		Crystal				Liquid				Gas			
Molecular formula	**Name**	$\Delta_f H°$ kJ/mol	$\Delta_f G°$ kJ/mol	$S°$ J/mol K	C_p J/mol K	$\Delta_f H°$ kJ/mol	$\Delta_f G°$ kJ/mol	$S°$ J/mol K	C_p J/mol K	$\Delta_f H°$ kJ/mol	$\Delta_f G°$ kJ/mol	$S°$ J/mol K	C_p J/mol K
N	Nitrogen (atomic)									472.7	455.5	153.3	20.8
$NNaO_2$	Sodium nitrite	-358.7	-284.6	103.8									
$NNaO_3$	Sodium nitrate	-467.9	-367.0	116.5	92.9								
NO	Nitric oxide									91.3	87.6	210.8	29.9
NO_2	Nitrogen dioxide									33.2	51.3	240.1	37.2
NO_2Rb	Rubidium nitrite	-367.4	-306.2	172.0									
NO_3Rb	Rubidium nitrate	-495.1	-395.8	147.3	102.1								
NO_3Tl	Thallium(I) nitrate	-243.9	-152.4	160.7	99.5								
NP	Phosphorus nitride	-63.0								171.5	149.4	211.1	29.7
N_2	Nitrogen									0.0		191.6	29.1
N_2O	Nitrous oxide									81.6	103.7	220.0	38.6
N_2O_3	Nitrogen trioxide					50.3				86.6	142.4	314.7	72.7
N_2O_4	Nitrogen tetroxide					-19.5	97.5	209.2	142.7	11.1	99.8	304.4	79.2
N_2O_4Sr	Strontium nitrite	-762.3											
N_2O_5	Nitrogen pentoxide	-43.1	113.9	178.2	143.1					13.3	117.1	355.7	95.3
N_2O_6Pb	Lead(II) nitrate	-451.9											
N_2O_6Ra	Radium nitrate	-992.0	-796.1	222.0									
N_2O_6Sr	Strontium nitrate	-978.2	-780.0	194.6	149.9								
N_2O_6Zn	Zinc nitrate	-483.7											
N_3Na	Sodium azide	21.7	93.8	96.9	76.6								
N_4Si_3	Silicon nitride	-743.5	-642.6	101.3									
Na	Sodium	0.0		51.3	28.2					107.5	77.0	153.7	20.8
NaO_2	Sodium superoxide	-260.2	-218.4	115.9	72.1								
Na_2	Disodium									142.1	103.9	230.2	37.6
Na_2O	Sodium oxide	-414.2	-375.5	75.1	69.1								
Na_2O_2	Sodium peroxide	-510.9	-447.7	95.0	89.2								
Na_2O_3S	Sodium sulfite	-1100.8	-1012.5	145.9	120.3								
Na_2O_3Si	Sodium metasilicate	-1554.9	-1462.8	113.9									
Na_2O_4S	Sodium sulfate	-1387.1	-1270.2	149.6	128.2								
Na_2S	Sodium sulfide	-364.8	-349.8	83.7									
Nb	Niobium	0.0		36.4	24.6					725.9	681.1	186.3	30.2
NbO	Niobium(II) oxide	-405.8	-378.6	48.1	41.3								
NbO_2	Niobium(IV) oxide	-796.2	-740.5	54.5	57.5								
Nb_2O_5	Niobium(V) oxide	-1899.5	-1766.0	137.2	132.1								
Nd	Neodymium	0.0		71.5	27.5					327.6	292.4	189.4	22.1
Nd_2O_3	Neodymium oxide	-1807.9	-1720.8	158.6	111.3								
Ne	Neon									0.0		146.3	20.8
Ni	Nickel	0.0		29.9	26.1					429.7	384.5	182.2	23.4
NiO_4S	Nickel(II) sulfate	-872.9	-759.7	92.0	138.0								
NiS	Nickel(II) sulfide	-82.0	-79.5	53.0	47.1								
Ni_2O_3	Nickel(III) oxide	-489.5											
No	Nobelium	0.0											
O	Oxygen (atomic)									249.2	231.7	161.1	21.9
OP	Phosphorus monoxide									-28.5	-51.9	222.8	31.8
OPb	Lead(II) oxide (massicot)	-217.3	-187.9	68.7	45.8								
OPb	Lead(II) oxide (litharge)	-219.0	-188.9	66.5	45.8								
OPd	Palladium(II) oxide	-85.4			31.4					348.9	325.9	218.0	
ORa	Radium oxide	-523.0											
ORb_2	Rubidium oxide	-339.0											
ORh	Rhodium monoxide									385.0			
OS	Sulfur monoxide									6.3	-19.9	222.0	30.2
OSe	Selenium monoxide									53.4	26.8	234.0	31.3
OSi	Silicon monoxide									-99.6	-126.4	211.6	29.9
OSn	Tin(II) oxide	-280.7	-251.9	57.2	44.3					15.1	-8.4	232.1	31.6
OSr	Strontium oxide	-592.0	-561.9	54.4	45.0					1.5			
OTi	Titanium(II) oxide	-519.7	-495.0	50.0	40.0								
OTl_2	Thallium(I) oxide	-178.7	-147.3	126.0									
OU	Uranium(II) oxide									21.0			
OV	Vanadium(II) oxide	-431.8	-404.2	38.9	45.4								
