

Standard Thermodynamic Data (at 298.15 K)

	ΔH_f° (kJ/mol)	ΔG_f° (kJ/mol)	S_f° (J/mol·K)			ΔH_f° (kJ/mol)	ΔG_f° (kJ/mol)	S_f° (J/mol·K)
H ₂ O (l)	-285.830	-237.129	69.91		Al ₂ O ₃ (s)	-1675.7	-1582.3	50.92
H ₂ O (g)	-241.818	-228.572	188.25		AlCl ₃ (s)	-704.2	-628.8	110.67
HF (g)	-271.1	-273.2	173.779		AlF ₃ (s)	-1504.1	-1425.0	66.44
HCl (g)	-92.307	-95.299	186.908		NH ₄ Cl (s)	-314.43	-203.87	94.6
HBr (g)	-36.40	-53.45	198.695		BaCl ₂ (s)	-858.6	-810.4	123.68
HI (g)	26.48	1.70	206.594		BaO (s)	-553.5	-525.1	70.42
SO ₂ (g)	-296.830	-300.194	248.22		BaSO ₄ (s)	-1473.2	-1362.2	132.2
SO ₃ (g)	-395.72	-371.06	256.76		CaCl ₂ (s)	-795.8	-748.1	104.6
SO ₃ (l)	-441.04	-373.75	113.8		CaCO ₃ (s)	-1206.92	-1128.79	92.9
SO ₃ (s)	-454.51	-374.21	70.7		CaO (s)	-635.09	-604.03	39.75
N ₂ O (g)	82.05	104.20	219.85		CaSO ₄ (s)	-1434.11	-1321.79	106.7
NO (g)	90.25	86.55	210.761		CaSO ₄ ·2H ₂ O (s)	-2022.63	-1797.28	194.1
NO ₂ (g)	33.18	51.31	240.06		CuO (s)	-157.3	-129.7	42.63
NH ₃ (g)	-46.11	-16.45	192.45		Cu ₂ O (s)	-168.6	-146.0	93.14
CO (g)	-110.525	-137.168	197.674		CuSO ₄ (s)	-771.36	-661.9	109
CO ₂ (g)	-393.509	-394.359	213.74		CuS (s)	-53.1	-53.6	66.5
COCl ₂ (g)	-218.8	-204.6	283.53		FeCl ₂ (s)	-341.79	-302.30	117.95
CCl ₄ (l)	-135.44	-65.21	216.40		FeCl ₃ (s)	-399.49	-334.00	142.3
CH ₄ (g)	-74.81	-50.752	186.264		KCl (s)	-436.747	-409.14	82.59
CH ₃ OH (l)	-238.66	-166.27	126.8		KClO ₃ (s)	-397.73	-296.25	143.1
C ₂ H ₂ (g)	226.73	209.20	200.94		AgCl (s)	-127.068	-109.789	96.2
C ₂ H ₄ (g)	52.26	68.15	219.56		Na ₂ CO ₃ (s)	-1130.68	-1044.44	134.98
C ₂ H ₆ (g)	-84.68	-32.82	229.6		NaCl (s)	-411.153	-384.138	72.13
C ₂ H ₅ OH (l)	-227.69	-174.78	160.7		NaOH (s)	-425.609	-379.494	64.45
C ₆ H ₆ (l)	49.028	124.50	172.8		H ⁺ (aq)	0	0	0
					NH ₄ ⁺ (aq)	-132.51	-79.31	113.4
H ₂ (g)	0	0	130.684		H ₃ O ⁺	-285.830	-237.129	69.91
O ₂ (g)	0	0	205.138		K ⁺ (aq)	-252.38	-283.27	102.5
N ₂ (g)	0	0	191.61		Ag ⁺ (aq)	105.579	77.107	72.68
F ₂ (g)	0	0	202.78		Na ⁺ (aq)	-240.13	-261.905	59.0
Cl ₂ (g)	0	0	223.066		Ba ⁺² (aq)	-537.64	-560.77	9.6
Br ₂ (l)	0	0	152.231		Ca ⁺² (aq)	-542.83	-553.58	-53.1
I ₂ (s)	0	0	116.135		Cu ⁺² (aq)	64.77	65.49	-99.6
C graphite	0	0	5.74		Al ⁺³ (aq)	-531	-485	-321.7
C diamond	1.895	2.900	2.377		Fe ⁺³ (aq)	-48.5	-4.7	-315.9
P ₄ (s)	0	0	41.09		OH ⁻ (aq)	-229.994	-157.244	-10.75
S ₈ (s)	0	0	31.80		Cl ⁻ (aq)	-167.159	-131.228	56.5
HCl (aq)	-167.159	-131.228	56.5		Br ⁻ (aq)	-121.5	-104.0	82.4
HNO ₃ (aq)	-207.36	-111.25	146.4		I ⁻ (aq)	-55.19	-51.59	111
HC ₂ H ₃ O ₂ (aq)	-485.76	-396.46	178.7		NO ₃ ⁻ (aq)	-207.36	-111.25	146.4
NH ₃ (aq)	-80.29	-26.50	111.3		C ₂ H ₃ O ₂ ⁻ (aq)	-486.01	-369.31	86.6
					HCO ₃ ⁻ (aq)	-691.99	-586.77	91.2
					CO ₃ ⁻² (aq)	-677.14	-527.81	-56.9
					SO ₄ ⁻² (aq)	-909.27	-744.53	20.1