1.975	6.260	340.9	1.969	45
50	4.422	345.8	2.014	4.767	345.6	2.007	5.114	345.5	2.000	5.461	345.4	1.994	5.808	345.3	1.988	6.157	345.2	1.983	50
55	4.352	350.1	2.027	4.691	350.0	2.020	5.032	349.9	2.014	5.373	349.8	2.007	5.717	349.7	2.002	6.057	349.6	1.996	55
60	4.283	354.5	2.040	4.671	354.4	2.033	4.952	354.3	2.027	5.288	354.2	2.021	5.624	354.1	2.015	5.961	354.0	2.009	60
65	4.217	358.9	2.054	4.546	358.5	2.047	4.875	358.7	2.040	5.205	358.6	2.034	5.536	358.5	2.028	5.867	358.4	2.023	65
70	4.153	363.4	2.067	4.477	363.3	2.060	4.801	363.2	2.053	5.126	363.1	2.047	5.451	363.0	2.041	5.777	362.9	2.036	70
75	4.091	367.9	2.080	4.410	367.8	2.073	4.279	367.7	2.066	5.048	367.6	2.060	5.369	367.5	2.054	5.689	367.4	2.049	75

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

Absolute Pressure (Bara)																			
Temp °C	1.9 bara			2.0 bara			2.1 bara			2.2 bara			2.3 bara			2.4 bara			Temp °C
	Dew Point -25.27C			Dew Point -24.07C			Dew Point -22.91C			Dew Point -21.80C			Dew Point -20.73C			Dew Point -19.69C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
-24	8.668	285.0	1.767	9.146	284.9	1.762	****	****	****	****	****	****	****	****	****	****	****	****	-24
-22	8.589	286.5	1.773	9.064	286.5	1.768	9.543	286.2	1.763	****	****	****	****	****	****	****	****	****	-22
-20	8.511	288.1	1.779	8.982	287.9	1.774	9.455	287.7	1.769	9.931	287.6	1.764	10.410	287.4	1.760	****	****	****	-20
-18	8.435	289.6	1.785	8.901	289.4	1.780	9.370	289.3	1.775	9.841	289.1	1.770	10.314	288.9	1.766	10.790	288.8	1.761	-18
-16	8.361	291.1	1.791	8.822	291.0	1.786	9.286	290.8	1.781	9.752	290.6	1.776	10.221	290.5	1.772	10.692	290.3	1.767	-16
-14	8.288	292.7	1.797	8.745	292.5	1.792	9.204	292.3	1.787	9.665	292.2	1.782	10.129	292.0	1.778	10.595	291.9	1.773	-14
-12	8.216	294.2	1.803	8.669	294.1	1.798	9.123	293.9	1.793	9.580	293.7	1.788	10.039	293.6	1.784	10.500	293.4	1.779	-12
-10	8.146	295.8	1.809	8.594	295.6	1.804	9.044	295.4	1.799	9.496	295.3	1.794	9.951	295.1	1.790	10.407	295.0	1.785	-10
-8	8.077	297.3	1.815	8.521	297.2	1.810	8.967	297.0	1.805	9.414	296.9	1.800	9.864	296.7	1.796	10.316	296.5	1.791	-6
-6	8.009	298.9	1.821	8.449	298.7	1.815	8.890	298.6	1.811	9.334	298.4	1.806	9.779	298.3	1.801	10.227	298.1	1.797	-6
-4	7.943	300.4	1.826	8.378	300.3	1.821	8.816	300.1	1.816	9.255	300.0	1.812	9.696	299.8	1.807	10.139	299.7	1.803	-4
-2	7.878	302.0	1.832	8.309	301.9	1.827	8.742	301.7	1.822	9.177	301.6	1.818	9.614	301.4	1.813	10.053	301.3	1.809	-2
0	7.813	303.6	1.838	8.241	303.5	1.833	8.670	303.3	1.828	9.101	303.2	1.823	9.534	303.0	1.819	9.969	302.9	1.815	0
2	7.750	305.2	1.844	8.174	305.0	1.839	8.599	304.9	1.834	9.027	304.8	1.829	9.455	304.6	1.825	9.886	304.5	1.821	2
4	7.688	306.8	1.850	8.106	306.6	1.845	8.530	306.5	1.840	8.953	306.4	1.835	9.378	306.2	1.831	9.805	306.1	1.826	4
6	7.628	308.4	1.855	8.044	308.2	1.850	8.462	308.1	1.854	8.881	308.0	1.841	9.302	307.8	1.836	9.725	307.7	1.832	6
8	7.568	310.0	1.861	7.980	309.8	1.856	8.394	309.7	1.851	8.810	309.6	1.847	9.227	309.4	1.842	9.646	309.3	1.838	8
10	7.509	311.6	1.867	7.918	311.5	1.862	8.328	311.3	1.857	8.741	311.2	1.852	9.154	311.0	1.848	9.569	310.9	1.844	10
12	7.451	313.2	1.872	7.856	313.1	1.867	8.264	312.9	1.863	8.672	312.8	1.858	9.082	312.7	1.854	9.493	312.5	1.849	12
14	7.394	314.8	1.878	7.796	314.7	1.873	8.200	314.6	1.868	8.605	314.4	1.864	9.011	314.3	1.859	9.419	314.2	1.855	14
16	7.338	316.5	1.884	7.737	316.3	1.879	8.137	316.2	1.874	8.538	316.1	1.869	8.941	315.9	1.865	9.346	315.8	1.861	16
18	7.283	318.1	1.889	7.678	318.0	1.884	8.075	317.8	1.880	8.473	317.7	1.875	8.873	317.6	1.871	9.274	317.5	1.866	18
20	7.228	319.7	1.895	7.621	319.6	1.890	8.014	319.5	1.885	8.409	319.4	1.881	8.805	319.2	1.876	9.203	319.1	1.872	20
25	7.096	323.9	1.909	7.481	323.7	1.904	7.867	323.6	1.899	8.254	323.5	1.895	8.642	323.4	1.890	9.031	323.3	1.886	25
30	6.969	328.0	1.923	7.347	327.9	1.918	7.725	327.8	1.913	8.104	327.7	1.909	8.484	327.6	1.904	8.866	327.4	1.900	30
35	6.847	332.3	1.937	7.217	332.1	1.932	7.588	332.0	1.927	7.960	331.9	1.922	8.333	331.8	1.918	8.707	331.7	1.914	35
40	6.729	336.5	1.950	7.092	336.4	1.945	7.456	336.3	1.941	7.821	336.2	1.936	8.187	336.0	1.932	8.554	335.9	1.928	40
45	6.616	340.8	1.964	6.972	340.7	1.959	7.330	340.6	1.954	7.688	340.5	1.950	8.047	340.3	1.945	8.407	340.2	1.941	45
50	6.506	345.1	1.977	6.856	345.0	1.972	7.207	344.9	1.968	7.559	344.6	1.963	7.912	344.7	1.959	8.265	344.6	1.955	50
55	6.400	349.5	1.991	6.744	349.4	1.986	7.089	349.3	1.981	7.435	349.2	1.977	7.781	349.0	1.972	8.128	348.9	1.968	55
60	6.298	353.9	2.004	6.636	353.8	1.999	6.975	353.7	1.994	7.315	353.6	1.990	7.655	353.5	1.986	7.996	353.4	1.982	60
65	6.199	358.3	2.017	6.532	358.2	2.012	6.865	358.1	2.008	7.198	358.0	2.003	7.533	357.9	1.999	7.868	357.8	1.995	65
70	6.103	362.8	2.031	6.430	362.7	2.026	6.758	362.6	2.021	7.086	362.5	2.016	7.415	362.4	2.012	7.745	362.3	2.008	70
75	6.011	367.3	2.044	6.332	367.2	2.039	6.655	367.1	2.034	6.978	367.0	2.029	7.301	366.9	2.025	7.625	366.8	2.021	75
80	5.921	371.9	2.057	6.237	371.8	2.052	6.555	371.7	2.047	6.872	371.6	2.042	7.191	371.5	2.038	7.509	371.4	2.034	80
85	5.834	376.5	2.069	6.145	376.4	2.065	6.458	376.3	2.060	6.770	376.2	2.055	7.084	376.1	2.051	7.397	376.0	2.047	85
89	5.794	381.1	2.082	6.056	381.0	2.077	6.364	380.9	2.073	6.672	380.8	2.068	6.980	380.7	2.064	7.269	380.6	2.060	90
95	5.667	385.7	2.095	5.970	385.7	2.090	6.273	385.6	2.086	6.576	385.5	2.081	6.880	385.4	2.077	7.184	385.3	2.073	95

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

Temp °C		Absolute Pressure (Bara)																		Temp °C	
		2.5 bara			2.6 bara			2.7 bara			2.8 bara			2.9 bara			3.0 bara				
		Dew Point -18.68C			Dew Point -17.70C			Dew Point -16.76C			Dew Point -15.83C			Dew Point -14.94C			Dew Point -14.07C				
D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S				
-18	11.269	288.6	1.757	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	-18		
-16	11.165	290.2	1.763	11.641	290.0	1.759	12.119	289.8	1.755	****	****	****	****	****	****	****	****	****	-16		
-14	11.063	291.7	1.769	11.534	291.5	1.765	12.007	291.4	1.761	12.483	291.2	1.757	12.961	291.1	1.750	13.442	290.9	1.750	-14		
-12	10.964	293.3	1.775	11.429	293.1	1.771	11.898	292.9	1.767	12.368	292.8	1.763	12.841	292.6	1.760	13.317	292.5	1.756	-12		
-10	10.866	294.8	1.761	11.327	294.7	1.777	11.790	294.5	1.773	12.256	294.4	1.769	12.724	294.2	1.766	13.194	294.0	1.762	-10		
-8	10.770	296.4	1.787	11.226	296.2	1.783	11.685	296.1	1.779	12.146	295.9	1.775	12.608	295.8	1.772	13.074	295.6	1.768	-8		
-6	10.676	298.0	1.793	11.128	297.8	1.789	11.582	297.7	1.785	12.038	297.5	1.781	12.496	297.4	1.778	12.956	297.2	1.774	-6		
-4	10.584	299.5	1.799	11.031	299.4	1.795	11.481	299.2	1.791	11.932	299.1	1.787	12.385	298.9	1.784	12.840	298.8	1.780	-4		
-2	10.494	301.1	1.805	10.937	301.0	1.801	11.381	300.8	1.797	11.826	300.7	1.793	12.277	300.5	1.790	12.727	300.4	1.786	-2		
0	10.405	302.7	1.811	10.844	302.6	1.807	11.284	302.4	1.803	11.726	302.3	1.799	12.170	302.1	1.795	12.616	302.0	1.792	0		
2	10.318	304.3	1.816	10.753	304.2	1.812	11.189	304.0	1.809	11.626	303.9	1.805	12.066	303.7	1.801	12.508	303.6	1.798	2		
4	10.233	305.9	1.822	10.663	305.8	1.818	11.095	305.6	1.814	11.528	305.5	1.811	11.964	305.4	1.807	12.401	305.2	1.804	4		
6	10.149	307.5	1.828	10.663	307.4	1.824	11.003	307.3	1.820	11.432	307.1	1.817	11.864	307.0	1.813	12.296	306.8	1.809	6		
8	10.067	309.2	1.834	10.489	309.0	1.830	10.913	308.9	1.826	11.338	308.7	1.822	11.765	308.6	1.819	12.194	308.5	1.815	8		
10	9.986	310.8	1.840	10.404	310.6	1.836	10.824	310.5	1.832	11.245	310.4	1.828	11.668	310.2	1.824	12.093	310.1	1.821	10		
12	9.906	312.4	1.845	10.321	312.3	1.841	10.737	312.1	1.837	11.154	312.0	1.834	11.573	311.9	1.830	11.994	311.7	1.827	12		
14	9.828	314.0	1.851	10.239	313.9	1.847	10.651	313.8	1.843	11.065	313.6	1.840	11.480	313.5	1.836	11.897	313.4	1.833	14		
16	9.751	315.7	1.857	10.159	315.5	1.853	10.567	315.4	1.849	10.977	315.3	1.845	11.389	315.1	1.842	11.802	315.0	1.838	16		
18	9.676	317.3	1.862	10.080	317.2	1.858	10.485	317.1	1.855	10.891	316.9	1.851	11.299	316.8	1.847	11.708	316.7	1.844	18		
20	9.602	319.0	1.868	10.002	318.8	1.864	10.403	318.7	1.860	10.806	318.6	1.857	11.210	318.5	1.853	11.616	318.3	1.850	20		
25	9.421	323.1	1.882	9.813	323.0	1.878	10.206	322.9	1.874	10.600	322.7	1.871	10.996	322.6	1.867	11.392	322.5	1.864	25		
30	9.248	327.3	1.896	9.632	327.2	1.892	10.017	327.1	1.888	10.403	327.0	1.885	10.790	326.6	1.881	11.178	326.7	1.878	30		
35	9.082	331.5	1.910	9.458	331.4	1.906	9.835	331.3	1.902	10.213	331.2	1.899	10.592	331.1	1.895	10.973	331.0	1.892	35		
40	8.922	335.8	1.924	9.291	335.7	1.920	9.660	335.6	1.916	10.031	335.5	1.912	10.402	335.4	1.909	10.775	335.2	1.905	40		
45	8.768	340.1	1.937	9.129	340.0	1.933	9.492	339.9	1.930	9.855	339.8	1.926	10.220	339.7	1.922	10.585	339.6	1.919	45		
50	8.619	344.5	1.951	8.974	344.3	1.947	9.330	344.2	1.943	9.687	344.1	1.940	10.044	344.0	1.936	10.402	343.9	1.933	50		
55	8.476	348.8	1.964	8.824	346.7	1.960	9.174	348.6	1.957	9.524	348.5	1.953	9.875	348.4	1.950	10.226	348.3	1.946	55		
60	8.337	353.3	1.978	8.680	353.2	1.974	9.023	353.0	1.970	9.367	352.9	1.966	9.711	352.8	1.963	10.056	352.7	1.960	60		
65	8.204	357.7	1.991	8.540	357.6	1.987	8.877	357.5	1.983	9.215	357.4	1.980	9.553	357.3	1.976	9.893	357.2	1.973	65		
70	8.075	362.2	2.004	8.405	362.1	2.000	8.737	362.0	1.996	9.069	361.9	1.993	9.401	361.8	1.989	9.734	361.7	1.986	70		
75	7.950	366.7	2.017	8.275	366.6	2.013	8.601	366.5	2.010	8.927	366.4	2.006	9.254	366.3	2.003	9.581	366.2	1.999	75		
80	7.829	371.3	2.030	8.149	371.2	2.026	8.469	371.1	2.023	8.790	371.0	2.019	9.111	370.9	2.016	9.434	370.8	2.012	80		
85	7.712	375.9	2.043	8.026	375.8	2.039	8.342	375.7	2.036	8.657	375.6	2.032	8.974	375.5	2.029	9.290	375.4	2.025	85		
90	7.598	380.6	2.056	7.908	380.5	2.052	8.218	380.4	2.048	8.529	380.3	2.045	8.840	380.2	2.042	9.152	380.1	2.038	90		
95	7.488	385.2	2.069	7.793	385.1	2.065	8.099	385.1	2.061	8.405	385.0	2.058	8.711	384.9	2.054	9.018	384.8	2.051	95		
100	7.382	389.9	2.081	7.682	389.9	2.078	7.963	389.8	2.074	8.284	389.7	2.071	8.586	389.6	2.067	8.888	389.5	2.064	100		
105	7.278	394.7	2.094	7.574	394.6	2.090	7.870	394.5	2.087	8.167	394.5	2.083	8.464	394.4	2.080	8.761	394.3	2.076	105		
110	7.178	399.5	2.107	7.469	399.4	2.103	7.761	399.3	2.099	8.053	399.3	2.096	8.346	399.2	2.092	8.639	399.1	2.089	110		
115	7.080	404.3	2.119	7.367	404.2	2.115	7.655	404.2	2.112	7.943	404.1	2.108	8.232	404.0	2.105	8.520	403.9	2.102	115		
120	6.985	409.2	2.132	7.268	409.1	2.128	7.552	409.0	2.124	7.836	409.0	2.121	8.120	408.9	2.117	8.405	408.8	2.114	120		

