

Characteristics of Chemical Elements

by Ivo Mentuccia

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Introduction

This article is about the main characteristics of chemical elements, in particular you will find in the next sections the following characteristics:

Atomic Number Number of protons found in the nucleus of an atom

Name IUPAC atom name

Symbol IUPAC atom symbol

Atomic Weight Weighted average of the masses of all the naturally occurring isotopes of the chemical element

Atomic Volume Atomic mass of an element divided by its density

Density Mass per unit volume of a substance at 20 °C

State Solid (s), liquid (l), gas (g) at 20 °C

Melting Point Temperature at which a solid changes state from solid to liquid

Heat of Fusion Amount of heat required to melt one mole of a solid at its melting point with no change in temperature

1st ionization Energy Energy required to remove an electron from a specific atom

Boiling Point Temperature at which a liquid changes state from liquid to gas

¹Other useful docs/software/websites on <http://ivomen.redirectme.net>

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Heat of Vaporization Amount of heat required to vaporize one mole of a liquid at its boiling point with no change in temperature

Electronegativity Ability of an atom to attract electrons towards itself in a covalent bond in Pauling units

Electron Configuration Arrangement of electrons in an atom

Group A vertical column in the periodic table, also called a family

Periodic Table & Index

The Periodic Table you find below is a special one... indeed it is the document's index:

Symbol
Page Number

H 1																		He 1
Li 1	Be 2											B 2	C 2	N 3	O 3	F 3	Ne 4	
Na 4	Mg 4											Al 5	Si 5	P 5	S 6	Cl 6	Ar 6	
K 7	Ca 7	Sc 7	Ti 8	V 8	Cr 8	Mn 9	Fe 9	Co 9	Ni 10	Cu 10	Zn 10	Ga 11	Ge 11	As 11	Se 12	Br 12	Kr 12	
Rb 13	Sr 13	Y 13	Zr 14	Nb 14	Mo 14	Tc 15	Ru 15	Rh 15	Pd 16	Ag 16	Cd 16	In 17	Sn 17	Sb 17	Te 18	I 18	Xe 18	
Cs 19	Ba 19	La 19	Hf 24	Ta 25	W 25	Re 25	Os 26	Ir 26	Pt 26	Au 27	Hg 27	Tl 27	Pb 28	Bi 28	Po 28	At 29	Rn 29	
Fr 29	Ra 30	Ac 30	Rf 33	Db 33	Sg 33	Bh 34	Hs 34	Mt 34	Ds 34	Ds 34	Uub 35	Uut 35	Uuq 35	Uup 35	Uuh 35	Uus 35	Uuo 35	
Lanthinide Series		Ce 20	Pr 20	Nd 20	Pm 21	Sm 21	Eu 21	Gd 22	Tb 22	Dy 22	Ho 23	Er 23	Tm 23	Yb 24	Lu 24			
Actinide Series		Th 30	Pa 31	U 31	Np 31	Pu 32	Am 32	Cm 32	Bk 32	Cf 32	Es 32	Fm 33	Md 33	No 33	Lr 33			

First Period

Atomic Number	Name	Symbol
1	Hydrogen	H
Atomic Weight	Atomic volume	Density at 20 °C
1.0079	14.4 cm ³ /mol	0.0000899 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-259,09 °C	0.05868 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1312 kJ/mol	-252,75 °C	0.44936 kJ/mol
Electronegativity	Electron Configuration	Group
2.2	1s1	1

Atomic Number	Name	Symbol
2	Helium	He
Atomic Weight	Atomic Volume	Density at 20 °C
4.00260	19.5 cm ³ /mol	0.0001787 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-272.2 °C at 2.5 MPa	0.0138
1st Ionization Energy	Boiling Point	Heat of Vaporization
2372.3 kJ/mole	-268,95 °C	0.0845 kJ/mol
Electronegativity	Electron Configuration	Group
N/A	1s2	18

Second Period

Atomic Number	Name	Symbol
3	Lithium	Li
Atomic Weight	Atomic Volume	Density at 20 °C
6.94	13.10 cm ³ /mol	0.53 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	180.59 °C	3.00 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
520.2 kJ/mol	1346.85 °C	145.920 kJ/mol
Electronegativity	Electron Configuration	Group
0.98	[He] 2s1	1

Atomic Number	Name	Symbol
4	Beryllium	Be
Atomic Weight	Atomic Volume	Density at 20 °C
9.01218	5.0 cm ³ /mol	1.848 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1278.05 °C	12.20 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
899.4 kJ/mol	2499.85 °C	292.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.57	[He] 2s ²	2

Atomic Number	Name	Symbol
5	Boron	B
Atomic Weight	Atomic Volume	Density at 20 °C
10.81	4.6 cm ³ /mol	2.34 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2079.05 °C	50.20 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
800.6 kJ/mol	3650.05 °C	489.70 kJ/mol
Electronegativity	Electron Configuration	Group
2.04	[He] 2s ² 2p ¹	13

Atomic Number	Name	Symbol
6	Carbon	C
Atomic Weight	Atomic Volume	Density at 20 °C
12.11	4.58 cm ³ /mol	2.62 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	3550.05 °C	N/A kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1086.4 kJ/mol	N/A	355.80 kJ/mol
Electronegativity	Electron Configuration	Group
2.55	[He] 2s ² 2p ²	14

