

1.00794

-1
+1

H

1

State at 25°C: gas

Density: 0.0001 g/cm³

Melting Point: 14.06 K

Boiling Point: 20.4 K

Electron Affinity: 72.7711 kJ/mol

1st Ion Energy: 1312 kJ/mol

Electronegativity: 2.20

Atomic Radius: 37.1 pm

Hydrogen

4.0026

He

2

State at 25°C: gas

Density: 0.0002 g/cm³

Melting Point: 0.8 K

Boiling Point: 4.2 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 2372.3 kJ/mol

Electronegativity:

Atomic Radius: 31 pm

Helium

6.941

+1

Li

3

State at 25°C: solid

Density: 0.534 g/cm³

Melting Point: 453.74 K

Boiling Point: 1620 K

Electron Affinity: 59.63 kJ/mol

1st Ion Energy: 520.2 kJ/mol

Electronegativity: 0.98

Atomic Radius: 152 pm

Lithium

9.01282

+2

Be

4

State at 25°C: solid

Density: 1.848 g/cm³

Melting Point: 1551.2 K

Boiling Point: 2773 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 899.4 kJ/mol

Electronegativity: 1.57

Atomic Radius: 112 pm

Beryllium

10.811

+3

B

5

State at 25°C: solid

Density: 2.35 g/cm³

Melting Point: 2352.2 K

Boiling Point: 3923.2 K

Electron Affinity: 26.7 kJ/mol

1st Ion Energy: 800.6 kJ/mol

Electronegativity: 2.04

Atomic Radius: 85 pm

BORON

12.011

-4
+4

C

6

State at 25°C: solid

Density: 2.266 g/cm³

Melting Point: 3823.2 K

Boiling Point: 5100 K

Electron Affinity: 121.85 kJ/mol

1st Ion Energy: 1086.4 kJ/mol

Electronegativity: 2.55

Atomic Radius: 77.2 pm

Carbon

14.0067

N

-3
+3
+5

7

State at 25°C: gas

Density: 0.0012 g/cm³

Melting Point: 63.34 K

Boiling Point: 77.4 K

Electron Affinity: 7 kJ/mol

1st Ion Energy: 1402.3 kJ/mol

Electronegativity: 3.04

Atomic Radius: 70 pm

Nitrogen

15.9994

-2

O

8

State at 25°C: gas

Density: 0.0014 g/cm³

Melting Point: 54.8 K

Boiling Point: 90.2 K

Electron Affinity: 140.9788 kJ/mol

1st Ion Energy: 1313.9 kJ/mol

Electronegativity: 3.44

Atomic Radius: 73 pm

Oxygen

18.9984

-1

F

9

State at 25°C: gas

Density: 0.0017 g/cm³

Melting Point: 53.58 K

Boiling Point: 85.1 K

Electron Affinity: 328 kJ/mol

1st Ion Energy: 1681 kJ/mol

Electronegativity: 3.98

Atomic Radius: 72 pm

Fluorine

20.1797

Ne

10

State at 25°C: gas

Density: 0.0009 g/cm³

Melting Point: 24.53 K

Boiling Point: 27.1 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 2080.6 kJ/mol

Electronegativity:

Atomic Radius: 71 pm

Neon

22.9897

+1

Na

11

State at 25°C: solid

Density: 0.968 g/cm³

Melting Point: 371.01 K

Boiling Point: 1154.6 K

Electron Affinity: 52.868 kJ/mol

1st Ion Energy: 495.8 kJ/mol

Electronegativity: 0.93

Atomic Radius: 186 pm

sodium

24.305

+2

Mg

12

State at 25°C: solid

Density: 1.738 g/cm³

Melting Point: 922 K

Boiling Point: 1378 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 737.7 kJ/mol