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

KLEA@407A Superheated Vapour Properties (D = Density in kg/m ³ , H = Enthalpy in kJ/kg, S = Entropy in kJ/kg.K)																		Table 4	Sheet 5
Temp °C	Absolute Pressure (Bara)																		Temp °C
	3.1 bara			3.2 bara			3.3 bara			3.4 bara			3.5 bara			3.6 bara			
	Dew Point -13.22C			Dew Point -12.39C			Dew Point -11.58C			Dew Point -10.79C			Dew Point -10.01C			Dew Point -9.26C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
-12	13.794	292.3	1.753	14.275	292.1	1.749	****	****	****	****	****	****	****	****	****	****	****	****	-12
-10	13.666	293.9	1.759	14.141	293.7	1.755	14.619	293.5	1.752	15.099	293.4	1.749	15.581	293.2	1.746	****	****	****	-10
-8	13.541	295.5	1.765	14.011	295.3	1.761	14.483	295.1	1.758	14.957	295.0	1.755	15.434	294.8	1.752	15.914	294.7	1.749	-8
-6	13.418	297.0	1.771	13.883	296.9	1.767	14.350	296.7	1.764	14.819	296.6	1.761	15.290	296.4	1.758	15.764	296.3	1.755	-6
-4	13.298	298.6	1.777	13.757	298.5	1.773	14.219	298.3	1.770	14.683	298.2	1.767	15.150	298.0	1.764	15.618	297.9	1.761	-4
-2	13.180	300.2	1.783	13.635	300.1	1.779	14.092	299.9	1.776	14.551	299.8	1.773	15.012	299.6	1.770	15.475	299.5	1.767	-2
0	13.064	301.8	1.789	13.514	301.7	1.785	13.966	301.5	1.782	14.421	301.4	1.779	14.877	301.2	1.776	15.335	301.1	1.773	0
2	12.951	303.4	1.784	13.396	303.3	1.791	13.844	303.2	1.788	14.293	303.0	1.785	14.744	302.9	1.782	15.198	302.7	1.779	2
4	12.840	305.1	1.800	13.281	304.9	1.797	13.724	304.8	1.794	14.168	304.6	1.791	14.615	304.5	1.788	15.063	304.3	1.785	4
6	12.731	306.7	1.806	13.168	306.5	1.803	13.606	306.4	1.800	14.046	306.3	1.796	14.486	306.1	1.793	14.932	306.0	1.790	6
8	12.624	308.3	1.812	13.056	308.2	1.809	13.490	308.0	1.805	13.926	307.9	1.802	14.363	307.7	1.799	14.803	307.6	1.796	8
10	12.519	309.9	1.818	12.947	309.8	1.814	13.377	309.7	1.811	13.808	309.5	1.808	14.241	309.4	1.805	14.676	309.2	1.802	10
12	12.416	311.6	1.823	12.840	311.4	1.820	13.266	311.3	1.817	13.693	311.2	1.814	14.121	311.0	1.811	14.552	310.9	1.808	12
14	12.315	313.2	1.829	12.735	313.1	1.826	13.156	313.0	1.823	13.579	312.8	1.820	14.004	312.7	1.817	14.430	312.5	1.814	14
16	12.216	314.9	1.835	12.632	314.7	1.832	13.049	314.6	1.828	13.468	314.5	1.825	13.889	314.3	1.822	14.311	314.2	1.819	16
18	12.118	316.5	1.841	12.530	316.4	1.837	12.944	316.3	1.834	13.359	316.1	1.831	13.775	316.0	1.828	14.193	315.9	1.825	18
20	12.023	318.2	1.846	12.431	318.1	1.843	12.841	317.9	1.840	13.252	317.8	1.837	13.664	317.7	1.834	14.078	317.5	1.831	20
25	11.790	322.4	1.860	12.189	322.2	1.857	12.590	322.1	1.854	12.992	322.0	1.851	13.395	321.9	1.848	13.799	321.7	1.845	25
30	11.568	326.6	1.874	11.958	326.5	1.871	12.350	326.3	1.868	12.743	326.2	1.865	13.137	326.1	1.862	13.533	326.0	1.859	30
35	11.354	330.8	1.888	11.736	330.7	1.885	12.120	330.6	1.882	12.504	330.5	1.879	12.890	330.3	1.876	13.277	330.2	1.873	35
40	11.149	335.1	1.902	11.523	335.0	1.899	11.899	334.9	1.896	12.276	334.8	1.893	12.653	334.6	1.890	13.032	334.5	1.887	40
45	10.951	339.4	1.916	11.319	339.9	1.913	11.687	339.2	1.910	12.056	339.1	1.907	12.426	339.0	1.904	12.797	338.9	1.901	45
50	10.762	343.8	1.929	11.122	343.7	1.926	11.483	343.6	1.923	11.844	343.5	1.920	12.207	343.4	1.917	12.570	343.2	1.914	50
55	10.579	348.2	1.943	10.932	348.1	1.940	11.266	348.0	1.937	11.641	347.9	1.934	11.996	347.8	1.931	12.353	347.7	1.928	55
60	10.402	352.6	1.956	10.749	352.5	1.953	11.097	352.4	1.950	11.445	352.3	1.947	11.794	352.2	1.944	12.143	352.1	1.941	60
65	10.232	357.1	1.970	10.573	357.0	1.967	10.914	356.9	1.963	11.256	356.8	1.960	11.598	356.7	1.958	11.942	356.6	1.955	65
70	10.066	361.6	1.983	10.403	361.5	1.980	10.738	361.4	1.977	11.073	361.3	1.974	11.410	361.2	1.971	11.747	361.1	1.968	70
75	9.909	366.2	1.996	10.238	366.1	1.993	10.567	366.0	1.990	10.897	365.9	1.987	11.228	365.8	1.984	11.559	365.7	1.981	75
80	9.756	370.7	2.009	10.079	370.6	2.006	10.403	370.5	2.003	10.727	370.5	2.000	11.052	370.4	1.997	11.377	370.3	1.994	80
85	9.608	375.4	2.022	9.925	375.3	2.019	10.244	375.2	2.016	10.563	375.1	2.013	10.882	375.0	2.010	11.202	364.9	2.007	85
90	9.464	380.0	2.035	9.777	379.9	2.032	10.090	379.8	2.029	10.403	379.7	2.026	10.717	379.9	2.023	11.032	379.6	2.020	90
95	9.325	384.7	2.048	9.633	384.6	2.046	9.941	384.5	2.042	10.249	384.4	2.039	10.558	384.4	2.036	10.868	384.3	2.033	95
100	9.190	389.4	2.061	9.493	389.4	2.058	9.796	389.3	2.055	10.100	389.2	2.052	10.404	389.1	2.049	10.708	389.0	2.046	100
105	9.059	394.2	2.073	9.358	394.1	2.070	9.656	394.0	2.067	9.955	394.0	2.064	10.255	393.9	2.061	10.554	393.8	2.059	105
110	8.932	399.0	2.086	9.226	398.9	2.083	9.520	398.8	2.080	9.815	398.8	2.077	10.110	398.7	2.074	10.405	398.6	2.071	110
115	8.809	403.8	2.098	9.099	403.8	2.095	9.388	403.7	2.092	9.679	403.6	2.089	9.969	403.5	2.087	10.260	403.5	2.084	115
120	8.690	408.7	2.111	8.975	408.6	2.108	9.260	408.6	2.105	9.546	408.5	2.102	9.832	408.4	2.099	10.119	408.3	2.096	120
125	8.574	413.6	2.123	8.855	413.6	2.120	9.136	413.5	2.117	9.418	413.4	2.114	9.700	413.3	2.112	9.982	413.3	2.109	125

