

# Engineering Software

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# Physical Properties

Here are some of the basic physical properties data tables and plots.

# Input and Output Data

Temperature	C (S)	H2	S (S)	N2	O2	H2O (L)	CH4	CO2	H2O	SO2
[K]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]
298	0.13	-0.67	0.53	-0.17	-0.15	-15,887.63	-4,682.15	-8,947.21	-13,440.38	-4,640.06
400	87.40	1,480.07	88.13	106.11	94.64	-15,458.88	-4,439.79	-8,856.08	-13,248.24	-4,573.52
500	198.51	2,941.41		211.15	190.34	-15,030.63	-4,168.18	-8,758.29	-13,055.25	-4,503.06
600	330.38	4,407.35		317.75	289.08	-14,629.28	-3,860.36	-8,653.62	-12,856.65	-4,428.27
700	478.57	5,877.76		426.41	390.78	-14,365.41	-3,516.54	-8,543.32	-12,651.73	-4,350.03
800	639.05	7,355.42		537.46	495.11	-14,452.12	-3,138.82	-8,428.40	-12,440.10	-4,269.14
900	808.58	8,844.23		650.96	601.62	-15,231.69	-2,730.30	-8,309.67	-12,221.57	-4,186.25
1,000	985.07	10,347.40		766.76	709.89	-17,202.30	-2,294.23	-8,187.69	-11,996.03	-4,101.80
1,100		11,869.19		884.51	819.50		-1,834.16	-8,063.08	-11,763.27	-4,016.15
1,200		13,412.59		1,004.00	930.19		-1,353.17	-7,936.36	-11,523.47	-3,929.59
1,300		14,977.30		1,125.07	1,041.93		-853.28	-7,807.75	-11,277.06	-3,842.22
1,400		16,562.95		1,247.54	1,154.67		-336.33	-7,677.46	-11,024.49	-3,754.14
1,500		18,169.13		1,371.29	1,268.36		195.93	-7,545.66	-10,766.14	-3,665.40
1,600		19,795.41		1,496.18	1,382.96		741.93	-7,412.52	-10,502.43	-3,576.10
1,700		21,441.33		1,622.10	1,498.44		1,300.20	-7,278.20	-10,233.70	-3,486.29
1,800		23,106.38		1,748.92	1,614.77		1,869.41	-7,142.84	-9,960.30	-3,396.03
1,900		24,790.04		1,876.56	1,731.91		2,448.33	-7,006.56	-9,682.57	-3,305.38
2,000		26,491.78		2,004.91	1,849.84		3,035.85	-6,869.48	-9,400.82	-3,214.38
2,100		28,211.02		2,133.91	1,968.52		3,630.97	-6,731.69	-9,115.32	-3,123.07
2,200		29,947.20		2,263.47	2,087.95		4,232.79	-6,593.28	-8,826.37	-3,031.49
2,300		31,699.74		2,393.54	2,208.08		4,840.50	-6,454.32	-8,534.20	-2,939.68
2,400		33,468.05		2,524.05	2,328.90		5,453.39	-6,314.89	-8,239.07	-2,847.65
2,500		35,251.54		2,654.95	2,450.40		6,070.83	-6,175.05	-7,941.20	-2,755.43
2,600		37,049.61		2,786.20	2,572.55		6,692.25	-6,034.83	-7,640.78	-2,663.03
2,700		38,861.69		2,917.76	2,695.33		7,317.19	-5,894.28	-7,338.03	-2,570.48
2,800		40,687.20		3,049.61	2,818.74		7,945.23	-5,753.44	-7,033.11	-2,477.79
2,900		42,525.58		3,181.70	2,942.75		8,576.02	-5,612.32	-6,726.20	-2,384.95
3,000		44,376.27		3,314.03	3,067.35		9,209.26	-5,470.95	-6,417.44	-2,291.99

# Input and Output Data

Temperature	C (S)	H2	S (S)	N2	O2	H2O (L)	CH4	CO2	H2O	SO2
[K]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]	[kJ/kg]
3,100		46,238.76		3,446.57	3,192.53		9,844.72	-5,329.34	-6,106.96	-2,198.89
3,200		48,112.53		3,579.31	3,318.27		10,482.20	-5,187.50	-5,794.91	-2,105.68
3,300		49,997.12		3,712.24	3,444.57		11,121.54	-5,045.44	-5,481.39	-2,012.33
3,400		51,892.08		3,845.35	3,571.39		11,762.62	-4,903.16	-5,166.51	-1,918.86
3,500		53,796.99		3,978.64	3,698.74		12,405.35	-4,760.66	-4,850.36	-1,825.26
3,600		55,711.49		4,112.10	3,826.59		13,049.66	-4,617.93	-4,533.03	-1,731.53
3,700		57,635.25		4,245.73	3,954.93		13,695.50	-4,474.98	-4,214.58	-1,637.66
3,800		59,567.97		4,379.54	4,083.75		14,342.82	-4,331.79	-3,895.09	-1,543.66
3,900		61,509.42		4,513.51	4,213.02		14,991.61	-4,188.37	-3,574.60	-1,449.52
4,000		63,459.43		4,647.66	4,342.73		15,641.82	-4,044.72	-3,253.17	-1,355.24
4,100		65,417.87		4,781.98	4,472.86		16,293.43	-3,900.83	-2,930.84	-1,260.81
4,200		67,384.66		4,916.47	4,603.38		16,946.39	-3,756.71	-2,607.64	-1,166.24
4,300		69,359.81		5,051.13	4,734.28		17,600.64	-3,612.35	-2,283.60	-1,071.54
4,400		71,343.39		5,185.95	4,865.52		18,256.10	-3,467.77	-1,958.74	-976.69
4,500		73,335.54		5,320.93	4,997.08		18,912.67	-3,322.99	-1,633.08	-881.72
4,600		75,336.45		5,456.06	5,128.93		19,570.20	-3,178.01	-1,306.63	-786.64
4,700		77,346.44		5,591.32	5,261.04		20,228.54	-3,032.87	-979.40	-691.44
4,800		79,365.87		5,726.71	5,393.38		20,887.45	-2,887.59	-651.39	-596.15
4,900		81,395.21		5,862.19	5,525.90		21,546.67	-2,742.22	-322.60	-500.79
5,000		83,435.00		5,997.76	5,658.56		22,205.89	-2,596.79	6.96	-405.39

# Specific Enthalpy vs Temperature

