Saturated properties of FC 87

T	T_r	P_{vp}	P_r	ρ_L	ρ_V	V_L	V_V	U_L	U_V	H_L	ΔH_{vap}	H_V	S_L	ΔS_{vap}	S_V
220	0.522	0.012	0.001	1910.4	0.18	0.151	1580.62	0.00	34.58	0.00	36.40	36.40	-0.00	158.57	158.57
222	0.527	0.013	0.001	1825.5	0.21	0.158	1369.41	0.56	34.94	0.56	36.22	36.78	2.53	156.49	159.02
224	0.532	0.016	0.001	1846.4	0.24	0.156	1189.51	1.13	35.30	1.13	36.03	37.16	5.08	154.42	159.49
226	0.537	0.018	0.001	1875.3	0.28	0.154	1035.89	1.68	35.67	1.68	35.86	37.54	7.56	152.42	159.98
228	0.541	0.021	0.001	1862.9	0.32	0.155	904.38	2.25	36.04	2.25	35.68	37.93	10.06	150.42	160.48
230	0.546	0.024	0.001	1826.4	0.36	0.158	791.51	2.82	36.41	2.82	35.50	38.32	12.52	148.48	161.00
232	0.551	0.028	0.001	1816.5	0.41	0.159	694.40	3.39	36.79	3.39	35.32	38.71	15.00	146.54	161.54
234	0.556	0.032	0.002	1801.7	0.47	0.160	610.65	3.96	37.16	3.96	35.13	39.10	17.46	144.62	162.09
236	0.560	0.036	0.002	1792.2	0.54	0.161	538.25	4.54	37.54	4.54	34.95	39.49	19.90	142.75	162.65
238	0.565	0.041	0.002	1803.6	0.61	0.160	475.51	5.11	37.92	5.11	34.77	39.89	22.33	140.90	163.23
240	0.570	0.047	0.002	1795.0	0.68	0.160	421.03	5.68	38.30	5.69	34.60	40.28	24.73	139.09	163.82
242	0.575	0.054	0.003	1800.5	0.77	0.160	373.60	6.27	38.68	6.27	34.41	40.68	27.16	137.27	164.43
244	0.579	0.061	0.003	1800.3	0.87	0.160	332.23	6.85	39.07	6.85	34.23	41.08	29.55	135.50	165.05
246	0.584	0.069	0.003	1778.7	0.97	0.162	296.07	7.44	39.46	7.44	34.05	41.48	31.94	133.74	165.68
248	0.589	0.077	0.004	1756.0	1.09	0.164	264.38	8.02	39.84	8.02	33.87	41.89	34.31	132.01	166.32
250	0.594	0.087	0.004	1755.6	1.22	0.164	236.56	8.61	40.24	8.61	33.69	42.29	36.66	130.32	166.97
252	0.598	0.098	0.005	1773.1	1.36	0.162	212.08	9.20	40.63	9.20	33.50	42.70	39.00	128.64	167.64
254	0.603	0.110	0.005	1751.2	1.51	0.164	190.51	9.78	41.02	9.79	33.32	43.11	41.33	126.98	168.32
256	0.608	0.123	0.006	1732.3	1.68	0.166	171.46	10.38	41.42	10.38	33.14	43.52	43.67	125.34	169.01
258	0.613	0.137	0.007	1741.9	1.86	0.165	154.59	10.97	41.81	10.97	32.96	43.93	45.97	123.74	169.71
260	0.617	0.152	0.007	1724.4	2.06	0.167	139.64	11.57	42.21	11.57	32.77	44.34	48.28	22.13	170.41
262	0.622	0.170	0.008	1715.4	2.28	0.168	126.36	12.17	42.61	12.17	32.58	44.76	50.58	20.55	171.13
264	0.627	0.188	0.009	1708.3	2.51	0.169	114.54	12.77	43.01	12.77	32.40	45.17	52.86	19.00	171.86
266	0.632	0.209	0.010	1701.1	2.77	0.169	104.00	13.37	43.42	13.38	32.21	45.59	55.14	17.46	172.59
268	0.636	0.231	0.011	1697.4	3.05	0.170	94.59	13.97	43.82	13.98	32.03	46.00	57.39	15.95	173.34
270	0.641	0.255	0.012	1688.9	3.34	0.171	86.17	14.58	44.23	14.58	31.84	46.42	59.63	114.46	174.09
272	0.646	0.281	0.014	1686.3	3.66	0.171	78.62	15.18	44.63	15.19	31.65	46.84	61.87	112.98	174.85
274	0.651	0.309	0.015	1670.9	4.01	0.172	71.85	15.79	45.04	15.80	31.47	47.26	64.10	111.52	175.62
276	0.655	0.339	0.017	1664.0	4.38	0.173	65.76	16.40	45.45	16.41	31.28	47.68	66.32	110.08	176.39
278	0.660	0.372	0.018	1662.2	4.78	0.173	60.27	17.01	45.86	17.02	31.09	48.11	68.53	108.65	177.18