Electronegativity: 1.31

Atomic Radius: 160 pm

Magnesium

26.98

+3

Al

13

State at 25°C: solid

Density: 2.699 g/cm³

Melting Point: 933.57 K

Boiling Point: 2740 K

Electron Affinity: 42.6 kJ/mol

1st Ion Energy: 577.6 kJ/mol

Electronegativity: 1.61

Atomic Radius: 143 pm

Aluminum

28.0855

-4
+4

Si

14

State at 25°C: solid

Density: 2.336 g/cm³

Melting Point: 1683.2 K

Boiling Point: 3553 K

Electron Affinity: 133.6 kJ/mol

1st Ion Energy: 786.4 kJ/mol

Electronegativity: 1.90

Atomic Radius: 117.6 pm

silicon

30.9737

P

-3
+3
+5

15

State at 25°C: solid

Density: 1.823 g/cm³

Melting Point: 317.3 K

Boiling Point: 553.7 K

Electron Affinity: 72.07 kJ/mol

1st Ion Energy: 1011.7 kJ/mol

Electronegativity: 2.19

Atomic Radius: 110 pm

Phosphorous

32.066

S

-2
+2
+4
+6

16

State at 25°C: solid

Density: 2.069 g/cm³

Melting Point: 386 K

Boiling Point: 717.9 K

Electron Affinity: 200.4144 kJ/mol

1st Ion Energy: 999.6 kJ/mol

Electronegativity: 2.58

Atomic Radius: 103 pm

Sulfur

35.4527

Cl

17

-1
+1
+3
+5

State at 25°C: gas

Density: 0.0032 g/cm³

Melting Point: 172.22 K

Boiling Point: 239.2 K

Electron Affinity: 349 kJ/mol

1st Ion Energy: 1251.1 kJ/mol

Electronegativity: 3.16

Atomic Radius: 100 pm

Chlorine

39.948

Ar

18

State at 25°C: gas

Density: 0.0018 g/cm³

Melting Point: 84 K

Boiling Point: 87.3 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 1520.5 kJ/mol

Electronegativity:

Atomic Radius: 98 pm

Argon

39.098

+1

K

19

State at 25°C: solid

Density: 0.856 g/cm³

Melting Point: 336.5 K

Boiling Point: 1038.7 K

Electron Affinity: 48.385 kJ/mol

1st Ion Energy: 418.8 kJ/mol

Electronegativity: 0.82

Atomic Radius: 227 pm

Potassium

40.078

+2

Ca

20

State at 25°C: solid

Density: 1.55 g/cm³

Melting Point: 1112.2 K

Boiling Point: 1767 K

Electron Affinity: 2.37 kJ/mol

1st Ion Energy: 589.8 kJ/mol

Electronegativity: 1.00

Atomic Radius: 197 pm

Calcium

44.956

+3

Sc

21

State at 25°C: solid

Density: 3 g/cm³

Melting Point: 1812.2 K

Boiling Point: 3021 K

Electron Affinity: 18.1 kJ/mol

1st Ion Energy: 631 kJ/mol

Electronegativity: 1.36

Atomic Radius: 162 pm

Scandium

47.88

+2
+3
+4

Ti

22

State at 25°C: solid

Density: 4.5 g/cm³

Melting Point: 1933.2 K

Boiling Point: 3558 K

Electron Affinity: 7.6 kJ/mol

1st Ion Energy: 658 kJ/mol

Electronegativity: 1.54

Atomic Radius: 147 pm

Titanium

50.9415

+2

+3

+5

V

23

State at 25°C: solid

Density: 6.11 g/cm³

Melting Point: 2163.2 K

Boiling Point: 3623 K

Electron Affinity: 50.7 kJ/mol

1st Ion Energy: 650.3 kJ/mol

Electronegativity: 1.63

Atomic Radius: 134 pm

vanadium

51.9961

+2

+3

+6

Cr

24

State at 25°C: solid

Density: 7.14 g/cm³

Melting Point: 2130.2 K

Boiling Point: 2963 K

Electron Affinity: 64.3 kJ/mol

1st Ion Energy: 652.8 kJ/mol

Electronegativity: 1.66

Atomic Radius: 128 pm

Chromium

54.93

Mn

+2

+4

+7

25

State at 25°C: solid

Density: 7.43 g/cm³

Melting Point: 1517.2 K

Boiling Point: 2333 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 717.4 kJ/mol