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

Temp °C	Absolute Pressure (Bara)																		Temp °C	
	3.7 bara			3.8 bara			3.9 bara			4.0 bara			4.1 bara			4.2 bara				
	Dew Point -8.52C			Dew Point -7.79C			Dew Point -7.08C			Dew Point -6.38C			Dew Point -5.70C			Dew Point -5.03C				
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
-8	16.396	294.5	1.746	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	-8
-6	16.241	296.1	1.752	16.719	295.9	1.749	17.201	295.8	1.746	17.684	295.6	1.744	****	****	****	****	****	****	****	-6
-4	16.089	297.7	1.758	16.562	297.5	1.755	17.308	297.4	1.752	17.516	297.2	1.750	17.996	297.1	1.747	18.479	296.9	1.744	****	-4
-2	15.941	299.3	1.764	16.408	299.2	1.761	16.878	299.0	1.758	17.351	298.8	1.756	17.825	298.7	1.753	18.303	298.5	1.750	****	-2
0	15.795	300.9	1.770	16.258	300.8	1.767	16.723	300.6	1.764	17.189	300.5	1.762	17.659	300.3	1.759	18.130	300.2	1.756	****	0
2	15.653	302.6	1.776	16.111	302.4	1.773	16.570	302.2	1.770	17.032	302.1	1.768	17.495	301.9	1.765	17.961	301.8	1.762	****	2
4	15.514	304.2	1.782	15.966	304.0	1.779	16.421	303.9	1.776	16.877	303.7	1.773	17.336	303.6	1.771	17.796	303.4	1.768	****	4
6	15.377	305.8	1.788	15.825	305.7	1.785	16.274	305.5	1.782	16.726	305.4	1.779	17.179	305.2	1.777	17.635	305.1	1.774	****	6
8	15.244	307.5	1.793	15.686	307.3	1.791	16.131	307.2	1.788	16.578	307.0	1.785	17.026	306.9	1.783	17.477	306.7	1.780	****	8
10	15.112	309.1	1.799	15.551	309.0	1.796	15.991	308.8	1.794	16.433	308.7	1.791	16.876	308.5	1.788	17.322	308.4	1.786	****	10
12	14.984	310.7	1.805	15.418	310.6	1.802	15.853	310.5	1.800	16.291	310.3	1.797	16.730	310.2	1.794	17.170	310.0	1.792	****	12
14	14.858	312.4	1.811	15.287	312.3	1.808	15.718	312.1	1.805	16.151	312.0	1.803	16.586	311.8	1.800	17.022	311.7	1.797	****	14
16	14.734	314.1	1.817	15.159	313.9	1.814	15.586	313.8	1.811	16.014	313.6	1.808	16.444	313.6	1.806	16.876	313.4	1.803	****	16
18	14.613	315.7	1.822	15.034	315.6	1.820	15.456	315.5	1.817	15.880	315.3	1.814	16.306	315.2	1.812	16.733	315.0	1.809	****	18
20	14.494	317.4	1.828	14.910	317.3	1.825	15.329	317.1	1.823	15.749	317.0	1.820	16.170	316.9	1.817	16.593	316.7	1.815	****	20
25	14.205	321.6	1.842	14.612	321.5	1.840	15.021	321.3	1.837	15.431	321.2	1.834	15.842	321.1	1.832	16.254	320.9	1.829	****	25
30	13.929	325.8	1.856	14.327	325.7	1.854	14.726	325.6	1.851	15.127	325.5	1.848	15.528	325.3	1.846	15.931	325.2	1.843	****	30
35	13.665	330.1	1.870	14.054	330.0	1.868	14.444	329.9	1.865	14.836	329.7	1.862	15.228	329.6	1.860	15.622	329.5	1.857	****	35
40	13.412	334.4	1.884	13.792	334.3	1.882	14.174	334.2	1.879	14.557	334.1	1.876	14.941	333.9	1.874	15.326	333.8	1.871	****	40
45	13.169	338.8	1.898	13.541	338.6	1.895	13.915	338.5	1.893	14.290	338.4	1.890	14.666	338.3	1.888	15.042	338.2	1.885	****	45
50	12.935	343.1	1.912	13.300	343.0	1.909	13.666	342.9	1.906	14.033	342.8	1.904	14.401	342.7	1.901	14.770	342.6	1.899	****	50
55	12.710	347.5	1.925	13.068	347.4	1.923	13.427	347.3	1.920	13.787	347.2	1.917	14.148	347.1	1.915	14.509	347.0	1.912	****	55
60	12.494	352.0	1.939	12.845	351.9	1.936	13.197	351.8	1.933	13.550	351.7	1.931	13.903	351.6	1.928	14.258	351.5	1.926	****	60
65	12.285	356.5	1.952	12.630	356.4	1.949	12.975	356.3	1.947	13.321	356.2	1.944	13.668	356.1	1.942	14.016	356.0	1.939	****	65
70	12.084	361.0	1.965	12.423	360.9	1.963	12.762	360.8	1.960	13.101	360.7	1.957	13.442	360.6	1.955	13.783	360.5	1.953	****	70
75	11.890	365.6	1.979	12.223	365.5	1.976	12.556	365.4	1.973	12.889	365.3	1.971	13.223	365.2	1.968	13.558	365.1	1.966	****	75
80	11.703	370.2	1.992	12.030	370.1	1.989	12.357	370.0	1.986	12.684	369.9	1.984	13.012	369.8	1.981	13.341	369.7	1.979	****	80
85	11.522	374.8	2.005	11.843	374.7	2.002	12.164	374.6	1.999	12.486	374.5	1.997	12.809	374.4	1.994	13.132	374.3	1.992	****	85
90	11.347	379.5	2.018	11.662	379.4	2.015	11.978	379.3	2.012	12.295	379.2	2.010	12.612	379.1	2.007	12.929	379.0	2.005	****	90
95	11.177	384.2	2.030	11.488	384.1	2.028	11.799	384.0	2.025	12.110	383.9	2.023	12.422	383.8	2.020	12.734	383.7	2.018	****	95
100	11.013	388.9	2.043	11.319	388.8	2.041	11.625	388.8	2.038	11.931	388.7	2.036	12.237	388.6	2.033	12.544	388.5	2.031	****	100
105	10.854	393.7	2.056	11.155	393.6	2.053	11.456	393.5	2.051	11.757	393.5	2.048	12.059	393.4	2.046	12.361	393.3	2.043	****	105
110	10.700	398.5	2.069	10.996	398.4	2.066	11.293	398.4	2.063	11.589	398.3	2.061	11.886	398.2	2.059	12.184	398.1	2.056	****	110
115	10.551	403.4	2.081	10.842	403.3	2.079	11.134	403.2	2.076	11.426	403.1	2.074	11.719	403.1	2.071	12.011	403.0	2.069	****	115
120	10.406	408.3	2.094	10.693	408.2	2.091	10.980	408.1	2.089	11.268	408.0	2.086	11.556	408.0	2.084	11.845	407.9	2.081	****	120
125	10.265	413.2	2.106	10.548	413.1	2.104	10.831	413.0	2.101	11.115	413.0	2.099	11.398	412.9	2.096	11.683	412.8	2.094	****	125
130	10.128	418.1	2.119	10.407	418.1	2.116	10.686	418.0	2.113	10.966	417.9	2.111	11.245	417.8	2.109	11.525	417.8	2.106	****	130
135	9.995	423.1	2.131	10.270	423.1	2.128	10.545	423.0	2.126	10.821	422.9	2.123	11.096	422.8	2.121	11.372	422.8	2.118	****	135
140	9.866	428.1	2.143	10.137	428.1	2.140	10.408	428.0	2.138	10.680	427.9	2.136	10.952	427.9	2.133	11.224	427.8	2.131	****	140
145	9.740	433.2	2.155	10.007	433.1	2.153	10.275	433.1	2.150	10.643	433.0	2.148	10.811	432.9	2.145	11.080	432.9	2.143	****	145

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

KLEA@407A Superheated Vapour Properties (D = Density in kg/m ³ , H = Enthalpy in kJ/kg, S = Entropy in kJ/kg.K)																		Table 4		Sheet 7	
Absolute Pressure (Bara)																					
Temp °C	4.3 bara			4.4 bara			4.5 bara			4.6 bara			4.7 bara			4.6 bara			Temp °C		
	Dew Point -4.37C			Dew Point -3.72C			Dew Point -3.09C			Dew Point -2.46C			Dew Point -1.85C			Dew Point -1.24C					
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S			
-4	18.964	296.7	1.742	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	-4		
-2	18.782	298.4	1.748	19.264	298.2	1.745	19.748	298.0	1.743	20.235	297.9	1.740	***	***	***	***	***	***	-2		
0	18.604	300.0	1.754	19.080	299.8	1.751	19.558	299.7	1.749	20.039	299.5	1.746	20.522	299.4	1.744	21.008	299.2	1.742	0		
2	18.430	301.6	1.760	18.900	301.5	1.757	19.373	301.3	1.755	19.848	301.2	1.752	20.325	301.0	1.750	20.805	300.8	1.748	2		
4	18.259	303.3	1.766	18.724	303.1	1.763	19.191	303.0	1.761	19.660	302.8	1.758	20.132	302.7	1.756	20.606	302.5	1.754	4		
6	18.092	304.9	1.772	18.552	304.8	1.769	19.014	304.6	1.767	19.477	304.5	1.764	19.943	304.3	1.762	20.411	304.2	1.759	6		
6	17.929	306.6	1.777	18.364	306.4	1.775	18.840	306.3	1.772	19.296	306.1	1.770	19.759	306.0	1.768	20.221	305.8	1.765	8		
10	17.776	308.2	1.783	18.219	308.1	1.781	18.670	307.9	1.778	19.123	307.8	1.776	19.578	307.6	1.774	20.036	307.5	1.771	10		
12	17.613	309.9	1.789	18.057	309.7	1.787	18.504	309.6	1.784	18.952	309.5	1.782	19.402	309.3	1.780	19.854	309.2	1.777	12		
14	17.460	311.6	1.795	17.899	311.4	1.793	18.341	311.3	1.790	18.784	311.1	1.788	19.229	311.0	1.785	19.676	310.8	1.783	14		
16	17.309	313.2	1.801	17.744	313.1	1.798	18.181	312.9	1.796	18.620	312.8	1.794	19.060	312.7	1.791	19.502	312.5	1.789	16		
18	17.162	314.9	1.807	17.593	314.8	1.804	18.025	314.6	1.802	18.458	314.5	1.799	18.894	314.3	1.797	19.331	314.2	1.795	18		
20	17.018	316.6	1.812	17.444	316.4	1.810	17.871	316.3	1.807	18.301	316.2	1.805	18.731	316.0	1.803	19.164	315.9	1.801	20		
25	16.668	320.8	1.827	17.064	320.7	1.824	17.501	320.5	1.822	17.919	320.4	1.819	18.339	320.3	1.817	18.760	320.1	1.815	25		
30	16.335	325.1	1.841	16.741	324.9	1.838	17.148	324.8	1.836	17.556	324.7	1.834	17.965	324.6	1.831	18.376	324.4	1.829	30		
35	16.017	329.4	1.855	16.413	329.2	1.852	16.810	329.1	1.850	17.209	329.0	1.846	17.608	328.9	1.845	18.009	328.7	1.843	35		
40	15.712	333.7	1.869	16.099	333.6	1.866	16.488	333.5	1.864	16.877	333.3	1.862	17.268	333.2	1.859	17.659	333.1	1.857	40		
45	15.420	338.1	1.883	15.799	337.9	1.880	16.179	337.8	1.878	16.560	337.7	1.876	16.941	337.6	1.873	17.324	337.5	1.871	45		
50	15.140	342.5	1.896	15.511	342.3	1.894	15.863	342.2	1.892	16.255	342.1	1.889	16.629	342.0	1.887	17.003	341.9	1.885	50		
55	14.871	346.9	1.910	15.234	346.8	1.908	15.598	346.7	1.905	15.963	346.6	1.903	16.329	346.5	1.901	16.695	346.3	1.899	55		
60	14.613	351.4	1.923	14.969	351.3	1.921	15.325	351.1	1.919	15.683	351.0	1.917	16.041	350.9	1.914	16.400	350.8	1.912	60		
65	14.364	355.9	1.937	14.713	355.8	1.935	15.062	355.7	1.932	15.413	355.5	1.930	15.764	355.4	1.928	16.116	355.3	1.926	65		
70	14.124	360.4	1.950	14.466	360.3	1.948	14.809	360.2	1.946	15.153	360.1	1.943	15.497	360.0	1.941	15.842	359.9	1.939	70		
75	13.893	365.0	1.963	14.229	364.9	1.961	14.566	364.8	1.959	14.903	364.7	1.957	15.241	364.6	1.954	15.579	364.5	1.952	75		
80	13.670	369.6	1.977	14.000	369.5	1.974	14.331	369.4	1.972	14.662	369.3	1.970	14.993	369.2	1.968	15.325	369.1	1.965	80		
85	13.455	374.2	1.990	13.779	374.2	1.987	14.104	374.1	1.985	14.429	374.0	1.983	14.755	373.9	1.981	15.081	373.8	1.979	85		
90	13.247	378.9	2.003	13.566	378.6	2.000	13.885	378.8	1.998	14.204	378.7	1.996	14.524	378.6	1.994	14.845	378.5	1.992	90		
95	13.046	383.7	2.016	13.359	383.6	2.013	13.673	383.5	2.011	13.987	383.4	2.009	14.301	383.3	2.007	14.616	383.2	2.005	95		
100	12.852	388.4	2.028	13.160	388.3	2.026	13.468	388.2	2.024	13.777	388.2	2.022	14.086	388.1	2.020	14.369	388.0	2.017	100		
105	12.664	393.2	2.041	12.967	393.1	2.039	13.270	393.0	2.037	13.574	393.0	2.034	13.878	392.9	2.032	14.182	398.2	2.030	105		
110	12.481	398.0	2.054	12.779	398.0	2.052	13.076	397.9	2.049	13.377	397.8	2.047	13.676	397.7	2.045	13.976	397.6	2.043	110		
115	12.305	402.9	2.066	12.598	402.8	2.064	12.892	402.7	2.062	13.186	402.7	2.060	13.481	402.6	2.058	13.776	402.5	2.056	115		
120	12.133	407.8	2.079	12.422	407.7	2.077	12.712	407.6	2.075	13.001	407.6	2.072	13.291	407.5	2.070	13.582	407.4	2.068	120		
125	11.967	412.7	2.091	12.252	412.7	2.089	12.537	412.6	2.087	12.822	412.5	2.085	13.108	412.4	2.083	13.394	412.4	2.081	125		
130	11.806	417.7	2.104	12.086	417.6	2.102	12.367	417.6	2.099	12.648	417.5	2.097	12.929	417.4	2.095	13.211	417.3	2.093	130		
135	11.649	422.7	2.116	11.925	422.6	2.114	12.202	422.6	2.112	12.479	422.5	2.110	12.756	422.4	2.107	13.034	422.3	2.105	135		
140	11.496	427.7	2.128	11.769	427.7	2.126	12.042	427.6	2.124	12.315	427.5	2.122	12.588	427.5	2.120	12.862	427.4	2.118	140		
145	11.348	432.8	2.141	11.617	432.7	2.138	11.886	432.7	2.136	12.155	432.6	2.134	12.425	432.5	2.132	12.695	432.5	2.130	145		