Atomic Number	Name	Symbol
7	Nitrogen	N
Atomic Weight	Atomic Volume	Density at 20 °C
14.0067	17.3 cm ³ /mol	0.0012506 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-209.81 °C	0.3604 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1402.3 kJ/mol	-195.75 °C	2.7928 kJ/mol
Electronegativity	Electron Configuration	Group
3.04	[He] 2s ² 2p ³	15

Atomic Number	Name	Symbol
8	Oxygen	O
Atomic Weight	Atomic Volume	Density at 20 °C
15.9994	14.0 cm ³ /mol	0.001429 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-218.35 °C	0.22259 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1313.9 kJ/mol	-182.95 °C	3.4099 kJ/mol
Electronegativity	Electron Configuration	Group
3.44	[He] 2s ² 2p ⁴	16

Atomic Number	Name	Symbol
9	Fluorine	F
Atomic Weight	Atomic Volume	Density at 20 °C
18.998403	17.1 cm ³ /mol	0.001696 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-219.57 °C	0.2552 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1681 kJ/mol	-188.05 °C	3.2698 kJ/mol
Electronegativity	Electron Configuration	Group
3.98	[He] 2s ² 2p ⁵	17

Atomic Number	Name	Symbol
10	Neon	Ne
Atomic Weight	Atomic Volume	Density at 20 °C
20.17	16.7 cm ³ /mol	0.0009 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-248.62 °C	0.3317 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
2080.6 kJ/mol	-246.05 °C	1.7326 kJ/mol
Electronegativity	Electron Configuration	Group
N/A	[He] 2s ² 2p ⁶	18

Third Period

Atomic Number	Name	Symbol
11	Sodium	Na
Atomic Weight	Atomic Volume	Density at 20 °C
22.98977	23.7 cm ³ /mol	0.971 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	97.86 °C	881,45 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
495.8 kJ/mol	-246.05 °C	96.960 kJ/mol
Electronegativity	Electron Configuration	Group
0.93	[Ne] 3s ¹	1

Atomic Number	Name	Symbol
12	Magnesium	Mg
Atomic Weight	Atomic Volume	Density at 20 °C
24.305	13.97 cm ³ /mol	1.738 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	718.85 °C	8.954 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
737.7 kJ/mol	1104.85 °C	127.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.31	[Ne] 3s ²	2

Atomic Number	Name	Symbol
13	Aluminum	Al
Atomic Weight	Atomic Volume	Density at 20 °C
26.98154	10.0 cm ³ /mol	2.702 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	660.42 °C	10.790 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
577.6 kJ/mol	2466.85 °C	293.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.61	[Ne] 3s ² 3p ¹	13

Atomic Number	Name	Symbol
14	Silicon	Si
Atomic Weight	Atomic Volume	Density at 20 °C
28.0855	12.1 cm ³ /mol	2.33 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1410.05 °C	50.550 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
786.4 kJ/mol	3279.85 °C	384.220 kJ/mol
Electronegativity	Electron Configuration	Group
1.9	[Ne] 3s ² 3p ²	14

Atomic Number	Name	Symbol
15	Phosphorus	P
Atomic Weight	Atomic Volume	Density at 20 °C
30.97376	17.0 cm ³ /mol	1.82 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	44.15 °C	0.657 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1011.7 kJ/mol	280.55 °C	12.129 kJ/mol
Electronegativity	Electron Configuration	Group
2.19	[Ne] 3s ² 3p ³	15

Atomic Number	Name	Symbol
16	Sulfur	S
Atomic Weight	Atomic Volume	Density at 20 °C
32.06	15.5 cm ³ /mol	2.07 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	112.85 °C	1.7175 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
999.6 kJ/mol	444.75 °C	45 kJ/mol
Electronegativity	Electron Configuration	Group
2.58	[Ne] 3s ² 3p ⁴	16

Atomic Number	Name	Symbol
17	Chlorine	Cl
Atomic Weight	Atomic Volume	Density at 20 °C
35.453	22.7 cm ³ /mol	0.003214 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-100.93 °C	3.203 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1251.1 kJ/mol	20,05 °C	10.20 kJ/mol
Electronegativity	Electron Configuration	Group
3.16	[Ne] 3s ² 3p ⁵	17

Atomic Number	Name	Symbol
18	Argon	Ar
Atomic Weight	Atomic Volume	Density at 20 °C
39.948	28.5 cm ³ /mol	0.0017824 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-189.15 °C	1.188 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1520.5 kJ/mol	-185,85 °C	6.447 kJ/mol
Electronegativity	Electron Configuration	Group
N/A	[Ne] 3s ² 3p ⁶	18

Fourth Period

Atomic Number	Name	Symbol
19	Potassium	K
Atomic Weight	Atomic Volume	Density at 20 °C
39.0983	45.46 cm ³ /mol	0.862 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	63.35 °C	2.334 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
418.8 kJ/mol	765.55 °C	79.870 kJ/mol
Electronegativity	Electron Configuration	Group
0.82	[Ar] 4s1	1