REFERENCE: Pure liquid at 220 K SYMBOLS AND UNITS: P_{vp}= v.p. [bar]; ρ = density [kg/m^3]; V = molar volume [L/mol]; U = int. energy [kJ/mol]; H = enthalpy [kJ/mol]; S = entropy [J/mol·K]; Δ = latent quantity (difference between sat. L and sat. V)

Saturated properties of FC 87

T	T_r	P_{vp}	P_r	ρ_L	ρ_V	V_L	V_V	U_L	U_V	H_L	ΔH_{vap}	H_V	S_L	ΔS_{vap}	S_V
280	0.665	0.407	0.020	1655.4	5.21	0.174	55.32	17.62	46.27	17.63	30.90	48.53	70.72	107.24	177.96
282	0.670	0.445	0.022	1649.4	5.66	0.175	50.85	18.24	46.69	18.25	30.70	48.95	72.91	105.85	178.76
284	0.674	0.486	0.024	1643.6	6.15	0.175	46.81	18.85	47.10	18.86	30.51	49.38	75.08	104.48	179.56
286	0.679	0.530	0.026	1633.7	6.68	0.176	43.14	19.47	47.51	19.48	30.32	49.80	77.25	103.11	180.36
288	0.684	0.577	0.028	1623.8	7.23	0.177	39.81	20.09	47.93	20.10	30.13	50.23	79.40	101.77	181.17
290	0.689	0.627	0.031	1616.5	7.83	0.178	36.79	20.71	48.35	20.72	29.93	50.65	81.56	100.43	181.99
292	0.693	0.680	0.033	1610.7	8.46	0.179	34.04	21.33	48.76	21.34	29.73	51.08	83.69	99.12	182.81
294	0.698	0.737	0.036	1600.1	9.13	0.180	31.53	21.96	49.18	21.97	29.53	51.50	85.82	97.82	183.64
296	0.703	0.798	0.039	1593.7	9.85	0.181	29.24	22.58	49.60	22.60	29.33	51.93	87.94	96.52	184.46
298	0.708	0.862	0.042	1586.5	10.61	0.182	27.15	23.21	50.02	23.23	29.13	52.36	90.06	95.24	185.30
300	0.712	0.931	0.046	1579.1	11.41	0.182	25.24	23.84	50.44	23.85	28.93	52.79	92.15	93.98	186.13
302	0.717	1.003	0.049	1572.5	12.26	0.183	23.49	24.47	50.86	24.48	28.73	53.21	94.25	92.73	186.97
304	0.722	1.080	0.053	1565.4	13.16	0.184	21.88	25.10	51.28	25.12	28.53	53.64	96.33	91.48	187.81
306	0.727	1.162	0.057	1555.9	14.12	0.185	20.40	25.73	51.70	25.75	28.32	54.07	98.41	90.25	188.66
308	0.731	1.248	0.061	1548.7	15.12	0.186	19.05	26.36	52.12	26.39	28.11	54.50	100.47	89.03	189.51
310	0.736	1.339	0.066	1540.4	16.19	0.187	17.80	27.00	52.54	27.02	27.90	54.93	102.53	87.82	190.36
312	0.741	1.434	0.070	1536.2	17.31	0.187	16.64	27.64	52.97	27.66	27.69	55.35	104.59	86.62	191.21
314	0.746	1.535	0.075	1526.2	18.49	0.189	15.58	28.28	53.39	28.30	27.48	55.78	106.63	85.43	192.06
316	0.750	1.642	0.080	1519.0	19.73	0.190	14.60	28.92	53.81	28.95	27.26	56.21	108.66	84.25	192.91
318	0.755	1.754	0.086	1510.3	21.04	0.191	13.69	29.56	54.23	29.59	27.04	56.64	110.69	83.08	193.77
320	0.760	1.871	0.092	1504.7	22.42	0.191	12.85	30.20	54.66	30.24	26.82	57.06	112.71	81.92	194.63
322	0.765	1.995	0.098	1495.9	23.87	0.193	12.07	30.85	55.08	30.89	26.60	57.49	114.72	80.76	195.48
324	0.769	2.124	0.104	1487.1	25.39	0.194	11.34	31.49	55.51	31.54	26.38	57.91	116.73	79.61	196.34
326	0.774	2.260	0.111	1480.7	26.99	0.195	10.67	32.14	55.93	32.19	26.15	58.34	118.72	78.48	197.20
328	0.779	2.402	0.118	1472.8	28.67	0.196	10.05	32.79	56.35	32.84	25.93	58.77	120.71	77.34	198.06
330	0.784	2.550	0.125	1464.3	30.43	0.197	9.47	33.44	56.78	33.49	25.70	59.19	122.70	76.22	198.91
332	0.788	2.706	0.133	1455.8	32.28	0.198	8.92	34.10	57.20	34.15	25.46	59.61	124.67	75.09	199.77
334	0.793	2.868	0.141	1449.2	34.22	0.199	8.42	34.75	57.62	34.81	25.23	60.04	126.64	73.98	200.62
336	0.798	3.038	0.149	1440.0	36.25	0.200	7.95	35.41	58.05	35.47	24.99	60.46	128.61	72.87	201.48
338	0.803	3.214	0.158	1431.8	38.38	0.201	7.51	36.07	58.47	36.13	24.75	60.88	130.57	71.76	202.33