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

Temp °C	Absolute Pressure (Bara)																		Temp °C
	4.9 bara			5.0 bara			5.1 bara			5.2 bara			5.3 bara			5.4 bara			
	Dew Point -0.65C			Dew Point -0.06C			Dew Point 0.52C			Dew Point 1.09C			Dew Point 1.65C			Dew Point 2.20C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
0	21.496	299.0	1.739	21.987	298.9	1.737	****	****	****	****	****	****	****	****	****	****	****	****	0
2	21.287	300.7	1.745	21.771	300.5	1.743	22.258	300.4	1.741	22.747	300.2	1.739	23.239	300.0	1.736	****	****	****	2
4	21.082	302.3	1.751	21.560	302.2	1.749	22.041	302.0	1.747	22.524	301.9	1.745	23.009	301.7	1.742	23.497	301.5	1.740	4
6	20.882	304.0	1.757	21.354	303.8	1.755	21.829	303.7	1.753	22.306	303.5	1.751	22.785	303.4	1.748	23.267	303.2	1.746	6
8	20.666	305.7	1.763	21.153	305.5	1.761	21.622	305.4	1.759	22.093	305.2	1.757	22.566	305.1	1.754	23.042	304.9	1.752	8
10	20.495	307.3	1.769	20.956	307.2	1.767	21.419	307.0	1.765	21.885	306.9	1.762	22.352	306.7	1.760	22.822	306.6	1.758	10
12	20.308	309.0	1.775	20.763	308.9	1.772	21.221	308.7	1.771	21.681	308.6	1.768	22.143	308.4	1.766	22.607	308.3	1.764	12
14	20.125	310.7	1.781	20.575	310.5	1.779	21.028	310.4	1.776	21.482	310.3	1.774	21.938	310.1	1.772	22.397	310.0	1.770	14
16	19.945	312.4	1.787	20.391	312.2	1.784	20.838	312.1	1.782	21.287	311.9	1.780	21.738	311.8	1.778	22.191	311.7	1.776	16
18	19.770	314.1	1.792	20.210	313.9	1.790	20.653	313.8	1.788	21.097	313.6	1.786	21.543	313.5	1.784	21.990	313.4	1.782	18
20	19.598	315.8	1.798	20.034	315.6	1.796	20.471	315.5	1.794	20.910	315.3	1.792	21.351	315.2	1.790	21.794	315.1	1.788	20
25	19.183	320.0	1.813	19.607	319.9	1.810	20.033	319.7	1.808	20.461	319.6	1.806	20.689	319.5	1.804	21.320	319.3	1.802	25
30	18.788	324.3	1.827	19.202	324.2	1.825	19.617	324.0	1.823	20.033	323.9	1.821	20.451	323.8	1.818	20.870	323.6	1.816	30
35	18.412	328.6	1.841	18.815	328.5	1.839	19.220	328.4	1.837	19.626	328.2	1.835	20.033	328.1	1.833	20.442	328.0	1.831	35
40	18.052	333.0	1.855	18.446	332.9	1.853	18.841	332.7	1.851	19.237	332.6	1.849	19.635	332.5	1.847	20.033	332.4	1.845	40
45	17.708	337.4	1.869	18.093	337.2	1.867	18.479	337.1	1.865	18.866	337.0	1.863	19.254	336.9	1.861	19.643	336.8	1.859	45
50	17.379	341.8	1.883	17.755	341.7	1.881	18.132	341.5	1.879	18.511	341.4	1.877	18.890	341.3	1.874	19.270	341.2	1.873	50
55	17.063	346.2	1.896	17.431	346.1	1.894	17.800	346.0	1.892	18.170	345.9	1.890	18.542	345.8	1.888	18.913	345.7	1.886	55
60	16.760	350.7	1.910	17.120	350.6	1.908	17.482	350.5	1.906	17.844	350.4	1.904	18.207	350.3	1.902	18.571	350.2	1.900	60
65	16.468	355.2	1.923	16.822	355.1	1.921	17.176	355.0	1.919	17.531	354.9	1.917	17.866	354.8	1.915	18.243	354.7	1.913	65
70	16.188	359.8	1.937	16.534	359.7	1.935	16.882	359.6	1.933	17.229	359.5	1.931	17.578	359.4	1.929	17.927	359.3	1.927	70
75	15.918	364.4	1.950	16.258	364.3	1.948	16.598	364.2	1.946	16.939	364.1	1.944	17.281	364.0	1.942	17.623	363.9	1.940	75
80	15.658	369.0	1.963	15.992	368.9	1.961	16.326	368.8	1.959	16.660	368.7	1.957	16.995	368.6	1.955	17.331	368.5	1.953	80
85	15.407	373.7	1.976	15.735	373.6	1.974	16.063	373.5	1.972	16.391	373.4	1.970	16.720	373.3	1.968	17.049	373.2	1.967	85
90	15.165	378.4	1.989	15.487	378.3	1.987	15.809	378.2	1.985	16.131	378.1	1.983	16.454	378.0	1.982	16.778	377.9	1.980	90
95	14.932	383.1	2.002	15.248	383.0	2.000	15.564	382.9	1.998	15.881	382.9	1.996	16.198	382.8	1.994	16.516	382.7	1.993	95
100	14.706	387.9	2.015	15.016	387.8	2.013	15.327	387.7	2.011	15.639	387.6	2.009	15.950	387.5	2.007	16.263	387.5	2.005	100
110	14.276	397.5	2.041	14.576	397.5	2.039	14.877	397.4	2.037	15.178	397.3	2.035	15.479	397.2	2.033	15.781	397.1	2.031	110
115	14.071	402.4	2.053	14.366	402.3	2.051	14.662	402.3	2.049	14.959	402.2	2.048	15.255	402.1	2.046	15.552	402.0	2.044	115
120	13.872	407.3	2.066	14.163	407.3	2.064	14.455	407.2	2.062	14.746	407.1	2.060	15.038	407.0	2.058	15.331	406.9	2.056	120
125	13.680	412.3	2.079	13.966	412.2	2.077	14.253	412.1	2.075	14.540	412.1	2.073	14.828	412.0	2.071	15.116	411.9	2.069	125
130	13.493	417.3	2.091	13.775	417.2	2.089	14.058	417.1	2.087	14.341	417.0	2.085	14.624	417.0	2.083	14.907	416.9	2.081	130
135	13.312	422.3	2.103	13.590	422.2	2.101	13.868	422.1	2.099	14.147	422.1	2.097	14.426	422.0	2.096	14.705	421.9	2.094	135
140	13.136	427.3	2.116	13.410	427.2	2.114	13.684	427.2	2.112	13.959	427.1	2.110	14.234	427.0	2.108	14.509	427.0	2.106	140
145	12.965	432.4	2.128	13.235	432.3	2.126	13.505	432.3	2.124	13.776	432.2	2.122	14.047	432.1	2.120	14.318	432.0	2.118	145
150	12.798	437.5	2.140	13.065	437.4	2.138	13.331	437.4	2.136	13.598	437.3	2.134	13.865	437.2	2.132	14.133	437.2	2.130	150