Atomic Number	Name	Symbol
20	Calcium	Ca
Atomic Weight	Atomic Volume	Density at 20 °C
40.08	29.9 cm ³ /mol	1.55 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	839.05 °C	8.540 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
589.8 kJ/mol	1493.85 °C	153.60 kJ/mol
Electronegativity	Electron Configuration	Group
1	[Ar] 4s2	2

Atomic Number	Name	Symbol
21	Scandium	Sc
Atomic Weight	Atomic Volume	Density at 20 °C
44.9559	15.0 cm ³ /mol	3.0 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1539.05 °C	14.10 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
631 kJ/mol	2747.85 °C	314.20 kJ/mol
Electronegativity	Electron Configuration	Group
1.36	[Ar] 3d1 4s2	3

Atomic Number	Name	Symbol
22	Titanium	Ti
Atomic Weight	Atomic Volume	Density at 20 °C
47.90	10.61 cm ³ /mol	4.50 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1660.05 °C	15.450 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
658 kJ/mol	3284.85 °C	421.00 kJ/mol
Electronegativity	Electron Configuration	Group
1.54	[Ar] 3d2 4s2	4

Atomic Number	Name	Symbol
23	Vanadium	V
Atomic Weight	Atomic Volume	Density at 20 °C
50.9415	8.78 cm ³ /mol	5.8 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1890.05 °C	20.90 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
650.3 kJ/mol	3349.85 °C	0.452 kJ/mol
Electronegativity	Electron Configuration	Group
1.63	[Ar] 3d3 4s2	5

Atomic Number	Name	Symbol
24	Chromium	Cr
Atomic Weight	Atomic Volume	Density at 20 °C
51.996	7.23 cm ³ /mol	7.19 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1857.05 °C	16.90 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
652.8 kJ/mol	2689.85 °C	344.30 kJ/mol
Electronegativity	Electron Configuration	Group
1.66	[Ar] 3d5 4s1	6

Atomic Number	Name	Symbol
25	Manganese	Mn
Atomic Weight	Atomic Volume	Density at 20 °C
54.9380	1.39 cm ³ /mol	7.43 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1244.05 °C	12.050 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
717.4 kJ/mol	2059.85 °C	226.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.55	[Ar] 3d5 4s2	7

Atomic Number	Name	Symbol
26	Iron	Fe
Atomic Weight	Atomic Volume	Density at 20 °C
55.847	7.1 cm ³ /mol	7.86 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1535.05 °C	13.80 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
759.3 kJ/mol	2749.85 °C	349.60 kJ/mol
Electronegativity	Electron Configuration	Group
1.9	[Ar] 3d6 4s2	8

Atomic Number	Name	Symbol
27	Cobalt	Co
Atomic Weight	Atomic Volume	Density at 20 °C
58.9332	6.7 cm ³ /mol	8.90 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1495.05 °C	16.190 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
758.4 kJ/mol	3099.85 °C	376.50 kJ/mol
Electronegativity	Electron Configuration	Group
1.88	[Ar] 3d7 4s2	9

Atomic Number	Name	Symbol
28	Nickel	Ni
Atomic Weight	Atomic Volume	Density at 20 °C
58.71	6.59 cm ³ /mol	8.90 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1453.05 °C	17.470 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
736.7 kJ/mol	2919.85 °C	370.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.91	[Ar] 3d8 4s2	10

Atomic Number	Name	Symbol
29	Copper	Cu
Atomic Weight	Atomic Volume	Density at 20 °C
63.546	7.1 cm ³ /mol	8.96 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1083.45 °C	13.050 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
745.4 kJ/mol	2569.85 °C	300.30 kJ/mol
Electronegativity	Electron Configuration	Group
1.95	[Ar] 3d10 4s1	11

Atomic Number	Name	Symbol
30	Zinc	Zn
Atomic Weight	Atomic Volume	Density at 20 °C
65.38	9.2 cm ³ /mol	7.14 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	419.63 °C	7.322 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
906.4 kJ/mol	906,85 °C	115.30 kJ/mol
Electronegativity	Electron Configuration	Group
1.65	[Ar] 3d10 4s2	12

Atomic Number	Name	Symbol
31	Gallium	Ga
Atomic Weight	Atomic Volume	Density at 20 °C
69.723	11.8 cm ³ /mol	5.907 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	29.83 °C	5.590 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
578.8 kJ/mol	2402.85 °C	258.70 kJ/mol
Electronegativity	Electron Configuration	Group
1.81	[Ar] 3d ¹⁰ 4s ² 4p ¹	13

Atomic Number	Name	Symbol
32	Germanium	Ge
Atomic Weight	Atomic Volume	Density at 20 °C
72.59	13.6 cm ³ /mol	5.323 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	937,45 °C	36.940 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
762.1 kJ/mol	2849.85 °C	330.90 kJ/mol
Electronegativity	Electron Configuration	Group
2.01	[Ar] 3d ¹⁰ 4s ² 4p ²	14

Atomic Number	Name	Symbol
33	Arsenic	As
Atomic Weight	Atomic Volume	Density at 20 °C
74.9216	13.1 cm ³ /mol	5.72 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	613 °C	24.44 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
946.5 kJ/mol	613 °C (sublimation)	34.760 kJ/mol
Electronegativity	Electron Configuration	Group
2.18	[Ar] 3d ¹⁰ 4s ² 4p	15