Electronegativity: 1.55

Atomic Radius: 127 pm

Manganese

55.85

+2
+3

Fe

26

State at 25°C: solid

Density: 7.874 g/cm³

Melting Point: 1808.2 K

Boiling Point: 3023 K

Electron Affinity: 15.7 kJ/mol

1st Ion Energy: 759.3 kJ/mol

Electronegativity: 1.90

Atomic Radius: 126 pm

iron

58.93

+2
+3

Co

27

State at 25°C: solid

Density: 8.9 g/cm³

Melting Point: 1768.2 K

Boiling Point: 3373 K

Electron Affinity: 63.8 kJ/mol

1st Ion Energy: 758.4 kJ/mol

Electronegativity: 1.88

Atomic Radius: 125 pm

cobalt

58.6934 +2

Ni

28

State at 25°C: solid

Density: 8.908 g/cm³

Melting Point: 1726.2 K

Boiling Point: 3193 K

Electron Affinity: 111.5 kJ/mol

1st Ion Energy: 736.7 kJ/mol

Electronegativity: 1.91

Atomic Radius: 124 pm

nickel

63.546

+1
+2

Cu

29

State at 25°C: solid

Density: 8.95 g/cm³

Melting Point: 1356.6 K

Boiling Point: 2843 K

Electron Affinity: 118.5 kJ/mol

1st Ion Energy: 745.4 kJ/mol

Electronegativity: 1.95

Atomic Radius: 128 pm

Copper

65.39

+2

Zn

30

State at 25°C: solid

Density: 7.14 g/cm³

Melting Point: 692.78 K

Boiling Point: 1180 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 906.4 kJ/mol

Electronegativity: 1.65

Atomic Radius: 134 pm

Zinc

69.723

+2
+3

Ga

31

State at 25°C: solid

Density: 5.904 g/cm³

Melting Point: 302.98 K

Boiling Point: 2676 K

Electron Affinity: 28.9 kJ/mol

1st Ion Energy: 578.8 kJ/mol

Electronegativity: 1.81

Atomic Radius: 135 pm

Gallium

72.61

Ge

-4
+2
+4

32

State at 25°C: solid

Density: 5.323 g/cm³

Melting Point: 1210.6 K

Boiling Point: 3123 K

Electron Affinity: 119 kJ/mol

1st Ion Energy: 762.1 kJ/mol

Electronegativity: 2.01

Atomic Radius: 122.3 pm

Germanium

74.9215

As

-3
+3
+5

33

State at 25°C: solid

Density: 5.778 g/cm³

Melting Point: 886 K

Boiling Point: 886.2 K

Electron Affinity: 78 kJ/mol

1st Ion Energy: 946.5 kJ/mol

Electronegativity: 2.18

Atomic Radius: 120 pm

Arsenic

78.96

Se

34

-2
+2
+4
+6

State at 25°C: solid

Density: 4.285 g/cm³

Melting Point: 490.2 K

Boiling Point: 958 K

Electron Affinity: 194.97 kJ/mol

1st Ion Energy: 940.9 kJ/mol

Electronegativity: 2.55

Atomic Radius: 119 pm

selenium

79.904

Br

35

-1
+1
+3
+5

State at 25°C: liquid

Density: 3.1 g/cm³

Melting Point: 266 K

Boiling Point: 332.7 K

Electron Affinity: 324.7 kJ/mol

1st Ion Energy: 1139.9 kJ/mol

Electronegativity: 2.96

Atomic Radius: 114 pm

Bromine

83.8

+2

Kr

36

State at 25°C: gas

Density: 0.0037 g/cm³

Melting Point: 116.6 K

Boiling Point: 119.7 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 1350.7 kJ/mol