OZn	Zinc oxide	-350.5	-320.5	43.7	40.3								
O_2	Oxygen									0.0		205.2	29.4
O_2P	Phosphorus dioxide									-279.9	-281.6	252.1	39.5
O_2Pb	Lead(IV) oxide	-277.4	-217.3	68.6	64.6								
O_2Rb	Rubidium superoxide	-278.7											
O_2Rb_2	Rubidium peroxide	-472.0											
O_2Ru	Ruthenium(IV) oxide	-305.0											

	J/K·mol			kJ/mol			
T/K	C_p°	S°	$-(G^\circ-H^\circ(T_r))/T$	$H^\circ-H^\circ(T_r)$	$\Delta_f H^\circ$	$\Delta_f G^\circ$	Log K_f
65. POTASSIUM CHLORIDE KCl (g)							
298.15	36.505	239.091	239.091	0.000	−214.575	−233.320	40.876
300	36.518	239.317	239.092	0.068	−214.594	−233.436	40.644
400	37.066	249.904	240.532	3.749	−218.112	−239.107	31.224
500	37.384	258.212	243.267	7.473	−219.287	−244.219	25.513
600	37.597	265.048	246.344	11.222	−220.396	−249.100	21.686
700	37.769	270.857	249.441	14.991	−221.461	−253.799	18.938
800	37.907	275.910	252.441	18.775	−222.509	−258.347	16.868
900	38.041	280.382	255.302	22.572	−223.568	−262.764	15.250
1000	38.162	284.397	258.014	26.383	−224.667	−267.061	13.950
1100	38.279	288.039	260.581	30.205	−304.696	−266.627	12.661
1200	38.401	291.375	263.010	34.039	−304.821	−263.161	11.455
1300	38.518	294.454	265.312	37.885	−304.941	−259.684	10.434
1400	38.639	297.313	267.496	41.743	−305.053	−256.199	9.559
1500	38.761	299.983	269.574	45.613	−305.159	−252.706	8.800
66. DINITROGEN N_2 (g)							
298.15	29.124	191.608	191.608	0.000	0.000	0.000	0.000
300	29.125	191.788	191.608	0.054	0.000	0.000	0.000
400	29.249	200.180	192.752	2.971	0.000	0.000	0.000
500	29.580	206.738	194.916	5.911	0.000	0.000	0.000
600	30.109	212.175	197.352	8.894	0.000	0.000	0.000
700	30.754	216.864	199.812	11.936	0.000	0.000	0.000
800	31.433	221.015	202.208	15.046	0.000	0.000	0.000
900	32.090	224.756	204.509	18.222	0.000	0.000	0.000
1000	32.696	228.169	206.706	21.462	0.000	0.000	0.000
1100	33.241	231.311	208.802	24.759	0.000	0.000	0.000
1200	33.723	234.224	210.801	28.108	0.000	0.000	0.000
1300	34.147	236.941	212.708	31.502	0.000	0.000	0.000
1400	34.517	239.485	214.531	34.936	0.000	0.000	0.000
1500	34.842	241.878	216.275	38.404	0.000	0.000	0.000
67. NITRIC OXIDE NO (g)							
298.15	29.862	210.745	210.745	0.000	91.277	87.590	−15.345
300	29.858	210.930	210.746	0.055	91.278	87.567	−15.247
400	29.954	219.519	211.916	3.041	91.320	86.323	−11.272
500	30.493	226.255	214.133	6.061	91.340	85.071	−8.887
600	31.243	231.879	216.635	9.147	91.354	83.816	−7.297
700	32.031	236.754	219.168	12.310	91.369	82.558	−6.160
800	32.770	241.081	221.642	15.551	91.386	81.298	−5.308
900	33.425	244.979	224.022	18.862	91.405	80.036	−4.645
1000	33.990	248.531	226.298	22.233	91.426	78.772	−4.115
1100	34.473	251.794	228.469	25.657	91.445	77.505	−3.680
1200	34.883	254.811	230.540	29.125	91.464	76.237	−3.318
1300	35.234	257.618	232.516	32.632	91.481	74.967	−3.012
1400	35.533	260.240	234.404	36.170	91.495	73.697	−2.750
1500	35.792	262.700	236.209	39.737	91.506	72.425	−2.522
68. NITROGEN DIOXIDE NO_2 (g)							
298.15	37.178	240.166	240.166	0.000	34.193	52.316	−9.165
300	37.236	240.397	240.167	0.069	34.181	52.429	−9.129
400	40.513	251.554	241.666	3.955	33.637	58.600	−7.652
500	43.664	260.939	244.605	8.167	33.319	64.882	−6.778
600	46.383	269.147	248.026	12.673	33.174	71.211	−6.199
700	48.612	276.471	251.575	17.427	33.151	77.553	−5.787
800	50.405	283.083	255.107	22.381	33.213	83.893	−5.478