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

KLEA@407A Superheated Vapour Properties (D = Density in kg/m ³ , H = Enthalpy in kJ/kg, S = Entropy in kJ/kg.K)																	Table 4	Sheet 9	
Absolute Pressure (Bara)																			
Temp	5.5 bara			5.6 bara			5.7 bara			5.8 bara			5.9 bara			6.0 bara			Temp
°C	Dew Point 2.74C			Dew Point 3.28C			Dew Point 3.81C			Dew Point 4.33C			Dew Point 4.85C			Dew Point 5.36C			°C
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
4	23.988	301.4	1.738	24.481	301.2	1.736	24.976	301.1	1.734	****	****	****	****	****	****	****	****	****	4
6	23.751	303.1	1.744	24.237	302.9	1.742	24.726	302.7	1.740	25.217	302.6	1.738	25.711	302.4	1.736	26.207	302.3	1.734	6
8	23.519	304.7	1.750	23.999	304.6	1.748	24.482	304.4	1.746	24.966	304.3	1.744	25.454	304.1	1.742	25.953	304.0	1.740	8
10	23.293	306.4	1.756	23.767	306.3	1.754	24.243	306.1	1.752	24.722	306.0	1.750	25.203	305.8	1.748	25.686	305.7	1.746	10
12	23.073	308.1	1.762	23.541	308.0	1.760	24.011	307.8	1.758	24.483	307.7	1.756	24.958	307.5	1.754	25.434	307.4	1.752	12
14	22.857	309.8	1.768	23.319	309.7	1.766	23.783	309.5	1.764	24.250	309.4	1.762	24.718	309.2	1.760	25.189	309.1	1.758	14
16	22.646	311.5	1.774	23.103	311.4	1.772	23.561	311.2	1.770	24.022	311.1	1.768	24.485	310.9	1.766	24.949	310.8	1.764	16
18	22.440	313.2	1.780	22.891	313.1	1.778	23.344	312.9	1.776	23.799	312.8	1.774	24.256	312.6	1.772	24.715	312.5	1.770	18
20	22.238	314.9	1.786	22.684	314.8	1.784	23.132	314.6	1.782	23.582	314.5	1.780	24.033	314.3	1.778	24.486	314.2	1.776	20
25	21.752	319.2	1.800	22.186	319.1	1.798	22.621	318.9	1.796	23.058	318.8	1.794	23.496	318.6	1.792	23.936	318.5	1.790	25
30	21.290	323.5	1.814	21.712	323.4	1.812	22.136	323.3	1.811	22.561	323.1	1.809	22.987	323.0	1.807	23.415	322.8	1.805	30
35	20.851	327.9	1.829	21.262	327.7	1.827	21.675	327.6	1.825	22.089	327.5	1.823	22.504	327.3	1.821	22.920	327.2	1.819	35
40	20.433	332.2	1.843	20.834	332.1	1.841	21.236	332.0	1.839	21.639	331.9	1.837	22.044	331.7	1.835	22.450	331.6	1.833	40
45	20.034	336.6	1.857	20.425	336.5	1.855	20.817	336.4	1.853	21.211	336.3	1.851	21.606	336.2	1.849	22.001	336.0	1.847	45
50	19.652	341.1	1.871	20.034	341.0	1.869	20.417	340.9	1.867	20.802	340.7	1.865	21.137	340.6	1.863	21.573	340.5	1.861	50
55	19.286	345.6	1.884	19.660	345.4	1.882	20.035	345.3	1.881	20.410	345.2	1.879	20.787	345.1	1.877	21.164	345.0	1.875	55
60	18.936	350.1	1.898	19.302	350.0	1.896	19.668	349.8	1.894	20.035	349.7	1.892	20.403	349.6	1.891	20.772	349.5	1.889	60
65	18.600	354.6	1.911	18.958	354.5	1.910	19.316	354.4	1.908	19.676	354.3	1.906	20.036	354.2	1.904	20.397	354.1	1.902	65
70	18.277	359.2	1.925	18.627	359.1	1.923	18.979	359.0	1.921	19.331	358.9	1.919	19.683	358.8	1.918	20.037	358.7	1.916	70
75	17.966	363.8	1.938	18.310	363.7	1.936	18.654	363.6	1.935	18.999	363.5	1.933	19.345	363.4	1.931	19.691	363.3	1.929	75
80	17.667	368.4	1.951	18.004	368.3	1.950	18.342	368.2	1.948	18.680	368.1	1.946	19.019	368.0	1.944	19.358	367.9	1.942	80
85	17.379	373.1	1.965	17.710	373.0	1.963	18.041	372.9	1.961	18.373	372.8	1.959	18.705	372.7	1.957	19.038	372.6	1.956	85
90	17.102	377.8	1.978	17.426	377.7	1.976	17.751	377.6	1.974	18.077	377.6	1.972	18.403	377.5	1.970	18.730	377.4	1.969	90
95	16.834	382.6	1.991	17.153	382.5	1.989	17.472	382.4	1.987	17.792	382.3	1.985	18.112	382.2	1.984	18.433	382.1	1.982	95
100	16.575	387.4	2.004	16.889	387.3	2.002	17.202	387.2	2.000	17.516	387.1	1.998	17.831	387.0	1.996	18.146	386.9	1.995	100
105	16.325	392.2	2.016	16.633	392.1	2.015	16.941	392.0	2.013	17.250	391.9	2.011	17.559	391.9	2.009	17.869	391.8	2.008	105
110	16.084	397.1	2.029	16.386	397.0	2.027	16.689	396.9	2.026	16.993	396.8	2.024	17.297	396.7	2.022	17.601	396.6	2.020	110
115	15.850	401.9	2.042	16.147	401.9	2.040	16.446	401.8	2.038	16.744	401.7	2.037	17.043	401.6	2.035	17.342	401.5	2.033	115
120	15.623	406.9	2.055	15.916	406.8	2.053	16.210	406.7	2.051	16.503	406.6	2.049	16.797	406.6	2.047	17.091	406.5	2.046	120
125	15.404	411.8	2.067	15.692	411.7	2.065	15.981	411.7	2.063	16.270	411.6	2.062	16.559	411.5	2.060	16.849	411.4	2.058	125
130	15.191	416.8	2.080	15.475	416.7	2.078	15.759	416.7	2.076	16.044	416.6	2.074	16.329	416.5	2.072	16.614	416.4	2.071	130
135	14.985	421.8	2.092	15.264	421.8	2.090	15.544	421.7	2.088	15.824	421.6	2.087	16.105	421.5	2.085	16.386	421.5	2.083	135
140	14.784	426.9	2.104	15.060	426.8	2.102	15.336	426.8	2.101	15.612	426.7	2.099	15.888	426.6	2.097	16.165	426.5	2.096	140
145	14.590	432.0	2.116	14.861	431.9	2.115	15.133	431.8	2.113	15.405	431.8	2.111	15.677	431.7	2.109	15.950	431.6	2.108	145
150	14.400	437.1	2.129	14.668	437.0	2.127	14.936	437.0	2.125	15.204	436.9	2.123	15.473	436.8	2.122	15.741	436.8	2.120	150
155	14.217	442.3	2.141	14.481	442.2	2.139	14.745	442.1	2.137	15.009	442.1	2.135	15.274	442.0	2.134	15.539	441.9	2.132	155
160	14.038	447.4	2.153	14.298	447.4	2.151	14.559	447.3	2.149	14.820	447.2	2.148	15.081	447.2	2.146	15.342	447.1	2.144	160
165	13.864	452.7	2.165	14.121	452.6	2.163	14.378	452.5	2.161	14.635	452.5	2.160	14.892	452.4	2.158	15.150	452.3	2.156	165

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

Temp °C	Absolute Pressure (Bara)																		Temp °C
	6.5 bara			7.0 bara			7.5 bara			8.0 bara			8.5 bara			9.0 bara			
	Dew Point 7.81C			DewPoint 10.12C			Dew Point 12.31C			Dew Point 14.39C			Dew Point 16.38C			Dew Point 18.27C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
10	28.136	304.9	1.737	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	10
15	27.438	309.2	1.752	29.863	306.4	1.743	32.347	307.6	1.735	34.896	306.8	1.727	***	***	***	***	***	***	15
20	26.782	313.5	1.767	29.126	312.7	1.758	31.523	312.0	1.750	33.976	311.2	1.742	36.488	310.4	1.734	39.063	309.6	1.727	20
25	26.163	317.8	1.781	28.433	317.1	1.773	30.751	316.4	1.765	33.117	315.6	1.757	35.536	314.9	1.750	38.010	314.1	1.742	25
30	25.578	322.2	1.796	27.780	321.5	1.787	30.024	320.8	1.779	32.312	320.1	1.773	34.647	319.4	1.764	37.030	318.6	1.757	30
35	25.024	326.6	1.810	27.163	325.9	1.802	29.340	325.2	1.794	31.556	324.5	1.786	33.813	323.9	1.779	36.113	323.1	1.772	35
40	24.498	331.0	1.824	26.578	330.3	1.816	28.692	329.7	1.808	30.842	329.0	1.801	33.028	328.4	1.794	35.253	327.7	1.787	40
45	23.997	335.4	1.839	26.023	334.8	1.830	28.079	334.2	1.823	30.167	333.6	1.815	32.288	332.9	1.808	34.443	332.3	1.801	45
50	23.521	339.9	1.853	25.495	339.3	1.844	27.497	338.7	1.837	29.527	338.1	1.829	31.588	337.5	1.822	33.679	336.8	1.816	50
55	23.066	344.4	1.866	24.992	343.8	1.858	26.943	343.3	1.851	28.920	342.7	1.843	30.924	342.1	1.836	32.956	341.5	1.830	55
60	22.631	349.0	1.880	24.511	348.4	1.872	26.415	347.8	1.864	28.342	347.3	1.857	30.294	346.7	1.850	32.271	346.1	1.844	60
65	22.214	353.5	1.894	24.052	353.0	1.886	25.911	352.4	1.878	27.791	351.9	1.871	29.693	351.3	1.864	31.619	350.8	1.858	65
70	21.815	358.1	1.907	23.612	357.6	1.899	25.429	357.1	1.892	27.265	356.5	1.885	29.121	356.0	1.878	30.998	355.4	1.872	70
75	21.432	362.8	1.921	23.191	362.3	1.913	24.968	361.7	1.905	26.762	361.2	1.898	28.575	360.7	1.892	30.407	360.2	1.885	75
80	21.065	367.4	1.934	22.787	367.0	1.926	24.525	366.5	1.919	26.280	365.9	1.912	28.052	365.4	1.905	29.842	364.9	1.899	80
85	20.711	372.2	1.947	22.399	371.7	1.939	24.101	371.2	1.932	25.619	370.7	1.925	27.552	370.2	1.919	29.301	369.7	1.912	85
90	20.371	376.9	1.960	22.026	376.4	1.953	23.694	376.0	1.945	25.376	375.5	1.938	27.073	375.0	1.932	28.784	374.5	1.926	90
95	20.043	381.7	1.973	21.666	381.2	1.966	23.302	380.8	1.958	24.951	380.3	1.952	26.613	379.8	1.945	28.288	379.4	1.939	95
100	19.727	386.5	1.986	21.320	386.0	1.979	22.925	385.6	1.971	24.542	385.2	1.965	26.170	384.7	1.958	27.812	384.3	1.952	100
105	19.422	391.3	1.999	20.987	390.9	1.992	22.562	390.5	1.984	24.148	390.0	1.978	25.745	389.6	1.971	27.354	389.2	1.965	105
110	19.128	396.2	2.012	20.665	395.8	2.005	22.211	395.4	1.997	23.766	395.0	1.991	25.336	394.5	1.984	26.913	394.1	1.978	110
115	18.843	401.1	2.025	20.354	400.7	2.017	21.873	400.3	2.010	23.402	399.9	2.003	24.941	399.5	1.997	26.489	399.1	1.991	115
120	18.568	406.1	2.038	20.053	405.7	2.030	21.547	405.3	2.023	23.049	404.9	2.016	24.561	404.5	2.010	26.081	404.1	2.004	120
125	18.302	411.1	2.050	19.763	410.7	2.043	21.231	410.3	2.036	22.708	409.9	2.029	24.193	409.5	2.023	25.687	409.1	2.016	125
130	18.044	416.1	2.063	19.481	415.7	2.055	20.926	415.3	2.048	22.378	414.9	2.041	23.838	414.6	2.035	25.306	414.2	2.029	130
135	17.794	421.1	2.075	19.209	420.8	2.068	20.631	420.4	2.061	22.059	420.0	2.054	23.495	419.7	2.048	24.938	419.3	2.042	135
140	17.552	426.2	2.087	18.945	425.8	2.080	20.344	425.5	2.073	21.750	425.1	2.066	23.163	424.8	2.060	24.582	424.4	2.054	140
145	17.316	431.3	2.100	18.689	431.0	2.092	20.067	430.6	2.085	21.451	430.3	2.079	22.842	429.9	2.072	24.238	429.6	2.067	145
150	17.088	436.4	2.112	18.440	436.1	2.105	19.798	435.8	2.098	21.161	435.4	2.091	22.530	435.1	2.085	23.905	434.8	2.079	150
155	16.866	441.6	2.124	18.199	441.3	2.117	19.537	441.0	2.110	20.880	440.6	2.103	22.228	440.3	2.097	23.581	440.0	2.091	155
160	16.651	446.8	2.136	17.964	446.5	2.129	19.283	446.2	2.122	20.606	445.9	2.115	21.935	445.5	2.109	23.268	445.2	2.103	160
165	16.441	452.0	2.148	17.737	451.7	2.141	19.037	451.4	2.134	20.341	451.1	2.127	21.650	450.8	2.121	22.964	450.5	2.115	165
170	16.237	457.3	2.160	17.515	457.0	2.153	18.797	456.7	2.146	20.083	456.4	2.139	21.374	456.1	2.133	22.669	455.8	2.127	170
175	16.039	462.6	2.172	17.299	462.3	2.165	18.564	462.0	2.158	19.833	461.7	2.151	21.105	461.4	2.145	22.382	461.1	2.139	175
180	15.845	467.9	2.184	17.090	467.6	2.177	18.337	467.4	2.170	19.589	467.1	2.163	20.844	466.8	2.157	22.103	466.5	2.151	180