Electronegativity: 3.00

Atomic Radius: 112 pm

Krypton

85.47

+1

Rb

37

State at 25°C: solid

Density: 1.532 g/cm³

Melting Point: 312.09 K

Boiling Point: 961 K

Electron Affinity: 46.885 kJ/mol

1st Ion Energy: 403 kJ/mol

Electronegativity: 0.82

Atomic Radius: 248 pm

Rubidium

87.62

+2

Sr

38

State at 25°C: solid

Density: 2.63 g/cm³

Melting Point: 1042.2 K

Boiling Point: 1654 K

Electron Affinity: 5.03 kJ/mol

1st Ion Energy: 549.5 kJ/mol

Electronegativity: 0.95

Atomic Radius: 215 pm

Strontium

88.9058 +3

Y

39

State at 25°C: solid

Density: 4.5 g/cm³

Melting Point: 1796.2 K

Boiling Point: 3537 K

Electron Affinity: 29.6 kJ/mol

1st Ion Energy: 615.6 kJ/mol

Electronegativity: 1.22

Atomic Radius: 180 pm

Yttrium

91.224

+4

Zr

40

State at 25°C: solid

Density: 6.51 g/cm³

Melting Point: 2125.2 K

Boiling Point: 4473 K

Electron Affinity: 41.1 kJ/mol

1st Ion Energy: 660 kJ/mol

Electronegativity: 1.33

Atomic Radius: 160 pm

Zirconium

92.9063

+5

Nb

41

State at 25°C: solid

Density: 8.57 g/cm³

Melting Point: 2741.2 K

Boiling Point: 5031 K

Electron Affinity: 86.2 kJ/mol

1st Ion Energy: 663.8 kJ/mol

Electronegativity: 1.60

Atomic Radius: 146 pm

niobium

95.94

+4

+6

Mo

42

State at 25°C: solid

Density: 10.28 g/cm³

Melting Point: 2890.2 K

Boiling Point: 4923 K

Electron Affinity: 72 kJ/mol

1st Ion Energy: 684.9 kJ/mol

Electronegativity: 2.24

Atomic Radius: 139 pm

Molybdenum

[97.907]

+4
+7

Tc

43

State at 25°C: solid

Density: 11.5 g/cm³

Melting Point: 2445.2 K

Boiling Point: 4840 K

Electron Affinity: 53 kJ/mol

1st Ion Energy: 702.4 kJ/mol

Electronegativity: 1.90

Atomic Radius: 136 pm

Technetium

101.07

+3

+4

Ru

44

State at 25°C: solid

Density: 12.41 g/cm³

Melting Point: 2583.2 K

Boiling Point: 4323 K

Electron Affinity: 101 kJ/mol

1st Ion Energy: 711.1 kJ/mol

Electronegativity: 2.20

Atomic Radius: 134 pm

Ruthenium

102.905

+3

Rh

45

State at 25°C: solid

Density: 12.39 g/cm³

Melting Point: 2238.2 K

Boiling Point: 4033 K

Electron Affinity: 109.7 kJ/mol

1st Ion Energy: 719.8 kJ/mol

Electronegativity: 2.28

Atomic Radius: 134 pm

Rhodium

106.42

+2

+4

Pd

46

State at 25°C: solid

Density: 11.99 g/cm³

Melting Point: 1827.2 K

Boiling Point: 3213 K

Electron Affinity: 53.7 kJ/mol

1st Ion Energy: 804.7 kJ/mol

Electronegativity: 2.20

Atomic Radius: 137 pm

Palladium

107.868

+1

Ag

47

State at 25°C: solid

Density: 10.49 g/cm³

Melting Point: 1235.1 K

Boiling Point: 2428 K

Electron Affinity: 125.6 kJ/mol

1st Ion Energy: 731 kJ/mol

Electronegativity: 1.93

Atomic Radius: 144 pm

Silver

112.411

+2

Cd

48

State at 25°C: solid

Density: 8.65 g/cm³

Melting Point: 594.1 K

Boiling Point: 1038 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 867.7 kJ/mol