REFERENCE: Pure liquid at 220 K SYMBOLS AND UNITS: P_{vp}= v.p. [bar]; ρ = density [kg/m^3]; V = molar volume [L/mol]; U = int. energy [kJ/mol]; H = enthalpy [kJ/mol]; S = entropy [J/mol·K]; Δ = latent quantity (difference between sat. L and sat. V)

Saturated properties of FC 87

T	T_r	P_{vp}	P_r	ρ_L	ρ_V	V_L	V_V	U_L	U_V	H_L	ΔH_{vap}	H_V	S_L	ΔS_{vap}	S_V
340	0.807	3.399	0.167	1423.9	40.61						24.50	61.30	132.52	70.66	203.18
342	0.812	3.591	0.176	1415.4	42.94						24.25	61.72	134.46	69.57	204.03
344	0.817	3.791	0.186	1407.2	45.39						24.00	62.14	136.40	68.47	204.88
346	0.822	3.999	0.196	1399.0	47.95						23.75	62.55	138.34	67.38	205.72
348	0.826	4.215	0.207	1390.7	50.64						23.49	62.97	140.27	66.29	206.56
350	0.831	4.440	0.218	1382.3	53.45	0.208	5.39	40.06	60.99	40.15	23.23	63.38	142.19	65.21	07.40
352	0.836	4.674	0.229	1373.4	56.39	0.210	5.11	40.73	61.41	40.83	22.96	63.80	144.11	64.12	08.23
354	0.841	4.916	0.241	1364.7	59.47	0.211	4.84	41.41	61.82	41.51	22.69	64.21	146.02	63.04	09.06
356	0.845	5.168	0.253	1356.2	62.70	0.212	4.59	42.08	62.24	42.19	22.42	64.61	147.93	61.95	09.88
358	0.850	5.430	0.266	1346.9	66.08	0.214	4.36	42.76	62.65	42.88	22.14	65.02	149.84	60.87	10.70
360	0.855	5.700	0.279	1338.2	69.62	0.215	4.14	43.44	63.07	43.57	21.86	65.42	151.74	59.78	211.52
362	0.860	5.981	0.293	1329.0	73.34	0.217	3.93	44.13	63.48	44.26	21.57	65.83	153.64	58.69	212.33
364	0.864	6.272	0.307	1319.9	77.23	0.218	3.73	44.81	63.89	44.95	21.28	66.23	155.53	57.60	213.13
366	0.869	6.573	0.322	1310.1	81.31	0.220	3.54	45.50	64.29	45.65	20.98	66.62	157.42	56.50	213.93
368	0.874	6.885	0.338	1300.9	85.60	0.221	3.36	46.19	64.70	46.34	20.67	67.02	159.31	55.41	214.72
370	0.879	7.208	0.353	1291.3	90.10	0.223	3.20	46.89	65.10	47.05	20.36	67.41	161.20	54.30	215.50
372	0.883	7.542	0.370	1281.5	94.83	0.225	3.04	47.58	65.50	47.75	20.04	67.79	163.08	53.19	216.27
374	0.888	7.888	0.387	1271.4	99.81	0.227	2.89	48.28	65.90	48.46	19.72	68.18	164.96	52.07	217.03
376	0.893	8.245	0.404	1261.0	105.04	0.228	2.74	48.98	66.30	49.17	19.38	68.56	166.84	50.94	217.78
378	0.898	8.614	0.422	1250.5	110.56	0.230	2.61	49.69	66.69	49.89	19.04	68.93	168.72	49.80	218.53
380	0.902	8.996	).441	1240.1	116.39	0.232	2.47	50.40	67.08	50.61	18.69	69.30	170.60	48.65	219.26
382	0.907	9.391	).460	1229.2	122.54	0.234	2.35	51.11	67.46	51.33	18.33	69.67	172.49	47.49	219.97
384	0.912	9.799	).480	1217.8	129.05	0.237	2.23	51.83	67.84	52.06	17.96	70.03	174.37	46.31	220.68
386	0.917	10.220	).501	1206.7	135.95	0.239	2.12	52.55	68.21	52.80	17.58	70.38	176.25	45.11	221.36
388	0.921	10.655	).522	1194.6	143.27	0.241	2.01	53.28	68.58	53.54	17.19	70.72	178.14	43.89	222.03
390	0.926	11.105	(.544	1182.5	51.07	0.244	1.91	54.01	68.94	54.28	16.78	71.06	180.03	42.65	222.68
392	0.931	11.570	(.567	1169.7	59.40	0.246	1.81	54.75	69.30	55.03	16.35	71.39	181.93	41.38	223.31
394	0.936	12.049	(.591	1156.9	68.32	0.249	1.71	55.49	69.64	55.79	15.91	71.71	183.83	40.08	223.92
396	0.940	12.545	(.615	1143.3	77.90	0.252	1.62	56.24	69.98	56.56	15.45	72.01	185.75	38.75	224.49
398	0.945	13.056	(.640	1129.1	88.24	0.255	1.53	57.00	70.31	57.33	14.97	72.31	187.67	37.37	225.04