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

Temp °C		Absolute Pressure (Bara)																		Temp °C	
		9.5 bara			10.0 bara			10.5 bara			11.0 bara			11.5 bara			12.0 bara				
		Dew Point 20.09C			Dew Point 21.83C			Dew Point 23.51C			Dew Point 25.13C			Dew Point 26.70C			Dew Point 28.21C				
D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
25	40.544	313.3	1.736	43.140	312.5	1.729	45.804	311.7	1.722	****	****	****	****	****	****	****	****	****	****	****	25
30	39.465	317.9	1.751	41.955	317.1	1.744	44.503	316.3	1.738	47.114	315.5	1.731	49.791	314.7	1.725	52.539	313.9	1.719	30		
35	36.459	322.4	1.766	40.854	321.7	1.759	43.299	321.0	1.753	45.798	320.2	1.747	48.354	319.4	1.741	50.971	318.6	1.735	35		
40	37.518	327.0	1.780	39.826	326.3	1.774	42.179	325.6	1.768	44.578	324.9	1.762	47.028	324.1	1.756	49.529	323.4	1.750	40		
45	36.635	331.6	1.795	38.864	330.9	1.789	41.133	330.2	1.783	43.443	329.6	1.777	45.797	328.9	1.771	48.196	328.1	1.765	45		
50	36.803	336.2	1.809	37.961	335.6	1.803	40.153	334.9	1.797	42.382	334.3	1.791	44.649	333.6	1.786	46.956	332.9	1.780	50		
55	35.017	340.8	1.823	37.109	340.2	1.817	39.231	339.6	1.811	41.386	339.0	1.806	43.575	338.3	1.800	45.799	337.7	1.795	55		
60	34.274	345.5	1.838	36.304	344.9	1.832	38.362	344.3	1.826	40.449	343.7	1.820	42.567	343.1	1.815	44.715	342.4	1.809	60		
65	33.568	350.2	1.852	35.542	349.6	1.846	37.540	349.0	1.840	39.565	348.4	1.834	41.617	347.8	1.829	43.696	347.2	1.824	65		
70	32.897	354.9	1.865	34.818	354.3	1.859	36.761	353.8	1.854	38.728	353.2	1.848	40.719	352.6	1.843	42.735	352.0	1.838	70		
75	32.258	359.6	1.879	34.130	359.1	1.873	36.022	358.6	1.868	37.935	358.0	1.862	39.870	357.4	1.857	41.827	356.9	1.852	75		
80	31.649	364.4	1.893	33.474	363.9	1.887	35.318	363.4	1.881	37.182	362.8	1.876	39.064	362.3	1.871	40.967	361.8	1.866	80		
85	31.067	369.2	1.906	32.849	368.7	1.900	34.648	368.2	1.895	36.464	367.7	1.889	38.299	367.2	1.884	40.151	366.7	1.879	85		
90	30.510	374.0	1.920	32.251	373.6	1.914	34.008	373.1	1.906	35.781	372.6	1.903	37.569	372.1	1.898	39.375	371.6	1.893	90		
95	29.770	378.9	1.933	31.679	378.4	1.927	33.396	378.0	1.922	35.128	377.5	1.916	36.874	377.0	1.911	38.635	376.5	1.906	95		
100	29.465	383.8	1.946	31.131	383.3	1.940	32.811	382.9	1.935	34.503	382.4	1.930	36.209	381.9	1.925	37.929	381.5	1.920	100		
105	28.974	388.7	1.959	30.606	388.3	1.954	32.250	387.8	1.948	33.905	387.4	1.943	35.574	386.9	1.938	37.254	386.5	1.933	105		
110	28.502	393.7	1.972	30.101	393.3	1.967	31.711	392.8	1.961	33.332	392.4	1.956	34.965	391.9	1.951	36.609	391.5	1.946	110		
115	28.048	398.7	1.985	29.616	398.3	1.980	31.194	397.8	1.974	32.782	397.4	1.969	34.381	397.0	1.964	35.990	396.6	1.959	115		
120	27.610	403.7	1.998	29.149	403.3	1.992	30.696	402.9	1.987	32.253	402.5	1.982	33.820	402.1	1.977	35.396	401.6	1.973	120		
125	27.188	408.7	2.011	28.699	408.3	2.005	30.217	407.9	2.000	31.745	407.6	1.995	33.281	407.2	1.990	34.826	406.8	1.985	125		
130	26.781	413.8	2.023	28.265	413.4	2.018	29.756	413.0	2.013	31.255	412.7	2.008	32.762	412.3	2.003	34.277	411.9	1.998	130		
135	26.338	418.9	2.036	27.846	418.5	2.031	29.310	418.2	2.025	30.782	417.8	2.020	32.262	417.4	2.016	33.749	417.1	2.011	135		
140	26.008	424.1	2.049	27.441	423.7	2.043	28.880	423.3	2.038	30.327	423.0	2.033	31.780	422.6	2.028	33.240	422.2	2.024	140		
145	25.641	429.2	2.061	27.050	428.9	2.056	28.465	428.5	2.050	29.886	428.2	2.045	31.314	427.8	2.041	32.749	427.5	2.036	145		
150	25.285	434.4	2.073	26.671	434.1	2.068	28.063	433.7	2.063	29.461	433.4	2.058	30.865	433.0	2.053	32.274	432.7	2.049	150		
155	24.940	439.6	2.086	26.305	439.3	2.080	27.674	439.0	2.075	29.049	438.6	2.070	30.430	438.3	2.066	31.816	438.0	2.061	155		
160	24.606	444.9	2.098	25.949	444.6	2.092	27.296	444.2	2.087	28.651	443.9	2.082	30.009	443.6	2.078	31.373	443.3	2.073	160		
165	24.282	450.2	2.110	25.605	449.9	2.105	26.933	449.5	2.100	28.265	449.2	2.095	29.602	448.9	2.090	30.944	448.6	2.086	165		
170	23.968	455.5	2.122	25.271	455.2	2.117	26.579	454.9	2.112	27.891	454.6	2.107	29.207	454.3	2.102	30.528	454.0	2.098	170		
175	23.662	460.8	2.134	24.947	460.5	2.129	26.235	460.2	2.124	27.528	459.9	2.119	28.824	459.6	2.114	30.125	459.3	2.110	175		
180	23.365	466.2	2.146	24.632	465.9	2.141	25.902	465.6	2.136	27.175	465.3	2.131	28.453	465.0	2.126	29.734	464.7	2.122	180		

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

Absolute Pressure (Bara)																			
Temp	12.5 bara			13.0 bara			13.5 bara			14.0 bara			14.5 bara			15.0 bara			Temp
°C	Dew Point 29.67C			Dew Point 31.09C			Dew Point 32.47C			Dew Point 33.81C			Dew Point 35.11C			Dew Point 36.38C			°C
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
30	55.364	313.0	1.713	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	30
35	53.563	317.8	1.729	56.405	317.0	1.724	59.231	316.1	1.718	62.137	315.3	1.713	****	****	****	****	****	35	
40	52.086	322.6	1.745	54.703	321.8	1.739	57.382	321.0	1.734	60.128	320.2	1.728	62.946	319.4	1.723	65.840	318.5	1.718	40
45	50.643	327.4	1.760	53.141	326.7	1.754	55.692	325.9	1.749	58.300	325.1	1.744	60.968	324.4	1.739	63.701	323.6	1.734	45
50	49.305	332.2	1.775	51.698	331.5	1.770	54.137	330.8	1.764	56.625	330.0	1.759	59.164	329.3	1.754	61.757	328.5	1.749	50
55	48.060	337.0	1.790	50.359	336.3	1.784	52.699	335.6	1.779	55.080	334.9	1.774	57.505	334.2	1.770	59.977	333.5	1.765	55
60	46.696	341.8	1.804	49.111	341.2	1.799	51.361	340.5	1.794	53.647	339.8	1.789	55.972	339.2	1.784	58.337	338.5	1.780	60
65	45.804	346.6	1.818	47.943	346.0	1.813	50.112	345.4	1.809	52.313	344.7	1.804	54.548	344.1	1.799	56.817	343.4	1.795	65
70	44.777	351.5	1.833	46.845	350.9	1.828	48.941	350.3	1.823	51.065	349.7	1.818	53.218	349.0	1.814	55.402	348.4	1.809	70
75	43.808	356.3	1.847	45.812	355.8	1.842	47.841	355.2	1.837	49.894	354.6	1.832	51.974	354.0	1.828	54.060	353.4	1.824	75
80	42.891	361.2	1.861	44.836	360.7	1.856	46.803	360.1	1.851	48.792	359.5	1.847	50.806	359.0	1.842	52.841	358.4	1.838	80
85	42.022	366.1	1.874	43.913	365.6	1.870	45.822	365.1	1.865	47.753	364.5	1.861	49.703	364.0	1.856	51.675	363.4	1.852	85
90	41.197	371.1	1.888	43.037	370.6	1.883	44.894	370.0	1.879	46.769	369.5	1.874	48.663	369.0	1.870	50.576	368.5	1.866	90
95	40.142	376.0	1.902	42.204	375.5	1.897	44.012	375.0	1.893	45.836	374.5	1.888	47.678	374.0	1.884	49.536	373.5	1.880	95
100	39.663	381.0	1.915	41.411	380.5	1.911	43.173	380.0	1.906	44.950	379.6	1.902	46.743	379.1	1.898	48.550	378.6	1.893	100
105	38.948	386.0	1.928	40.654	385.6	1.924	42.374	385.1	1.920	44.107	384.6	1.915	45.853	384.2	1.911	47.614	383.7	1.907	105
110	38.264	391.1	1.942	39.932	390.6	1.937	41.611	390.2	1.933	43.303	389.7	1.929	45.007	389.3	1.924	46.723	388.8	1.920	110
115	37.610	396.1	1.955	39.240	395.7	1.950	40.882	395.3	1.946	42.535	394.8	1.942	44.199	394.4	1.938	45.874	394.0	1.934	115
120	36.982	401.2	1.966	38.578	400.8	1.964	40.184	400.4	1.959	41.800	400.0	1.955	43.427	399.6	1.951	45.064	399.1	1.947	120
125	36.380	406.4	1.981	37.943	406.0	1.976	39.515	405.5	1.972	41.097	405.1	1.968	42.688	404.7	1.964	44.288	404.3	1.960	125
130	35.801	411.5	1.994	37.333	411.1	1.989	38.873	410.7	1.985	40.422	410.3	1.981	41.980	409.9	1.977	43.546	409.5	1.973	130
135	35.244	416.7	2.006	36.746	416.3	2.002	38.256	415.9	1.998	39.774	415.5	1.994	41.300	415.2	1.990	42.834	414.6	1.986	135
140	34.707	421.9	2.019	36.181	421.5	2.015	37.663	421.1	2.011	39.151	420.8	2.007	40.647	420.4	2.003	42.150	420.0	1.999	140
145	34.190	427.1	2.032	35.637	426.7	2.027	37.091	426.4	2.023	38.551	426.0	2.019	40.019	425.7	2.015	41.493	425.3	2.012	145
150	33.690	432.4	2.044	35.112	432.0	2.040	36.540	431.7	2.036	37.973	431.3	2.032	39.414	431.0	2.028	40.860	430.6	2.024	150
155	33.208	437.6	2.057	34.605	437.3	2.052	36.008	437.0	2.048	37.416	436.6	2.044	38.830	436.3	2.040	40.250	435.9	2.037	155
160	32.741	442.9	2.069	34.115	442.6	2.065	35.494	442.3	2.061	36.878	442.0	2.057	38.267	441.6	2.053	39.662	441.3	2.049	160
165	32.290	448.3	2.061	33.641	446.0	2.077	34.997	447.6	2.073	36.358	447.3	2.069	37.724	447.0	2.065	39.094	446.7	2.062	165
170	31.853	453.6	2.093	33.183	453.3	2.089	34.517	453.0	2.085	35.855	452.7	2.081	37.198	452.4	2.077	38.564	452.1	2.074	170
175	31.430	459.0	2.105	32.739	456.7	2.101	34.052	458.4	2.097	35.369	458.1	2.093	36.690	457.8	2.090	38.015	457.5	2.086	175
180	31.019	464.5	2.117	32.308	464.2	2.113	33.601	463.9	2.109	34.897	463.6	2.105	36.198	463.3	2.102	37.502	463.0	2.098	180