Electronegativity: 1.69

Atomic Radius: 151 pm

Cadmium

114.82

+3

In

49

State at 25°C: solid

Density: 7.31 g/cm³

Melting Point: 429.81 K

Boiling Point: 2353 K

Electron Affinity: 28.9 kJ/mol

1st Ion Energy: 558.3 kJ/mol

Electronegativity: 1.78

Atomic Radius: 167 pm

Iridium

118.71

Sn

-4
+2
+4

50

State at 25°C: solid

Density: 7.265 g/cm³

Melting Point: 505.168 K

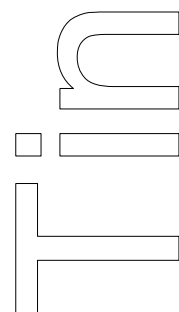
Boiling Point: 2896 K

Electron Affinity: 107.3 kJ/mol

1st Ion Energy: 708.6 kJ/mol

Electronegativity: 1.88

Atomic Radius: 140.5 pm



121.57

Sb

-3
+3
+5

51

State at 25°C: solid

Density: 6.697 g/cm³

Melting Point: 903.94 K

Boiling Point: 1860 K

Electron Affinity: 103 kJ/mol

1st Ion Energy: 833.7 kJ/mol

Electronegativity: 2.05

Atomic Radius: 140 pm

Antimony

127.6

Te

-2
+2
+4
+6

52

State at 25°C: solid

Density: 6.25 g/cm³

Melting Point: 722.7 K

Boiling Point: 1263 K

Electron Affinity: 190.16 kJ/mol

1st Ion Energy: 869.2 kJ/mol

Electronegativity: 2.10

Atomic Radius: 142 pm

Tellurium

126.904

I

-1
+1
+3
+5

53

State at 25°C: solid

Density: 4.94 g/cm³

Melting Point: 386.7 K

Boiling Point: 458.4 K

Electron Affinity: 295.16 kJ/mol

1st Ion Energy: 1008.4 kJ/mol

Electronegativity: 2.66

Atomic Radius: 133 pm

lobidie

131.29

+2

Xe

+4

+6

54

State at 25°C: gas

Density: 0.0059 g/cm³

Melting Point: 161.3 K

Boiling Point: 165 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 1170.4 kJ/mol

Electronegativity: 2.60

Atomic Radius: 131 pm

xenon

132.905

+1

Cs

55

State at 25°C: solid

Density: 1.9 g/cm³

Melting Point: 301.6 K

Boiling Point: 978 K

Electron Affinity: 45.506 kJ/mol

1st Ion Energy: 375.7 kJ/mol

Electronegativity: 0.79

Atomic Radius: 265 pm

cesium

137.327 +2

Ba

56

State at 25°C: solid

Density: 3.62 g/cm³

Melting Point: 998.2 K

Boiling Point: 2123 K

Electron Affinity: 13.95 kJ/mol

1st Ion Energy: 502.9 kJ/mol

Electronegativity: 0.89

Atomic Radius: 222 pm

Barium

138.91

+3

La

57

State at 25°C: solid

Density: 6.17 g/cm³

Melting Point: 1193.2 K

Boiling Point: 3693 K

Electron Affinity: 48 kJ/mol

1st Ion Energy: 538.1 kJ/mol

Electronegativity: 1.10

Atomic Radius: 187 pm

Lanthanum

140.115

+3

+4

Ce

58

State at 25°C: solid

Density: 6.773 g/cm³

Melting Point: 1071.2 K

Boiling Point: 3743 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 527.4 kJ/mol

Electronegativity: 1.12

Atomic Radius: 182 pm

Cerium

140.907

+3

Pr

59

State at 25°C: solid

Density: 6.475 g/cm³

Melting Point: 1204.2 K

Boiling Point: 3293 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 523.2 kJ/mol

Electronegativity: 1.13

Atomic Radius: 182 pm

Praseodymium

144.24

+3

Nd

60

State at 25°C: solid

Density: 7.003 g/cm³

Melting Point: 1283.2 K

Boiling Point: 3300 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 529.6 kJ/mol

Electronegativity: 1.14

Atomic Radius: 181 pm

Neodymium

144.9128 +3

Pm

61

State at 25°C: solid

Density: 7.2 g/cm³

Melting Point: 1353.2 K

Boiling Point:

Electron Affinity: 50 kJ/mol

1st Ion Energy: 535.9 kJ/mol

Electronegativity: 1.15

Atomic Radius: 183 pm

Promethium

150.36

+3

Sm

62

State at 25°C: solid

Density: 7.536 g/cm³

Melting Point: 1345.2 K

Boiling Point: 2073 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 543.3 kJ/mol

Electronegativity: 1.17

Atomic Radius: 180 pm

samarium

151.965

+2
+3

Eu

63

State at 25°C: solid

Density: 5.245 g/cm³

Melting Point: 1095.2 K

Boiling Point: 1712 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 546.7 kJ/mol

