|  |  |  |  |
| --- | --- | --- | --- |
| **Formula****and phase** | **∆H°**kJ/mol | **∆S°**J/molK | **∆G°**kJ/mol |
| Al (s) | 0 | 28.3 | 0 |
| Al2O3 (l) | ‐1581.13  | 89.58 | ‐1499.25 |
| AlCl3 (s) | ‐705.63  | 109.3 | ‐630.07 |
| C (s)graphite | 0 | 5.7 | 0 |
| C2H4 (g) | 52.30  | 219.20 | 68.24 |
| C2H5OH (l) | ‐276.98  | 161.04 | ‐174.18 |
| C2H6 (g) | ‐84.68  | 229.12 | ‐32.80 |
| C3H8 (*l*) | -103.8 | 269.9 | -23.5 |
| Ca (s) | 0.00  | 41.42 | 0.00 |
| Ca2+ (aq) | ‐542.83 | -53.14 | ‐553.54 |
| CaCl2 (s) | -795 | 114 | -750.2 |
| CaCO3 (s) | ‐1206.92  | 92.88 | ‐1128.84 |
| CaO (s) | ‐635.13  | 38.20 | ‐603.54 |
| CaSO4 (s) | ‐1434.11  | 106.69 | ‐1321.85 |
| CH3Cl (g) | -83.7 | 234 | -60.2 |
| CH3OH (l) | ‐239.03  | 127.24 | -166 |
| CH4 (g) | ‐74.85  | 186.27 | ‐50.84 |
| Cl2 (g) | 0 | 223.1 | 0 |
| CO(g) | ‐110.54  | 197.90 | -137 |
| CO2 (g) | -393.5 | 213.7 | -394.4 |
| COCl2 (g) | -220 | 283.76  | -206 |
| CS2 (l) | 87.9 |  151.34  | 63.6 |
| Cu2+ (aq) | 64.39 | -98.7 | 64.98 |
| F2 (g) | 0 | 202.8 | 0 |
| Fe (s) | 0  | 27.28 | 0 |
| Fe2O3 (s) | ‐824.25  | 87.40 | ‐742.24 |
| H+ (aq) | 0 | 0 | 0 |
| H2 (g) | 0 | 130.7 | 0 |
| H2O (g) | -241.8 | 188.8 | -228.6 |
| H2O (l) | -285.8 | 69.4 | -237.0 |
| **Formula****and phase** | **∆H°**kJ/mol | **∆S°**J/molK | **∆G°**kJ/mol |
| H2O2 (l) | -187.6 | 109.5 | -120.2 |
| H2S (g) | ‐20.17 | 205.77 | ‐33.05 |
| H2SO4 (l) | ‐814.00 | 156.90 | ‐690.07 |
| HCl (g) | -92.5 | 186.77 | ‐95.31 |
| HCN (g) | 135.14 | 201.67 | 124.68 |
| HCO3- (aq) | -691.11 | 95.0 | -587.06 |
| HF (g) | -273.3 | 173.8 | -275.4 |
| K2SO4 (s) | -1437.8 | 175.6 | -1321.4 |
| KCl (s) | -436.69 | 82.55 | -436.69 |
| Mg2+ (aq) | -461.96 | -118 | -456.01 |
| N2 (g) | 0 | 191.50 | 0 |
| N2H4 (g) | 95.40 | 238.5 | 159.28 |
| N2H4 (l) | 50.63 | 121.2 | 149.24 |
| Na+ (aq) | ‐240.1 | 59.0 | ‐261.9 |
| Na2CO3 (s) | -1130.94 | 135.98 | -1047.67 |
| NH3 (g) | ‐46.11 | 192.8 | ‐16.48 |
| NH4Cl (s) | -314.4 | 94.56 | ‐202.97 |
| NO (g) | 91.3 | 210.8 | 87.6 |
| NO2 (g) | 34.0 | 240.5 | 51.84 |
| NOCl (g) | 51.7 | 261.7 | 66.4 |
| O2 (g) | 0 | 205.1 | 0 |
| Pb (s) | 0 | 64.77 | 0 |
| PbO (s) | ‐218.99  | 66.53 | ‐189.24 |
| SO2 (g) | ‐296.83  | 248.11 | ‐300.19 |
| SO3 (g) | ‐395.72  | 256.65 | ‐371.08 |
| TiCl4 (*l*) | -804.2 | 252.3 | -737.2 |
| TiO2 (s) | -939.7 | 49.9 | -884.5 |
| Zn (s) | 0.00  | 41.63 | 0.00 |
| Zn2+ (aq) | -152.4 | -106.5 | -147.21 |

*Please tell me if anything looks really wrong, not just slight variation between sources!
I was cutting and pasting so many numbers…something is bound to be wrong! Ha!*