Atomic Number	Name	Symbol
34	Selenium	Se
Atomic Weight	Atomic Volume	Density at 20 °C
78.96	16.45 cm ³ /mol	4.79 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	217.05 °C	6.694 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
940.9 kJ/mol	684.85 °C	37.70 kJ/mol
Electronegativity	Electron Configuration	Group
2.55	[Ar] 3d10 4s2 4p4	16

Atomic Number	Name	Symbol
35	Bromine	Br
Atomic Weight	Atomic Volume	Density at 20 °C
79.904	23.5 cm ³ /mol	3.119 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
liquid	-7.15 °C	5.286 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1139.9 kJ/mol	59.55 °C	15.438 kJ/mol
Electronegativity	Electron Configuration	Group
2.96	[Ar] 3d10 4s2 4p5	17

Atomic Number	Name	Symbol
36	Krypton	Kr
Atomic Weight	Atomic Volume	Density at 20 °C
83.80	38.9 cm ³ /mol	0.003708 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-156.55 °C	1.638 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1350.7 kJ/mol	-153.45 °C	9.029 kJ/mol
Electronegativity	Electron Configuration	Group
3.00	[Ar] 3d10 4s2 4p6	18

Fifth Period

Atomic Number	Name	Symbol
37	Rubidium	Rb
Atomic Weight	Atomic Volume	Density at 20 °C
85.467	55.9 cm ³ /mol	1.53 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	38.94 °C	2.192 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
403 kJ/mol	687.85 °C	72.216 kJ/mol
Electronegativity	Electron Configuration	Group
0.82	[Kr] 5s1	1

Atomic Number	Name	Symbol
38	Strontium	Sr
Atomic Weight	Atomic Volume	Density at 20 °C
87.62	33.7 cm ³ /mol	2.6 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	769.05 °C	8.30 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
549.5 kJ/mol	1380,85 °C	144.0 kJ/mol
Electronegativity	Electron Configuration	Group
0.95	[Kr] 5s2	2

Atomic Number	Name	Symbol
39	Yttrium	Y
Atomic Weight	Atomic Volume	Density at 20 °C
88.9059	19.8 cm ³ /mol	4.47 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1523.05 °C	11.40 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
615.6 kJ/mol	3263.85 °C	363.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.22	[Kr] 4d1 5s2	3

Atomic Number	Name	Symbol
40	Zirconium	Zr
Atomic Weight	Atomic Volume	Density at 20 °C
91.22	14.1 cm ³ /mol	6.4 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1852.05 °C	16.90 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
660 kJ/mol	4199,85 °C	58.20 kJ/mol
Electronegativity	Electron Configuration	Group
1.33	[Kr] 4d2 5s2	4

Atomic Number	Name	Symbol
41	Niobium	Nb
Atomic Weight	Atomic Volume	Density at 20 °C
92.9064	10.87 cm ³ /mol	8.57 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2468.05 °C	26.40 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
663.8 kJ/mol	4757.85 °C	682.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.6	[Kr] 4d4 5s1	5

Atomic Number	Name	Symbol
42	Molybdenum	Mo
Atomic Weight	Atomic Volume	Density at 20 °C
95.94	9.4 cm ³ /mol	10.2 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2617.05 °C	32.0 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
684.9 kJ/mol	4649,85 °C	598.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.24	[Kr] 4d5 5s1	6

Atomic Number	Name	Symbol
43	Tchnetium	Tc
Atomic Weight	Atomic Volume	Density at 20 °C
98.9062	8.5 cm ³ /mol	11.5 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2172.05 °C	24.0 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
702.4 kJ/mol	4566,85 °C	660.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.9	[Kr] 4d5 5s2	7

Atomic Number	Name	Symbol
44	Ruthenium	Ru
Atomic Weight	Atomic Volume	Density at 20 °C
98.9062	8.5 cm ³ /mol	11.5 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2172.05 °C	24.0 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
702.4 kJ/mol	4566,85 °C	660.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.9	[Kr] 4d7 5s1	8

Atomic Number	Name	Symbol
45	Rhodium	Rh
Atomic Weight	Atomic Volume	Density at 20 °C
102.9055	8.3 cm ³ /mol	12.4 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1965.05 °C	21.50 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
719.8 kJ/mol	3759.85 °C	493.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.28	[Kr] 4d8 5s1	9

Atomic Number	Name	Symbol
46	Palladium	Pd
Atomic Weight	Atomic Volume	Density at 20 °C
106.4	8.9 cm ³ /mol	12.02 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1554.05 °C	17.60 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
804.7 kJ/mol	2939.85 °C	357.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.2	[Kr] 4d10	10

Atomic Number	Name	Symbol
47	Silver	Ag
Atomic Weight	Atomic Volume	Density at 20 °C
107.868	10.3 cm ³ /mol	10.5 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	961,95 °C	11.30 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
731 kJ/mol	2154 °C	250.580 kJ/mol
Electronegativity	Electron Configuration	Group
1.93	[Kr] 4d10 5s1	11