Electronegativity: 1.12

Atomic Radius: 208 pm

Europium

157.25

+3

Gd

64

State at 25°C: solid

Density: 7.886 g/cm³

Melting Point: 1584.2 K

Boiling Point: 3273 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 592.6 kJ/mol

Electronegativity: 1.17

Atomic Radius: 180 pm

Gadolinium

158.925

+3

Tb

65

State at 25°C: solid

Density: 8.253 g/cm³

Melting Point: 1633.2 K

Boiling Point: 3073 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 564.7 kJ/mol

Electronegativity: 1.21

Atomic Radius: 177 pm

Terbium

162.5

+3

Dy

66

State at 25°C: solid

Density: 8.559 g/cm³

Melting Point: 1682.2 K

Boiling Point: 2873 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 571.9 kJ/mol

Electronegativity: 1.20

Atomic Radius: 178 pm

dysprosium

164.903

+3

Ho

67

State at 25°C: solid

Density: 8.78 g/cm³

Melting Point: 1743.2 K

Boiling Point: 2873 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 580.7 kJ/mol

Electronegativity: 1.23

Atomic Radius: 176 pm

holmium

167.26

+3

Er

68

State at 25°C: solid

Density: 9.045 g/cm³

Melting Point: 1795.2 K

Boiling Point: 3173 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 588.7 kJ/mol

Electronegativity: 1.24

Atomic Radius: 176 pm

erbium

168.934 +3

Tm

69

State at 25°C: solid

Density: 9.318 g/cm³

Melting Point: 1818.2 K

Boiling Point: 2000 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 596.7 kJ/mol

Electronegativity: 1.25

Atomic Radius: 176 pm

Thulium

173.04

+3

Yb

70

State at 25°C: solid

Density: 6.973 g/cm³

Melting Point: 1097.2 K

Boiling Point: 1700 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 603.4 kJ/mol

Electronegativity: 1.21

Atomic Radius: 193 pm

ytterbium

174.967

+3

Lu

71

State at 25°C: solid

Density: 9.84 g/cm³

Melting Point: 1929.2 K

Boiling Point: 3600 K

Electron Affinity: 50 kJ/mol

1st Ion Energy: 523.6 kJ/mol

Electronegativity: 1.27

Atomic Radius: 174 pm

Lutetium

178.49

+4

Hf

72

State at 25°C: solid

Density: 13.28 g/cm³

Melting Point: 2495.2 K

Boiling Point: 4723 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 680 kJ/mol

