Gas or Vapor	Formula	Specific Heat				Specific Heat Ratio	Individual Gas constant - R -	
		c_p (kJ/(kg K))	c_v (kJ/(kg K))	c_p (Btu/(lb_m ^oF))	c_v (Btu/(lb_m ^oF))	$\kappa = c_p / c_v$	$c_p - c_v$ (kJ/(kg K))	$c_p - c_v$ (ft lb_f/(lb_m ^oR))
Acetone	$(CH_3)_2CO$	1.47	1.32	0.35	0.32	1.11	0.15	
Acetylene	C_2H_2	1.69	1.37	0.35	0.27	1.232	0.319	59.34
Air		1.01	0.718	0.24	0.17	1.40	0.287	53.34
Alcohol (ethanol)	C_2H_5OH	1.88	1.67	0.45	0.4	1.13	0.22	
Alcohol (methanol)	CH_3OH	1.93	1.53	0.46	0.37	1.26	0.39	
Ammonia	NH_3	2.19	1.66	0.52	0.4	1.31	0.53	96.5
Argon	Ar	0.520	0.312	0.12	0.07	1.667	0.208	
Benzene	C_6H_6	1.09	0.99	0.26	0.24	1.12	0.1	
Blast furnace gas		1.03	0.73	0.25	0.17	1.41	0.3	55.05
Bromine	Br_2	0.25	0.2	0.06	0.05	1.28	0.05	
Butane	C_4H_{10}	1.67	1.53	0.395	0.356	1.094	0.143	26.5
Carbon dioxide	CO_2	0.844	0.655	0.21	0.16	1.289	0.189	38.86
Carbon monoxide	CO	1.02	0.72	0.24	0.17	1.40	0.297	55.14
Carbon disulphide	CS_2	0.67	0.55	0.16	0.13	1.21	0.12	
Chlorine	Cl_2	0.48	0.36	0.12	0.09	1.34	0.12	
Chloroform	$CHCl_3$	0.63	0.55	0.15	0.13	1.15	0.08	
Coal gas		2.14	1.59					
Combustion products		1		0.24				
Ethane	C_2H_6	1.75	1.48	0.39	0.32	1.187	0.276	51.5
Ether (diethyl ether)	$(C_2H_5)_2O$	2.01	1.95	0.48	0.47	1.03	0.06	
Ethylene	C_2H_4	1.53	1.23	0.4	0.33	1.240	0.296	55.08
Chlorodifluoromethane, R-22	$CHClF_2$					1.18		
Helium	He	5.19	3.12	1.25	0.75	1.667	2.08	386.3
Hexane	C_6H_{14}					1.06		
Hydrochloric acid		0.795	0.567					
Hydrogen	H_2	14.32	10.16	3.42	2.43	1.405	4.12	765.9
Hydrogen Chloride	HCl	0.8	0.57	0.191	0.135	1.41	0.23	42.4
Hydrogen Sulfide	H_2S			0.243	0.187	1.32		45.2
Hydroxyl	OH	1.76	1.27			1.384	0.489	
Krypton	Kr	0.25	0.151					
Methane	CH_4	2.22	1.70	0.59	0.45	1.304	0.518	96.4
Methyl Chloride	CH_3Cl			0.240	0.200	1.20		30.6
Natural Gas		2.34	1.85	0.56	0.44	1.27	0.5	79.1
Neon	Ne	1.03	0.618			1.667	0.412	
Nitric Oxide	NO	0.995	0.718	0.23	0.17	1.386	0.277	
Nitrogen	N_2	1.04	0.743	0.25	0.18	1.400	0.297	54.99
Nitrogen tetroxide	N_2O_4	4.69	4.6	1.12	1.1	1.02	0.09	
Nitrous oxide	N_2O	0.88	0.69	0.21	0.17	1.27	0.18	35.1
Oxygen	O_2	0.919	0.659	0.22	0.16	1.395	0.260	48.24
Pentane	C_5H_{12}					1.07		
Propane	C_3H_8	1.67	1.48	0.39	0.34	1.13	0.189	35.0
Propene (propylene)	C_3H_6	1.5	1.31	0.36	0.31	1.15	0.18	36.8
Water Vapor Steam 1 psia. 120 – 600 ^oF	H_2O	1.93	1.46	0.46	0.35	1.32	0.462	
Steam 14.7 psia. 220 – 600 ^oF	H_2O	1.97	1.5	0.47	0.36	1.31	0.46	
Steam 150 psia. 360 – 600 ^oF	H_2O	2.26	1.76	0.54	0.42	1.28	0.5	
Sulfur dioxide (Sulphur dioxide)	SO_2	0.64	0.51	0.15	0.12	1.29	0.13	24.1