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

Temp °C		Absolute Pressure (Bara)																		Temp °C	
		15.5 bara			16.0 bara			16.5 bara			17.0 bara			17.5 bara			18.0 bara				
		Dew Point 37.62C			Dew Point 38.82C			Dew Point 40.00C			Dew Point 41.15C			Dew Point 42.27C			Dew Point 43.37C				
		D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
40	68.818	317.7	1.713	71.886	316.7	1.708	75.050	315.8	1.703	****	****	****	****	****	****	****	****	****	****	40	
45	66.501	322.7	1.729	69.375	321.9	1.724	72.327	321.0	1.719	75.364	320.2	1.714	78.492	319.2	1.809	81.719	318.3	1.704	45		
50	64.407	327.8	1.745	67.118	327.0	1.740	69.893	326.2	1.735	72.737	325.4	1.730	75.655	324.5	1.726	78.651	323.7	1.721	50		
55	62.497	332.8	1.760	65.068	332.1	1.755	67.693	331.3	1.751	70.375	330.5	1.746	73.116	329.7	1.742	75.925	328.9	1.737	55		
60	60.743	337.8	1.775	63.193	337.1	1.771	65.688	336.4	1.766	68.232	335.7	1.762	70.826	334.9	1.757	73.473	334.2	1.753	60		
65	59.122	342.8	1.790	61.465	342.1	1.786	63.847	341.4	1.781	66.270	340.8	1.777	68.736	340.1	1.773	71.247	339.3	1.768	65		
70	57.617	347.8	1.805	59.865	347.2	1.800	62.147	346.5	1.796	64.464	345.9	1.792	66.818	345.2	1.788	69.210	344.5	1.784	70		
75	56.215	352.8	1.819	58.377	352.2	1.815	60.570	351.6	1.811	62.793	351.0	1.807	65.047	350.3	1.803	67.335	349.7	1.799	75		
80	54.902	357.8	1.834	56.987	357.3	1.829	59.099	356.7	1.825	61.238	356.1	1.821	63.404	355.5	1.817	65.599	354.9	1.813	80		
85	53.669	362.9	1.848	55.685	362.3	1.844	57.724	361.8	1.840	59.786	361.2	1.836	61.873	360.6	1.832	63.985	360.0	1.828	85		
90	52.508	367.9	1.862	54.460	367.4	1.858	56.432	366.9	1.854	58.426	366.3	1.850	60.440	365.8	1.846	62.477	365.2	1.842	90		
95	51.411	373.0	1.876	53.305	372.5	1.872	55.216	372.0	1.868	57.147	371.5	1.864	59.096	370.9	1.860	61.065	370.4	1.856	95		
100	50.373	378.1	1.889	52.213	377.6	1.885	54.068	377.1	1.882	55.940	376.6	1.878	57.829	376.1	1.874	59.736	375.6	1.870	100		
105	49.389	383.2	1.903	51.178	382.7	1.899	52.981	382.3	1.895	54.800	381.8	1.892	56.634	381.3	1.898	58.483	380.8	1.864	105		
110	48.453	388.4	1.917	50.195	387.9	1.913	51.951	387.4	1.909	53.720	387.0	1.905	55.502	386.5	1.902	57.299	386.0	1.898	110		
115	47.561	393.5	1.930	49.260	393.1	1.926	50.971	392.6	1.922	52.694	392.2	1.919	54.429	391.7	1.915	56.177	391.3	1.912	115		
120	46.711	398.7	1.943	48.369	398.3	1.939	50.038	397.9	1.936	51.718	397.4	1.932	53.410	397.0	1.929	55.112	396.6	1.925	120		
125	45.899	403.9	1.956	47.519	403.5	1.953	49.148	403.1	1.949	50.788	402.7	1.945	52.438	402.2	1.942	54.099	401.8	1.939	125		
130	45.121	409.1	1.969	46.705	408.7	1.966	48.298	408.3	1.962	49.900	407.9	1.959	51.512	407.5	1.955	53.132	407.1	1.952	130		
135	44.367	414.4	1.982	45.926	414.0	1.979	47.484	413.6	1.975	49.051	413.2	1.972	50.626	412.8	1.968	52.209	412.4	1.965	135		
140	43.661	419.7	1.995	45.179	419.3	1.992	46.704	418.9	1.988	48.237	418.5	1.985	49.778	418.1	1.981	51.327	417.8	1.978	140		
145	42.973	424.9	2.008	44.461	424.6	2.004	45.956	424.2	2.001	47.457	423.9	1.997	48.966	423.5	1.994	50.481	423.1	1.991	145		
150	42.312	430.3	2.021	43.771	429.9	2.017	45.236	429.6	2.013	46.708	429.2	2.010	48.186	428.9	2.007	49.670	428.5	2.003	150		
155	41.676	435.6	2.033	43.107	435.3	2.030	44.544	434.9	2.026	45.988	434.6	2.023	47.437	434.2	2.019	48.891	433.9	2.016	155		
160	41.062	441.0	2.046	42.467	440.6	2.042	43.878	440.3	2.039	45.294	440.0	2.035	46.716	439.6	2.032	48.142	439.3	2.029	160		
165	40.470	446.4	2.058	41.850	446.0	2.054	43.236	445.7	2.051	44.626	445.4	2.048	46.021	445.1	2.044	47.421	444.8	2.041	165		
170	39.898	451.8	2.070	41.254	451.5	2.067	42.616	451.2	2.063	43.981	450.8	2.060	45.352	450.5	2.057	46.726	450.2	2.054	170		
175	39.345	457.2	2.082	40.679	456.9	2.079	42.017	456.6	2.076	43.359	456.3	2.072	44.705	456.0	2.069	46.056	455.7	2.066	175		
180	38.810	451.8	2.095	40.122	462.4	2.091	41.438	462.1	2.088	42.758	461.8	2.084	44.081	461.5	2.081	45.409	461.2	2.078	180		

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

Absolute Pressure (Bara)																			
Temp	18.5 bara			19.0 bara			19.5 bara			20.0 bara			20.5 bara			21.0 bara			Temp
°C	Dew Point 44.45C			Dew Point 45.50C			Dew Point 46.53C			Dew Point 47.54C			Dew Point 48.53C			Dew Point 49.50C			°C
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
45	85.055	317.4	1.699	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	45
50	81.732	322.8	1.716	84.905	321.9	1.712	88.177	320.9	1.707	91.566	320.0	1.702	95.045	319.0	1.698	98.681	318.0	1.693	50
55	78.800	328.1	1.733	81.748	327.3	1.728	84.773	326.4	1.724	87.883	325.5	1.719	91.082	324.6	1.715	94.379	323.7	1.711	55
60	76.176	333.4	1.749	78.939	332.6	1.744	81.765	331.8	1.740	84.657	331.0	1.736	87.620	330.2	1.732	90.660	329.3	1.727	60
65	73.804	338.6	1.764	76.411	337.9	1.760	79.070	337.2	1.756	81.783	336.4	1.752	84.553	335.6	1.748	87.385	334.8	1.744	65
70	71.642	343.8	1.780	74.115	343.2	1.776	76.631	342.5	1.772	79.193	341.7	1.768	81.802	341.0	1.764	84.461	340.3	1.760	70
75	69.656	349.1	1.795	72.013	348.4	1.791	74.407	347.7	1.787	76.839	347.1	1.783	79.311	346.4	1.779	81.824	345.7	1.776	75
80	67.823	354.3	1.810	70.078	353.6	1.806	72.364	353.0	1.802	74.683	352.4	1.798	77.036	351.7	1.795	79.423	351.1	1.791	80
85	66.122	359.5	1.824	68.286	358.9	1.820	70.477	358.3	1.817	72.696	357.7	1.813	74.945	357.1	1.810	77.223	356.4	1.806	85
90	64.537	364.7	1.839	66.619	364.1	1.835	68.725	363.5	1.831	70.856	363.0	1.828	73.012	362.4	1.824	75.194	361.8	1.821	90
95	63.053	369.9	1.853	65.062	369.3	1.849	67.092	368.8	1.846	69.143	368.2	1.842	71.217	367.7	1.839	73.313	367.1	1.835	95
100	61.660	375.1	1.867	63.602	374.6	1.863	65.563	374.0	1.860	67.543	373.5	1.856	69.542	373.0	1.853	71.560	372.4	1.850	100
105	60.348	380.3	1.881	62.230	379.8	1.877	64.127	379.3	1.874	66.041	378.8	1.871	67.973	378.3	1.867	69.922	377.8	1.864	105
110	59.110	385.6	1.895	60.935	385.1	1.891	62.775	384.6	1.886	64.630	384.1	1.885	66.500	383.6	1.881	68.385	383.2	1.878	110
115	57.938	390.8	1.908	59.711	390.4	1.905	61.496	389.9	1.902	63.298	389.5	1.898	65.112	389.0	1.895	66.939	388.5	1.892	115
120	56.826	396.1	1.922	58.552	395.7	1.918	60.289	395.2	1.915	62.039	394.8	1.912	63.800	394.3	1.909	65.574	393.9	1.906	120
125	55.769	401.4	1.935	57.450	401.0	1.932	59.142	400.6	1.929	60.845	400.1	1.925	62.558	399.7	1.922	64.283	399.3	1.919	125
130	54.762	406.7	1.948	56.402	406.3	1.945	58.051	405.9	1.942	59.710	405.5	1.939	61.379	405.1	1.936	63.058	404.7	1.933	130
135	53.802	412.0	1.962	55.402	411.6	1.958	57.012	411.3	1.955	58.630	410.9	1.952	60.257	410.5	1.949	61.694	410.1	1.946	135
140	52.883	417.4	1.975	54.448	417.0	1.971	56.020	416.6	1.968	57.600	416.2	1.965	59.188	415.9	1.962	60.785	415.5	1.959	140
145	52.004	422.8	1.987	53.534	422.4	1.984	55.071	422.0	1.981	56.616	421.6	1.978	58.168	421.3	1.975	59.727	420.9	1.972	145
150	51.161	428.1	2.000	52.659	427.8	1.997	54.163	427.4	1.994	55.674	427.1	1.991	57.192	426.7	1.988	58.716	426.3	1.985	150
155	50.352	433.5	2.013	51.819	433.2	2.010	53.292	432.9	2.007	54.771	432.5	2.004	56.257	432.2	2.001	57.748	431.8	1.998	155
160	49.575	439.0	2.026	51.013	438.6	2.023	52.456	438.3	2.020	53.905	438.0	2.017	55.360	437.6	2.014	56.820	437.3	2.011	160
165	48.827	444.4	2.038	50.237	444.1	2.035	51.653	443.8	2.032	53.073	443.4	2.029	54.499	443.1	2.026	55.930	442.8	2.023	165
170	48.106	449.9	2.051	49.490	449.6	2.047	50.879	449.3	2.045	52.273	448.9	2.042	53.671	448.6	2.039	55.074	448.3	2.036	170
175	47.411	455.4	2.063	48.770	455.1	2.060	50.134	454.8	2.057	51.502	454.5	2.054	52.874	454.2	2.051	54.250	453.9	2.048	175
180	46.740	460.9	2.075	48.076	460.6	2.072	49.415	460.3	2.069	50.758	460.0	2.066	52.106	459.7	2.064	53.467	459.4	2.061	180

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

		Absolute Pressure (Bara)																		
Temp	21.5 bara			22.0 bara			22.5 bara			23.0 bara			23.5 bara			24.0 bara			Temp	
°C	Dew Point 50.46C			Dew Point 51.39C			Dew Point 52.31C			Dew Point 53.22C			Dew Point 54.11C			Dew Point 54.98C			°C	
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S		
55	97.781	322.8	1.706	101.298	321.8	1.702	104.942	320.8	1.697	108.724	319.7	1.692	112.661	318.7	1.688	116.769	317.5	1.683	55	
60	93.780	328.5	1.723	96.987	327.6	1.719	100.288	326.7	1.715	103.690	325.7	1.710	107.203	324.8	1.706	110.835	323.8	1.702	60	
65	90.280	334.0	1.740	93.244	333.2	1.736	96.281	332.4	1.732	99.394	331.5	1.728	102.591	330.6	1.724	105.876	329.7	1.720	65	
70	87.173	339.5	1.756	89.939	338.8	1.752	92.763	338.0	1.748	95.648	337.2	1.744	98.597	336.4	1.741	101.615	335.6	1.737	70	
75	84.380	345.0	1.772	86.982	344.3	1.768	89.631	343.6	1.764	92.329	342.6	1.761	95.079	342.1	1.757	97.883	341.3	1.753	75	
80	81.847	350.4	1.787	84.309	349.7	1.784	86.810	349.1	1.780	89.352	348.4	1.777	91.936	347.7	1.773	94.565	347.0	1.769	80	
85	79.532	355.8	1.802	81.873	355.2	1.799	84.246	354.5	1.795	86.656	353.9	1.792	89.100	353.2	1.789	91.581	352.6	1.785	85	
90	77.402	361.2	1.817	79.638	360.6	1.814	81.902	360.0	1.811	84.195	359.4	1.807	86.518	358.8	1.804	88.872	358.1	1.801	90	
95	75.432	366.6	1.832	77.574	366.0	1.829	79.741	365.4	1.825	81.933	364.8	1.822	84.150	364.3	1.819	86.394	363.7	1.816	95	
100	73.599	371.9	1.846	75.659	371.4	1.843	77.739	370.8	1.840	79.641	370.3	1.837	81.966	369.7	1.834	84.113	369.2	1.831	100	
105	71.868	377.3	1.861	73.873	376.8	1.858	75.876	376.2	1.854	77.898	375.7	1.851	79.940	375.2	1.848	82.001	374.7	1.845	105	
110	70.286	382.7	1.875	72.203	382.2	1.872	74.136	381.7	1.869	76.086	381.2	1.866	78.053	380.7	1.863	80.037	380.2	1.860	110	
115	68.760	388.0	1.889	70.636	387.6	1.886	72.505	387.1	1.883	74.390	386.6	1.880	76.290	386.1	1.877	76.204	385.7	1.874	115	
120	67.360	393.4	1.903	69.160	393.0	1.900	70.971	392.5	1.897	72.796	392.1	1.894	74.635	391.6	1.891	76.486	391.1	1.888	120	
125	66.019	398.8	1.916	67.766	398.4	1.913	69.524	398.0	1.910	71.295	397.5	1.907	73.077	397.1	1.905	74.871	396.6	1.902	125	
130	64.747	404.2	1.930	66.446	403.8	1.927	68.155	403.4	1.924	69.875	403.0	1.921	71.606	402.5	1.918	73.347	402.1	1.916	130	
135	63.539	409.6	1.943	65.194	409.2	1.940	66.658	406.8	1.937	68.531	408.4	1.935	70.214	406.0	1.932	71.906	407.6	1.929	135	
140	62.390	415.1	1.956	64.003	414.7	1.953	65.624	414.3	1.951	67.254	413.9	1.948	66.893	413.5	1.945	70.540	413.1	1.942	140	
145	61.294	420.5	1.969	62.868	420.1	1.967	64.450	419.8	1.964	66.040	419.4	1.961	67.637	419.0	1.958	69.242	418.6	1.956	145	
150	60.247	426.0	1.982	61.785	425.6	1.980	63.330	425.3	1.977	64.882	424.9	1.974	66.441	424.5	1.971	68.006	424.1	1.969	150	
155	59.246	431.5	1.995	60.749	431.1	1.993	62.260	430.8	1.990	63.776	430.4	1.987	65.299	430.0	1.984	66.628	429.7	1.982	155	
160	58.286	436.9	2.008	59.758	436.6	2.005	61.235	436.3	2.003	62.718	435.9	2.000	64.207	435.6	1.997	65.702	435.2	1.995	160	
165	57.366	442.5	2.021	58.607	442.1	2.018	60.253	441.8	2.015	61.705	441.5	2.013	63.162	441.1	2.010	64.624	440.8	2.008	165	
170	56.482	448.0	2.033	57.894	447.7	2.031	59.311	447.4	2.018	60.733	447.0	2.025	62.160	446.7	2.023	63.592	446.4	2.020	170	
175	55.631	453.5	2.046	57.016	453.2	2.043	58.406	452.9	2.040	59.800	452.6	2.038	61.196	452.3	2.035	62.601	452.0	2.033	175	
180	54.812	459.1	2.058	56.171	458.8	2.055	57.535	458.5	2.053	58.902	458.2	2.050	60.273	457.9	2.048	61.648	457.6	2.045	180	