REFERENCE: Pure liquid at 220 K SYMBOLS AND UNITS: P_{vp}= v.p. [bar]; ρ = density [kg/m^3]; V = molar volume [L/mol]; U = int. energy [kJ/mol]; H = enthalpy [kJ/mol]; S = entropy [J/mol·K]; Δ = latent quantity (difference between sat. L and sat. V)

Saturated properties of FC 87

T	T_r	P_{vp}	P_r	ρ_L	ρ_V	V_L	V_V	U_L	U_V	H_L	ΔH_{vap}	H_V	S_L	ΔS_{vap}	S_V
400	0.950	13.585	0.666	1114.0	199.45	0.259	1.44	57.77	70.62	58.12	14.47	72.59	189.61	35.95	225.55
402	0.955	14.131	0.693	1098.3	211.69	0.262	1.36	58.55	70.92	58.92	13.93	72.85	191.56	34.46	226.02
404	0.959	14.695	0.720	1081.6	225.14	0.266	1.28	59.33	71.21	59.73	13.36	73.09	193.54	32.91	226.44
406	0.964	15.278	0.749	1063.5	240.07	0.271	1.20	60.14	71.47	60.55	12.75	73.30	195.54	31.26	226.81
408	0.969	15.881	0.778	1043.9	256.85	0.276	1.12	60.96	71.70	61.39	12.09	73.48	197.58	29.51	227.10
410	0.974	16.504	0.809	1022.4	276.00	0.282	1.04	61.80	71.91	62.26	11.36	73.63	199.67	27.62	227.29
412	0.978	17.149	0.841	998.2	298.36	0.289	0.97	62.67	72.06	63.16	10.55	73.72	201.82	25.54	227.37
414	0.983	17.816	0.873	970.2	325.33	0.297	0.89	63.58	72.16	64.11	9.62	73.73	204.07	23.19	227.26
416	0.988	18.508	0.907	936.2	359.63	0.308	0.80	64.55	72.15	65.12	8.51	73.64	206.47	20.42	226.90
418	0.993	19.226	0.942	889.4	407.79	0.324	0.71	65.64	71.97	66.27	7.06	73.33	209.16	16.88	226.04
420	0.997	19.973	0.979	813.3	495.61	0.354	0.58	67.05	71.31	67.75	4.71	72.47	212.66	1.22	223.88
421.1	1.000	20.400	1.000	619.75	619.75	0.465	0.465	69.83	69.83	70.78	0.00	70.78	219.81	0.00	219.81

REFERENCE: Pure liquid at 220 K SYMBOLS AND UNITS: P_{vp}= v.p. [bar]; ρ = density [kg/m^3]; V = molar volume [L/mol]; U = int. energy [kJ/mol]; H = enthalpy [kJ/mol]; S = entropy [J/mol·K]; Δ = latent quantity (difference between sat. L and sat. V)