Atomic Number	Name	Symbol
48	Cadmium	Cd
Atomic Weight	Atomic Volume	Density at 20 °C
112.41	13.1 cm ³ /mol	8.65 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	320.95 °C	6.192 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
867.7 kJ/mol	764.85 °C	99.570 kJ/mol
Electronegativity	Electron Configuration	Group
1.69	[Kr] 4d10 5s2	12

Atomic Number	Name	Symbol
49	Indium	In
Atomic Weight	Atomic Volume	Density at 20 °C
114.82	15.7 cm ³ /mol	7.31 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	156.66 °C	3.263 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
558.3 kJ/mol	2079 °C	231.50 kJ/mol
Electronegativity	Electron Configuration	Group
1.78	[Kr] 4d10 5s2 5p1	13

Atomic Number	Name	Symbol
50	Tin	Sn
Atomic Weight	Atomic Volume	Density at 20 °C
118.69	16.3 cm ³ /mol	7.30 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	232.018 °C	7.029 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
708.6 kJ/mol	2622 °C	295.80 kJ/mol
Electronegativity	Electron Configuration	Group
1.88	[Kr] 4d10 5s2 5p2	14

Atomic Number	Name	Symbol
51	Antimony	Sb
Atomic Weight	Atomic Volume	Density at 20 °C
121.75	18.23 cm ³ /mol	6.684 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	630.79 °C	19.870 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
833.7 kJ/mol	1586 °C	77.140 kJ/mol
Electronegativity	Electron Configuration	Group
2.05	[Kr] 4d10 5s2 5p3	15

Atomic Number	Name	Symbol
52	Iodine	I
Atomic Weight	Atomic Volume	Density at 20 °C
127.60	20.5 cm ³ /mol	6.24 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	449.55 °C	17.490 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
869.2 kJ/mol	989 °C	52.550 kJ/mol
Electronegativity	Electron Configuration	Group
2.1	[Kr] 4d10 5s2 5p4	16

Atomic Number	Name	Symbol
53	Tellurium	Te
Atomic Weight	Atomic Volume	Density at 20 °C
126.9045	25.74 cm ³ /mol	4.93 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	113.55 °C	7.824 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1008.4 kJ/mol	184.25 °C	20.752 kJ/mol
Electronegativity	Electron Configuration	Group
2.66	[Kr] 4d10 5s2 5p5	17

Atomic Number	Name	Symbol
54	Xenon	Xe
Atomic Weight	Atomic Volume	Density at 20 °C
131.30	37.3 cm ³ /mol	0.00588 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-111.85 °C	2.297 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1170.4 kJ/mol	-108.15 °C	12.636 kJ/mol
Electronegativity	Electron Configuration	Group
2.6	[Kr] 4d10 5s2 5p6	18

Fifth Period

Atomic Number	Name	Symbol
55	Cesium	Cs
Atomic Weight	Atomic Volume	Density at 20 °C
132.9054	71.07 cm ³ /mol	1.873 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	28,5 °C	2.092 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
375.7 kJ/mol	704 °C	67.740 kJ/mol
Electronegativity	Electron Configuration	Group
0.79	[Xe] 6s1	1

Atomic Number	Name	Symbol
56	Barium	Ba
Atomic Weight	Atomic Volume	Density at 20 °C
137.33	39.24 cm ³ /mol	3.51 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	725.05 °C	7.750 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
502.9 kJ/mol	1849 °C	142.0 kJ/mol
Electronegativity	Electron Configuration	Group
0.82	[Xe] 6s2	2

Atomic Number	Name	Symbol
57	Lanthanum	La
Atomic Weight	Atomic Volume	Density at 20 °C
138.9055	20.73 cm ³ /mol	6.7 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	920.05 °C	6.20 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
538.1 kJ/mol	3419 °C	414.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.1	[Xe] 5d1 6s2	3

Atomic Number	Name	Symbol
58	Cerium	Ce
Atomic Weight	Atomic Volume	Density at 20 °C
140.12	20.67 cm ³ /mol	6.78 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	798.05 °C	5.460 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
527.4 kJ/mol	3469 °C	414.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.12	[Xe] 4f2 6s2	Lanthinide

Atomic Number	Name	Symbol
59	Praseodymium	Pr
Atomic Weight	Atomic Volume	Density at 20 °C
140.9077	20.8 cm ³ /mol	6.77 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	931 °C	6.890 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
523.2 kJ/mol	3019 °C	296.80 kJ/mol
Electronegativity	Electron Configuration	Group
1.13	[Xe] 4f3 6s2	Lanthinide

Atomic Number	Name	Symbol
60	Neodymium	Nd
Atomic Weight	Atomic Volume	Density at 20 °C
144.24	20.6 cm ³ /mol	7.0 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1010 °C	7.140 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
529.6 kJ/mol	3026 °C	273.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.14	[Xe] 4f4 6s2	Lanthinide

Atomic Number	Name	Symbol
61	Promethium	Pm
Atomic Weight	Atomic Volume	Density at 20 °C
(145)	22.39 cm ³ /mol	6.475 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1079 °C	7.140 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
535.9 kJ/mol	3000 °C	273.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.15	[Xe] 4f5 6s2	Lanthinide