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

		Absolute Pressure (Bara)																			
Temp °C	24.5 bara			25.0 bara			25.5 bara			26.0 bara			26.5 bara			27.0 bara			Temp °C		
	Dew Point 55.84C			Dew Point 56.68C			Dew Point 57.52C			Dew Point 58.33C			Dew Point 59.14C			Dew Point 59.93C					
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S			
60	114.598	322.7	1.697	118.507	321.7	1.693	122.576	320.6	1.688	126.825	319.4	1.684	131.276	318.2	1.679	135.957	317.0	1.674	60		
65	109.256	328.8	1.716	112.740	327.9	1.711	116.335	326.9	1.707	120.051	325.9	1.703	123.901	324.9	1.699	127.896	323.8	1.694	65		
70	104.706	338.0	1.733	107.874	333.9	1.729	111.124	333.0	1.725	114.463	332.1	1.721	117.896	331.2	1.717	121.431	330.3	1.713	70		
75	100.745	340.6	1.750	103.667	339.6	1.746	106.652	339.0	1.742	109.705	338.2	1.739	112.828	337.3	1.735	116.027	336.5	1.731	75		
80	97.239	346.3	1.766	99.962	345.5	1.762	102.736	344.6	1.759	105.562	344.0	1.755	108.444	343.3	1.752	111.384	342.5	1.749	80		
85	94.099	351.9	1.782	96.656	351.2	1.779	99.257	350.6	1.775	101.899	349.9	1.772	104.566	349.1	1.768	107.319	348.4	1.765	85		
90	91.258	357.5	1.797	93.677	356.9	1.794	96.130	356.2	1.791	98.618	355.6	1.788	101.142	354.9	1.785	103.705	354.3	1.781	90		
95	88.665	363.1	1.813	90.964	362.5	1.809	93.292	361.9	1.806	95.649	361.2	1.803	98.036	360.6	1.800	100.455	360.0	1.797	95		
100	86.283	368.6	1.827	88.477	368.0	1.824	90.696	367.4	1.821	92.939	366.9	1.818	95.209	366.3	1.815	97.504	365.7	1.812	100		
105	84.082	374.1	1.842	86.184	373.6	1.839	88.307	373.0	1.836	90.451	372.5	1.833	92.617	371.9	1.830	94.806	371.4	1.828	105		
110	82.039	379.7	1.857	84.059	379.1	1.854	86.096	378.6	1.851	88.153	378.1	1.848	90.228	377.6	1.845	92.323	377.0	1.842	110		
115	80.134	385.2	1.871	82.080	384.7	1.868	84.042	384.2	1.865	86.020	383.7	1.863	88.014	383.2	1.860	90.025	382.7	1.857	115		
120	78.351	390.7	1.885	80.230	390.2	1.882	82.124	389.7	1.880	84.031	389.3	1.877	85.953	388.8	1.874	87.869	388.3	1.871	120		
125	76.677	396.2	1.899	78.495	395.7	1.896	80.326	395.3	1.894	82.169	394.8	1.891	84.025	394.4	1.886	85.895	393.9	1.886	125		
130	75.099	401.7	1.913	76.862	401.3	1.910	78.636	400.8	1.907	80.421	400.4	1.905	82.217	400.0	1.902	84.025	399.5	1.900	130		
135	73.608	407.2	1.926	75.320	406.8	1.924	77.041	406.4	1.921	78.773	406.0	1.918	80.515	405.5	1.916	82.267	405.1	1.913	135		
140	72.196	412.7	1.940	73.860	412.3	1.937	75.534	411.9	1.935	77.216	411.5	1.932	78.907	411.1	1.930	80.608	410.7	1.927	140		
145	70.855	418.2	1.953	72.476	417.9	1.951	74.105	417.5	1.948	75.741	417.1	1.945	77.386	416.7	1.943	79.039	416.3	1.940	145		
150	69.579	423.8	1.966	71.159	423.4	1.964	72.747	423.0	1.961	74.341	422.7	1.959	75.943	422.3	1.956	77.552	421.9	1.954	150		
155	68.363	429.3	1.979	69.905	429.0	1.977	71.454	428.6	1.974	73.009	428.3	1.972	74.571	427.9	1.969	76.139	427.5	1.967	155		
160	67.202	434.9	1.992	68.709	434.6	1.990	70.221	434.2	1.987	71.739	433.9	1.985	73.263	433.5	1.982	74.793	433.2	1.980	160		
165	66.092	440.5	2.005	67.565	440.1	2.003	69.043	439.8	2.000	70.527	439.5	1.998	72.016	439.1	1.995	73.510	438.8	1.993	165		
170	65.028	446.1	2.018	66.469	445.7	2.015	67.916	445.4	2.013	69.367	445.1	2.011	70.823	444.8	2.008	72.284	444.5	2.006	170		
175	64.008	451.7	2.030	65.419	451.4	2.028	66.835	451.1	2.026	68.256	450.7	2.023	69.681	450.4	2.021	71.110	450.1	2.019	175		
180	63.028	457.3	2.043	64.411	457.0	2.040	65.799	456.7	2.038	67.190	456.4	2.036	68.586	456.1	2.033	69.985	455.8	2.031	180		

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

KLEA@407A Superheated Vapour Properties (D = Density in kg/m ³ , H = Enthalpy in kJ/kg, S = Entropy in kJ/kg.K)																	Table 4	Sheet 17	
Absolute Pressure (Bara)																			
Temp °C	27.5 bara			28.0 bara			28.5 bara			29.0 bara			29.5 bara			30.0 bara			Temp °C
	Dew Point 60.72C			Dew Point 61.49C			Dew Point 62.25C			Dew Point 62.99C			Dew Point 63.73C			Dew Point 64.46C			
	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	D	H	S	
65	132.053	322.7	1.690	136.391	321.6	1.686	140.931	320.4	1.681	145.700	319.1	1.676	150.733	317.8	1.671	156.072	316.4	1.666	65
70	125.076	329.3	1.709	128.840	328.3	1.705	132.734	327.3	1.701	136.771	326.2	1.697	140.965	325.1	1.693	145.332	324.0	1.688	70
75	119.306	335.6	1.728	122.671	334.7	1.724	126.127	333.8	1.720	129.681	332.9	1.716	133.340	331.9	1.712	137.113	330.9	1.709	75
80	114.386	341.7	1.745	117.452	340.9	1.742	120.585	340.1	1.738	123.791	339.3	1.734	127.073	338.4	1.731	130.436	337.5	1.727	80
85	110.100	347.7	1.762	112.931	347.0	1.759	115.816	346.2	1.755	118.756	345.4	1.752	121.753	344.7	1.749	124.811	343.9	1.745	85
90	106.306	353.6	1.778	108.948	352.9	1.775	111.632	352.2	1.772	114.360	351.5	1.769	117.133	350.8	1.766	119.954	350.1	1.762	90
95	102.906	359.4	1.794	105.390	358.7	1.791	107.909	356.1	1.788	110.463	357.4	1.785	113.054	356.8	1.782	115.682	356.1	1.779	95
100	99.827	365.1	1.809	102.177	364.5	1.807	104.557	363.9	1.804	106.965	363.3	1.801	109.403	362.7	1.798	111.873	362.0	1.795	100
105	97.017	370.8	1.825	99.253	370.3	1.822	101.512	369.7	1.819	103.796	369.1	1.816	106.105	368.5	1.813	108.440	367.9	1.811	105
110	94.437	376.5	1.840	96.572	376.0	1.837	98.727	375.4	1.834	100.903	374.9	1.831	103.100	374.3	1.829	105.320	373.8	1.826	110
115	92.054	382.2	1.854	94.100	381.7	1.852	96.163	381.2	1.849	98.244	380.6	1.846	100.344	380.1	1.844	102.463	379.6	1.841	115
120	89.841	387.8	1.869	91.807	387.3	1.866	93.789	386.8	1.864	95.787	386.4	1.861	97.800	385.9	1.858	99.830	385.4	1.856	120
125	87.777	393.5	1.883	89.672	393.0	1.880	91.581	392.5	1.878	93.504	392.1	1.875	95.440	391.6	1.873	97.390	391.1	1.870	125
130	85.844	399.1	1.897	87.675	398.6	1.895	89.518	398.2	1.892	91.373	397.7	1.890	93.240	397.3	1.887	95.120	396.6	1.885	130
135	84.029	404.7	1.911	85.801	404.3	1.908	87.584	403.8	1.906	89.378	403.4	1.904	91.182	403.0	1.901	92.997	402.6	1.899	135
140	82.318	410.3	1.925	84.036	409.9	1.922	85.765	409.5	1.920	87.502	409.1	1.917	89.249	408.7	1.915	91.006	408.3	1.913	140
145	80.701	415.9	1.938	82.370	415.5	1.936	84.048	415.1	1.933	85.734	414.7	1.931	87.429	414.4	1.929	89.132	414.0	1.926	145
150	79.169	421.5	1.951	80.792	421.2	1.949	82.424	420.8	1.947	84.063	420.4	1.944	85.709	420.0	1.942	87.363	419.7	1.940	150
155	77.714	427.2	1.965	79.295	426.8	1.962	80.884	426.4	1.960	82.479	426.1	1.958	84.080	425.7	1.955	85.689	425.4	1.953	155
160	76.329	432.8	1.978	77.872	432.5	1.975	79.420	432.1	1.973	80.974	431.8	1.971	82.534	431.4	1.969	84.101	431.1	1.966	160
165	75.010	438.5	1.991	76.515	438.1	1.988	78.026	437.8	1.986	79.542	437.4	1.984	81.064	437.1	1.982	82.591	436.8	1.980	165
170	73.749	444.1	2.004	75.220	443.8	2.001	76.696	443.5	1.999	78.177	443.1	1.997	79.662	442.8	1.995	81.153	442.5	1.993	170
175	72.544	449.8	2.016	73.982	443.5	2.014	75.425	449.2	2.012	76.872	448.9	2.010	78.324	448.5	2.008	79.780	448.2	2.005	175
180	71.389	455.5	2.029	72.797	455.2	2.027	74.208	454.9	2.025	75.624	454.6	2.022	77.044	454.3	2.020	78.469	454.0	2.013	180

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

KLEA® 407A



Mexichem.
FLUOR

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