

PROPERTIES OF SATURATED ETHANE

T K	P MPa	volume, m <sup>3</sup> /kg		enthalpy, kJ/kg			entropy, kJ/(kg·K)		
		v <sub>f</sub>	v <sub>g</sub>	h <sub>f</sub>	h <sub>fg</sub>	h <sub>g</sub>	s <sub>f</sub>	s <sub>fg</sub>	s <sub>g</sub>
150	0.009591	0.001693	4.299	0.0	539.18	539.18	0.0	3.5945	3.5945
160	0.02153	0.001735	2.031	27.17	523.99	551.16	0.1752	3.2750	3.4502
170	0.04329	0.001779	1.064	53.61	509.29	562.90	0.3353	2.9959	3.3312
180	0.07968	0.001823	0.6053	79.62	494.67	574.29	0.4836	2.7482	3.2318
184.32	0.101325	0.001843	0.4845	90.80	488.28	579.08	0.5448	2.6491	3.1939
190	0.1364	0.001869	0.3676	105.51	479.72	585.23	0.6230	2.5249	3.1479
200	0.2200	0.001918	0.2355	131.50	464.11	595.61	0.7555	2.3206	3.0761
210	0.3376	0.001969	0.1575	157.69	447.64	605.33	0.8822	2.1316	3.0138
220	0.4968	0.002023	0.1091	184.13	430.15	614.28	1.0037	1.9553	2.9590
230	0.7057	0.002082	0.07768	210.90	411.44	622.34	1.1208	1.7889	2.9097
240	0.9730	0.002147	0.05655	238.21	391.10	629.31	1.2346	1.6296	2.8642
250	1.308	0.002221	0.04184	266.47	368.49	634.96	1.3470	1.4739	2.8209
260	1.720	0.002308	0.03130	296.21	342.70	638.91	1.4599	1.3181	2.7780
270	2.221	0.002415	0.02352	327.97	312.59	640.56	1.5753	1.1577	2.7330
280	2.822	0.002555	0.01759	362.34	276.44	638.78	1.6948	0.9873	2.6821
290	3.541	0.002759	0.01286	400.71	230.25	630.96	1.8228	0.7939	2.6167
300	4.409	0.003142	0.008602	450.52	156.97	607.49	1.9828	0.5232	2.5060
305.88	5.010	0.004596	0.004596	532.03	0.0	532.03	2.2441	0.0	2.2441

PROPERTIES OF GASEOUS ETHANE

P, MPa (T <sub>sat</sub> , K)		T, K								
		sat	300	340	380	420	460	500	540	580
0.070 (177.8)	v, m <sup>3</sup> /kg	0.6824	1.180	1.340	1.499	1.658	1.816	1.975	2.134	2.292
	h, kJ/kg	571.78	764.36	838.62	919.15	1006.11	1099.55	1199.46	1305.74	1418.27
	s, kJ/(kg·K)	3.2525	4.0686	4.3007	4.5245	4.7419	4.9543	5.1625	5.3669	5.5679
0.101325 (184.3)	v, m <sup>3</sup> /kg	0.4845	0.8132	0.9240	1.034	1.144	1.254	1.364	1.474	1.583
	h, kJ/kg	579.08	763.73	838.14	918.77	1005.80	1099.29	1199.24	1305.56	1418.11
	s, kJ/(kg·K)	3.1939	3.9648	4.1974	4.4214	4.6390	4.8516	5.0598	5.2643	5.4653
0.20 (197.9)	v, m <sup>3</sup> /kg	0.2575	0.4089	0.4658	0.5222	0.5783	0.6342	0.6901	0.7458	0.8014
	h, kJ/kg	593.49	761.74	836.62	917.58	1004.83	1098.49	1198.56	1304.98	1417.61
	s, kJ/(kg·K)	3.0902	3.7720	4.0061	4.2310	4.4492	4.6621	4.8706	5.0753	5.2765
0.40 (214.3)	v, m <sup>3</sup> /kg	0.1341	0.2012	0.2305	0.2592	0.2877	0.3160	0.3441	0.3721	0.4001
	h, kJ/kg	609.25	757.62	833.52	915.14	1002.86	1096.86	1197.19	1303.80	1416.60
	s, kJ/(kg·K)	2.9896	3.5706	3.8079	4.0347	4.2541	4.4677	4.6768	4.8818	5.0833
0.70 (229.8)	v, m <sup>3</sup> /kg	0.07829	0.1122	0.1296	0.1465	0.1632	0.1796	0.1958	0.2120	0.2281
	h, kJ/kg	622.15	751.24	828.77	911.44	999.88	1094.40	1195.12	1302.04	1415.07
	s, kJ/(kg·K)	2.9108	3.4008	3.6433	3.8730	4.0942	4.3090	4.5189	4.7245	4.9264
1.0 (240.9)	v, m <sup>3</sup> /kg	0.05502	0.07648	0.08926	0.1015	0.1133	0.1250	0.1365	0.1480	0.1593
	h, kJ/kg	629.87	744.60	823.91	907.68	996.87	1091.93	1193.05	1300.27	1413.55
	s, kJ/(kg·K)	2.8603	3.2865	3.5345	3.7673	3.9904	4.2064	4.4171	4.6234	4.8257
2.0 (265.8)	v, m <sup>3</sup> /kg	0.02651	0.03451	0.04205	0.04882	0.05520	0.06135	0.06736	0.07326	0.07910
	h, kJ/kg	640.20	720.03	806.77	894.73	986.63	1083.58	1186.08	1294.36	1408.47
	s, kJ/(kg·K)	2.7523	3.0353	3.3067	3.5512	3.7811	4.0015	4.2151	4.4233	4.6271
4.0 (295.5)	v, m <sup>3</sup> /kg	0.01051	0.01183	0.01813	0.02243	0.02614	0.02957	0.03283	0.03597	0.03904
	h, kJ/kg	621.42	644.02	766.56	866.58	965.16	1066.43	1171.98	1282.52	1398.37
	s, kJ/(kg·K)	2.5659	2.6418	3.0271	3.3054	3.5520	3.7823	4.0022	4.2148	4.4218
7.0	v, m <sup>3</sup> /kg			0.00727	0.01106	0.01374	0.01604	0.01812	0.02009	0.02197
	h, kJ/kg			678.32	817.80	930.66	1039.90	1150.64	1264.88	1383.51
	s, kJ/(kg·K)			2.6637	3.0531	3.3357	3.5841	3.8149	4.0347	4.2466
10.	v, m <sup>3</sup> /kg			0.00397	0.00672	0.00892	0.01074	0.01235	0.01383	0.01523
	h, kJ/kg			589.90	764.34	894.94	1013.29	1129.67	1247.78	1369.25
	s, kJ/(kg·K)			2.3579	2.8446	3.1719	3.4411	3.6837	3.9109	4.1279
20.	v, m <sup>3</sup> /kg			0.00277	0.00342	0.00429	0.00521	0.00609	0.00691	0.00769
	h, kJ/kg			532.36	668.78	808.21	941.97	1071.47	1199.79	1329.20
	s, kJ/(kg·K)			2.0966	2.4756	2.8246	3.1289	3.3989	3.6458	3.8769
30.	v, m <sup>3</sup> /kg			0.00252	0.00287	0.00332	0.00384	0.00438	0.00492	0.00544
	h, kJ/kg			526.36	646.92	774.99	905.97	1037.43	1169.40	1302.75
	s, kJ/(kg·K)			2.0017	2.3367	2.6570	2.9549	3.2290	3.4829	3.7211