Atomic Number	Name	Symbol
62	Samarium	Sm
Atomic Weight	Atomic Volume	Density at 20 °C
150.4	19.95 cm ³ /mol	7.54 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1071 °C	7.140 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
543.3 kJ/mol	1799 °C	273.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.17	[Xe] 4f6 6s2	Lanthinide

Atomic Number	Name	Symbol
63	Europium	Eu
Atomic Weight	Atomic Volume	Density at 20 °C
151.96	28.9 cm ³ /mol	5.259 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	821 °C	9.210 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
546.7 kJ/mol	1438 °C	143.50 kJ/mol
Electronegativity	Electron Configuration	Group
1.12	[Xe] 4f7 6s2	Lanthinide

Atomic Number	Name	Symbol
64	Gadolinium	Gd
Atomic Weight	Atomic Volume	Density at 20 °C
157.25	19.9 cm ³ /mol	7.895 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1310 °C	10.050 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
592.6 kJ/mol	3000 °C	359.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.17	[Xe] 4f7 5d1 6s2	Lanthinide

Atomic Number	Name	Symbol
65	Terbium	Tb
Atomic Weight	Atomic Volume	Density at 20 °C
158.9254	19.2 cm ³ /mol	8.27 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1359 °C	10.80 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
564.7 kJ/mol	2800 °C	330.90 kJ/mol
Electronegativity	Electron Configuration	Group
1.21	[Xe] 4f9 6s2	Lanthinide

Atomic Number	Name	Symbol
66	Dysprosium	Dy
Atomic Weight	Atomic Volume	Density at 20 °C
162.50	19.0 cm ³ /mol	8.536 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1408 °C	11.060 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
571.9 kJ/mol	1600 °C	230.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.2	[Xe] 4f10 6s2	Lanthinide

Atomic Number	Name	Symbol
67	Holmium	Ho
Atomic Weight	Atomic Volume	Density at 20 °C
164.9304	18.7 cm ³ /mol	8.80 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1469 °C	12.20 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
580.7 kJ/mol	2600 °C	241.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.23	[Xe] 4f11 6s2	Lanthinide

Atomic Number	Name	Symbol
68	Erbium	Er
Atomic Weight	Atomic Volume	Density at 20 °C
167.26	18.4 cm ³ /mol	9.05 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1521 °C	19.90 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
588.7 kJ/mol	2900 °C	261.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.24	[Xe] 4f12 6s2	Lanthinide

Atomic Number	Name	Symbol
69	Thulium	Tm
Atomic Weight	Atomic Volume	Density at 20 °C
168.9342	18.1 cm ³ /mol	9.33 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1544 °C	16.840 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
596.7 kJ/mol	1726 °C	191.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.25	[Xe] 4f13 6s2	Lanthinide

Atomic Number	Name	Symbol
70	Ytterbium	Yb
Atomic Weight	Atomic Volume	Density at 20 °C
173.04	24.79 cm ³ /mol	6.98 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	823 °C	7.660 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
603.4 kJ/mol	1426 °C	128.90 kJ/mol
Electronegativity	Electron Configuration	Group
1.21	[Xe] 4f14 6s2	Lanthinide

Atomic Number	Name	Symbol
71	Lutetium	Lu
Atomic Weight	Atomic Volume	Density at 20 °C
174.96	17.78 cm ³ /mol	9.85 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1655 °C	18.60 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
523.6 kJ/mol	3326 °C	355.90 kJ/mol
Electronegativity	Electron Configuration	Group
1.27	[Xe] 4f14 5d1 6s2	Lanthinide

Atomic Number	Name	Symbol
72	Hafnium	Hf
Atomic Weight	Atomic Volume	Density at 20 °C
178.49	13.6 cm ³ /mol	13.2 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2221 °C	24.06 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
680 kJ/mol	4449 °C	575.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.3	[Xe] 4f14 5d2 6s2	4

Atomic Number	Name	Symbol
73	Tantalum	Ta
Atomic Weight	Atomic Volume	Density at 20 °C
180.947	10.9 cm ³ /mol	16.6 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	3179 °C	31.60 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
761 kJ/mol	5534 °C	743.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.5	[Xe] 4f14 5d3 6s2	5

Atomic Number	Name	Symbol
74	Tungsten	W
Atomic Weight	Atomic Volume	Density at 20 °C
183.85	9.53 cm ³ /mol	19.3 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	3409 °C	35.40 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
770 kJ/mol	5500 °C	824.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.36	[Xe] 4f14 5d4 6s2	5

Atomic Number	Name	Symbol
75	Rhenium	Re
Atomic Weight	Atomic Volume	Density at 20 °C
186.207	8.85 cm ³ /mol	21.0 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	3022 °C	33.20 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
760 kJ/mol	5649 °C	715.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.9	[Xe] 4f14 5d5 6s2	7

Atomic Number	Name	Symbol
76	Osmium	Os
Atomic Weight	Atomic Volume	Density at 20 °C
190.2	8.49 cm ³ /mol	22.40 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	3044 °C	31.80 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
840 kJ/mol	5024 °C	746.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.2	[Xe] 4f14 5d6 6s2	8