900	51.844	289.106	258.555	27.496	33.334	90.221	−5.236
1000	53.007	294.631	261.891	32.741	33.495	96.534	−5.042
1100	53.956	299.729	265.102	38.090	33.686	102.828	−4.883
1200	54.741	304.459	268.187	43.526	33.898	109.105	−4.749

	J/K·mol			kJ/mol			
T/K	C_p°	S°	$-(G^\circ-H^\circ(T_r))/T$	$H^\circ-H^\circ(T_r)$	$\Delta_f H^\circ$	$\Delta_f G^\circ$	Log K_f
1300	55.399	308.867	271.148	49.034	34.124	115.363	−4.635
1400	55.960	312.994	273.992	54.603	34.360	121.603	−4.537
1500	56.446	316.871	276.722	60.224	34.604	127.827	−4.451
69. AMMONIA NH$_3$ (g)							
298.15	35.630	192.768	192.768	0.000	−45.940	−16.407	2.874
300	35.678	192.989	192.769	0.066	−45.981	−16.223	2.825
400	38.674	203.647	194.202	3.778	−48.087	−5.980	0.781
500	41.994	212.633	197.011	7.811	−49.908	4.764	−0.498
600	45.229	220.578	200.289	12.174	−51.430	15.846	−1.379
700	48.269	227.781	203.709	16.850	−52.682	27.161	−2.027
800	51.112	234.414	207.138	21.821	−53.695	38.639	−2.523
900	53.769	240.589	210.516	27.066	−54.499	50.231	−2.915
1000	56.244	246.384	213.816	32.569	−55.122	61.903	−3.233
1100	58.535	251.854	217.027	38.309	−55.589	73.629	−3.496
1200	60.644	257.039	220.147	44.270	−55.920	85.392	−3.717
1300	62.576	261.970	223.176	50.432	−56.136	97.177	−3.905
1400	64.339	266.673	226.117	56.779	−56.251	108.975	−4.066
1500	65.945	271.168	228.971	63.295	−56.282	120.779	−4.206
70. OXYGEN O (g)							
298.15	21.911	161.058	161.058	0.000	249.180	231.743	−40.600
300	21.901	161.194	161.059	0.041	249.193	231.635	−40.331
400	21.482	167.430	161.912	2.207	249.874	225.677	−29.470
500	21.257	172.197	163.511	4.343	250.481	219.556	−22.937
600	21.124	176.060	165.290	6.462	251.019	213.319	−18.571
700	21.040	179.310	167.067	8.570	251.500	206.997	−15.446
800	20.984	182.115	168.777	10.671	251.932	200.610	−13.098
900	20.944	184.584	170.399	12.767	252.325	194.171	−11.269
1000	20.915	186.789	171.930	14.860	252.686	187.689	−9.804
1100	20.893	188.782	173.372	16.950	253.022	181.173	−8.603
1200	20.877	190.599	174.733	19.039	253.335	174.628	−7.601
1300	20.864	192.270	176.019	21.126	253.630	168.057	−6.753
1400	20.853	193.815	177.236	23.212	253.908	161.463	−6.024
1500	20.845	195.254	178.389	25.296	254.171	154.851	−5.392
71. DIOXYGEN O$_2$ (g)							
298.15	29.378	205.148	205.148	0.000	0.000	0.000	0.000
300	29.387	205.330	205.148	0.054	0.000	0.000	0.000
400	30.109	213.873	206.308	3.026	0.000	0.000	0.000
500	31.094	220.695	208.525	6.085	0.000	0.000	0.000
600	32.095	226.454	211.045	9.245	0.000	0.000	0.000
700	32.987	231.470	213.612	12.500	0.000	0.000	0.000
800	33.741	235.925	216.128	15.838	0.000	0.000	0.000
900	34.365	239.937	218.554	19.244	0.000	0.000	0.000
1000	34.881	243.585	220.878	22.707	0.000	0.000	0.000
1100	35.314	246.930	223.096	26.217	0.000	0.000	0.000
1200	35.683	250.019	225.213	29.768	0.000	0.000	0.000
1300	36.006	252.888	227.233	33.352	0.000	0.000	0.000
1400	36.297	255.568	229.162	36.968	0.000	0.000	0.000
1500	36.567	258.081	231.007	40.611	0.000	0.000	0.000
72. SULFUR S (cr, l)							
298.15	22.690	32.070	32.070	0.000	0.000	0.000	0.000
300	22.737	32.210	32.070	0.042	0.000	0.000	0.000
368.3	24.237	37.030	32.554	1.649	0.000	0.000	0.000
PHASE TRANSITION: $\Delta_{trs}H$ = 0.401 kJ/mol, $\Delta_{trs}S$ = 1.089 J/K·mol, crII–crI							
368.3	24.773	38.119	32.553	2.050	0.000	0.000	0.000
388.36	25.180	39.444	32.875	2.551	0.000	0.000	0.000