Atomic Number	Name	Symbol
77	Iridium	Ir
Atomic Weight	Atomic Volume	Density at 20 °C
192.22	8.54 cm ³ /mol	22.42 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	2409 °C	26.10 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
880 kJ/mol	4549 °C	604.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.2	[Xe] 4f14 5d7 6s2	9

Atomic Number	Name	Symbol
78	Platinum	Pt
Atomic Weight	Atomic Volume	Density at 20 °C
195.09	9.10 cm ³ /mol	21.45 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1771 °C	19.60 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
870 kJ/mol	4169 °C	510.0 kJ/mol
Electronegativity	Electron Configuration	Group
2.28	[Xe] 4f14 5d9 6s1	10

Atomic Number	Name	Symbol
79	Gold	Au
Atomic Weight	Atomic Volume	Density at 20 °C
196.9665	10.2 cm ³ /mol	19.32 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1064.48 °C	12.550 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
890.1 kJ/mol	2808 °C	334.40 kJ/mol
Electronegativity	Electron Configuration	Group
2.54	[Xe] 4f14 5d10 6s1	11

Atomic Number	Name	Symbol
80	Mercury	Hg
Atomic Weight	Atomic Volume	Density at 20 °C
200.59	14.82 cm ³ /mol	13.546 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
liquid	-38.82 °C	2.295 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1007 kJ/mol	356.85 °C	59.229 kJ/mol
Electronegativity	Electron Configuration	Group
2	[Xe] 4f14 5d10 6s2	12

Atomic Number	Name	Symbol
81	Thallium	Tl
Atomic Weight	Atomic Volume	Density at 20 °C
204.37	17.2 cm ³ /mol	11.85 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	303.55 °C	4.142 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
589.4 kJ/mol	1456 °C	164.10 kJ/mol
Electronegativity	Electron Configuration	Group
1.83	[Xe] 4f14 5d10 6s2 6p1	13

Atomic Number	Name	Symbol
82	Lead	Pb
Atomic Weight	Atomic Volume	Density at 20 °C
207.2	18.17 cm ³ /mol	11.34 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	327.552 °C	4.799 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
715.6 kJ/mol	1750 °C	177.70 kJ/mol
Electronegativity	Electron Configuration	Group
2.1	[Xe] 4f14 5d10 6s2 6p2	14

Atomic Number	Name	Symbol
83	Bismuth	Bi
Atomic Weight	Atomic Volume	Density at 20 °C
208.9804	21.3 cm ³ /mol	9.8 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	271.35 °C	11.30 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
703.3 kJ/mol	1563 °C	104.80 kJ/mol
Electronegativity	Electron Configuration	Group
2.02	[Xe] 4f14 5d10 6s2 6p3	15

Atomic Number	Name	Symbol
84	Polonium	Po
Atomic Weight	Atomic Volume	Density at 20 °C
(209)	22.23 cm ³ /mol	9.4 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	254 °C	13 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
812 kJ/mol	962 °C	102.91 kJ/mol
Electronegativity	Electron Configuration	Group
2	[Xe] 4f14 5d10 6s2 6p4	16

Atomic Number	Name	Symbol
85	Astatine	At
Atomic Weight	Atomic Volume	Density at 20 °C
(210)	N/A cm ³ /mol	N/A g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	300 °C	N/A kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
890 kJ/mol	337 °C	40 kJ/mol
Electronegativity	Electron Configuration	Group
2.2	[Xe] 4f14 5d10 6s2 6p5	17

Atomic Number	Name	Symbol
86	Radon	Rn
Atomic Weight	Atomic Volume	Density at 20 °C
(222)	50.5 cm ³ /mol	0.00973 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
gas	-70.95 °C	2.890 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
1037 kJ/mol	-63 °C	16.40 kJ/mol
Electronegativity	Electron Configuration	Group
N/A	[Xe] 4f14 5d10 6s2 6p6	18

Sixth Period

Atomic Number	Name	Symbol
87	Francium	Fr
Atomic Weight	Atomic Volume	Density at 20 °C
(223)	N/A cm ³ /mol	1.87 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	27 °C	2 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
384 kJ/mol	677 °C	65 kJ/mol
Electronegativity	Electron Configuration	Group
0.7	[Rn] 7s1	1

Atomic Number	Name	Symbol
88	Radium	Ra
Atomic Weight	Atomic Volume	Density at 20 °C
226.0254	45.20 cm ³ /mol	5 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	236.25 °C	8.5 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
509.4 kJ/mol	1700 °C	113 kJ/mol
Electronegativity	Electron Configuration	Group
0.9	[Rn] 7s2	2

Atomic Number	Name	Symbol
89	Actinium	Ac
Atomic Weight	Atomic Volume	Density at 20 °C
(227)	22.54 cm ³ /mol	10.07 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1050 °C	14 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
499 kJ/mol	2470 °C	400 kJ/mol
Electronegativity	Electron Configuration	Group
1.1	[Rn] 6d1 7s2	3

Atomic Number	Name	Symbol
90	Thorium	Th
Atomic Weight	Atomic Volume	Density at 20 °C
232.0381	19.9 cm ³ /mol	11.7 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1749 °C	16.10 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
587 kJ/mol	4850 °C	514.40 kJ/mol
Electronegativity	Electron Configuration	Group
1.3	[Rn] 6d2 7s2	Actinide

Atomic Number	Name	Symbol
91	Protactinium	Pa
Atomic Weight	Atomic Volume	Density at 20 °C
231.0359	15.0 cm ³ /mol	15.4 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1600 °C	12.30 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
568 kJ/mol	4226 °C	481 kJ/mol
Electronegativity	Electron Configuration	Group
1.5	[Rn] 5f ² 6d ¹ 7s ²	Actinide

Atomic Number	Name	Symbol
92	Uranium	U
Atomic Weight	Atomic Volume	Density at 20 °C
238.029	12.59 cm ³ /mol	18.9 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	1132 °C	8.520 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
584 kJ/mol	3930 °C	477.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.7	[Rn] 5f ³ 6d ¹ 7s ²	Actinide

Atomic Number	Name	Symbol
93	Neptunium	Np
Atomic Weight	Atomic Volume	Density at 20 °C
237.0482	11.62 cm ³ /mol	20.45 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	640 °C	5.190 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
597 kJ/mol	3800 °C	336 kJ/mol
Electronegativity	Electron Configuration	Group
1.3	[Rn] 5f ⁴ 6d ¹ 7s ²	Actinide

Atomic Number	Name	Symbol
94	Plutonium	Pu
Atomic Weight	Atomic Volume	Density at 20 °C
(244)	12.32 cm ³ /mol	19.8 g/cm ³
State at 20 °C	Melting Point	Heat of Fusion
solid	641 °C	2.840 kJ/mol
1st Ionization Energy	Boiling Point	Heat of Vaporization
585 kJ/mol	3230 °C	344.0 kJ/mol
Electronegativity	Electron Configuration	Group
1.3	[Rn] 5f6 7s2	Actinide

Not very common atoms

Atomic Number	Name	Symbol
95	Americium	Am
Atomic Weight	Electron Configuration	Group
(243)	[Rn] 5f7 7s2	Actinide

Atomic Number	Name	Symbol
96	Curium	Cm
Atomic Weight	Electron Configuration	Group
(247)	[Rn] 5f7 6d1 7s2	Actinide

Atomic Number	Name	Symbol
97	Berkelium	Bk
Atomic Weight	Electron Configuration	Group
(247)	[Rn] 5f9 7s2	Actinide

Atomic Number	Name	Symbol
98	Californium	Cf
Atomic Weight	Electron Configuration	Group
(251)	[Rn] 5f10 7s2	Actinide

Atomic Number	Name	Symbol
99	Einsteinium	Ef
Atomic Weight	Electron Configuration	Group
(254)	[Rn] 5f11 7s2	Actinide

Atomic Number	Name	Symbol
100	Fermium	Fm
Atomic Weight	Electron Configuration	Group
(257)	[Rn] 5f12 7s2	Actinide

Atomic Number	Name	Symbol
101	Mendelevium	Md
Atomic Weight	Electron Configuration	Group
(258)	[Rn] 5f13 7s2	Actinide

Atomic Number	Name	Symbol
102	Nobelium	No
Atomic Weight	Electron Configuration	Group
(259)	[Rn] 5f14 7s2	Actinide

Atomic Number	Name	Symbol
103	Lawrencium	Lr
Atomic Weight	Electron Configuration	Group
(260)	[Rn] 5f14 6d1 7s2	Actinide

Atomic Number	Name	Symbol
104	Rutherfordium	Rf
Atomic Weight	Electron Configuration	Group
(261)	[Rn] 5f14 6d2 7s2	4

Atomic Number	Name	Symbol
105	Dubnium	Db
Atomic Weight	Electron Configuration	Group
(262)	[Rn] 5f14 6d3 7s2	5

Atomic Number	Name	Symbol
106	Seaborgium	Sg
Atomic Weight	Electron Configuration	Group
(263)	[Rn] 5f14 6d4 7s2	6

Atomic Number	Name	Symbol
107	Bohrium	Bh
Atomic Weight	Electron Configuration	Group
(262)	[Rn] 5f14 6d5 7s2	7

Atomic Number	Name	Symbol
108	Hassium	hs
Atomic Weight	Electron Configuration	Group
(265)	[Rn] 5f14 6d6 7s2	8

Atomic Number	Name	Symbol
109	Meitnerium	Mt
Atomic Weight	Electron Configuration	Group
(266)	[Rn] 5f14 6d7 7s2	9

Atomic Number	Name	Symbol
110	Darmstadtium	Ds
Atomic Weight	Electron Configuration	Group
(272)	[Rn] 5f14 6d8 7s2	10

Atomic Number	Name	Symbol
111	Roentgenium	Rg
Atomic Weight	Electron Configuration	Group
(272)	[Rn] 5f14 6d10 7s1	11

Atomic Number	Name	Symbol
112	Ununbium	Uub
Atomic Number	Name	Symbol
113	Ununtrium	Uut
Atomic Number	Name	Symbol
114	Ununquadium	Uuq
Atomic Number	Name	Symbol
115	Ununpentium	Uup
Atomic Number	Name	Symbol
116	Ununhexium	Uuh
Atomic Number	Name	Symbol
117	Ununseptium	Uus
Atomic Number	Name	Symbol
118	Ununoctium	Uuo

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