Electronegativity: 1.30

Atomic Radius: 159 pm

Hafnium

180.947

+5

Ta

73

State at 25°C: solid

Density: 16.65 g/cm³

Melting Point: 3269.2 K

Boiling Point: 5807 K

Electron Affinity: 31.1 kJ/mol

1st Ion Energy: 761 kJ/mol

Electronegativity: 1.50

Atomic Radius: 146 pm

Tantalum

183.85

+4

+6

W

74

State at 25°C: solid

Density: 19.3 g/cm³

Melting Point: 3683.2 K

Boiling Point: 5773 K

Electron Affinity: 78.6 kJ/mol

1st Ion Energy: 770 kJ/mol

Electronegativity: 2.36

Atomic Radius: 139 pm

Tungsten

186.2

+4

Re

75

State at 25°C: solid

Density: 21 g/cm³

Melting Point: 3453.2 K

Boiling Point: 5923 K

Electron Affinity: 14.5 kJ/mol

1st Ion Energy: 760 kJ/mol

Electronegativity: 1.90

Atomic Radius: 137 pm

rhennium

190.2

+4

Os

76

State at 25°C: solid

Density: 22.57 g/cm³

Melting Point: 3318.2 K

Boiling Point: 5298 K

Electron Affinity: 106.1 kJ/mol

1st Ion Energy: 840 kJ/mol

Electronegativity: 2.20

Atomic Radius: 135 pm

osmium

192.22

+3

+4

Ir

77

State at 25°C: solid

Density: 22.61 g/cm³

Melting Point: 2683.2 K

Boiling Point: 4823 K

Electron Affinity: 151 kJ/mol

1st Ion Energy: 880 kJ/mol

Electronegativity: 2.20

Atomic Radius: 136 pm

Iridium

195.08

+2

+4

Pt

78

State at 25°C: solid

Density: 21.41 g/cm³

Melting Point: 2045.2 K

Boiling Point: 4443 K

Electron Affinity: 205.3 kJ/mol

1st Ion Energy: 870 kJ/mol

Electronegativity: 2.28

Atomic Radius: 139 pm

Platinum

196.966

+1
+3

Au

79

State at 25°C: solid

Density: 19.32 g/cm³

Melting Point: 1337.63 K

Boiling Point: 3081 K

Electron Affinity: 222.752 kJ/mol

1st Ion Energy: 890.1 kJ/mol

Electronegativity: 2.54

Atomic Radius: 144 pm

gold

200.59

+1
+2

Hg

80

State at 25°C: liquid

Density: 13.534 g/cm³

Melting Point: 234.33 K

Boiling Point: 630 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 1007 kJ/mol

Electronegativity: 2.00

Atomic Radius: 151 pm

Mercury

204.383

+1

+3

Tl

81

State at 25°C: solid

Density: 11.85 g/cm³

Melting Point: 576.7 K

Boiling Point: 1730 K

Electron Affinity: 19.2 kJ/mol

1st Ion Energy: 589.4 kJ/mol

Electronegativity: 1.83

Atomic Radius: 170 pm

Thallium

207.2

+2

+4

Pb

82

State at 25°C: solid

Density: 11.342 g/cm³

Melting Point: 600.702 K

Boiling Point: 2024 K

Electron Affinity: 35.1 kJ/mol

1st Ion Energy: 715.6 kJ/mol

Electronegativity: 2.10

Atomic Radius: 146 pm

Lead

208.980 +3

Bi

83

State at 25°C: solid

Density: 9.808 g/cm³

Melting Point: 544.5 K

Boiling Point: 1837 K

Electron Affinity: 91.3 kJ/mol

1st Ion Energy: 703.3 kJ/mol

Electronegativity: 2.02

Atomic Radius: 150 pm

ultraviolet
bis
Bi

[208.98]

Po

-2
+2
+4

84

State at 25°C: solid

Density: 9.142 g/cm³

Melting Point: 527.2 K

Boiling Point: 1235 K

Electron Affinity: 183.3 kJ/mol

1st Ion Energy: 812 kJ/mol

Electronegativity: 2.00

Atomic Radius: 168 pm

Polonium

[209.98]

-1
+1

At

85

State at 25°C: solid

Density: $\sim 7 \text{ g/cm}^3$

Melting Point: 575.2 K

Boiling Point: 610.15 K

Electron Affinity: 270.1 kJ/mol

1st Ion Energy: 890 kJ/mol

Electronegativity: 2.20

Atomic Radius:

Astatine

[222.02]

Rn

86

State at 25°C: gas

Density: 0.0097 g/cm³

Melting Point: 202.2 K

Boiling Point: 211 K

Electron Affinity: 0 kJ/mol

1st Ion Energy: 1037 kJ/mol

Electronegativity:

Atomic Radius: 120 pm

Radon

[223.02]

+1

Fr

87

State at 25°C: solid

Density: 1.87 g/cm³

Melting Point: 300.2 K

Boiling Point: 950.15 K

Electron Affinity:

1st Ion Energy: 384 kJ/mol

Electronegativity: 0.7

Atomic Radius:

Franadium

[226.03] +2

Ra

88

State at 25°C: solid

Density: 5.5 g/cm³

Melting Point: 973.2 K

Boiling Point: 1973 K

Electron Affinity:

1st Ion Energy: 509.4 kJ/mol

Electronegativity: 0.9

Atomic Radius: 215 pm

Radium

[227.03] +3

Ac

89

State at 25°C: solid

Density: 10.07 g/cm³

Melting Point: 1323.2 K

Boiling Point: 2743 K

Electron Affinity:

1st Ion Energy: 499 kJ/mol

Electronegativity: 1.1

Atomic Radius: 195 pm

Actinium

232.038

+4

Th

90

State at 25°C: solid

Density: 11.78 g/cm³

Melting Point: 2023.2 K

Boiling Point: 5123 K

Electron Affinity:

1st Ion Energy: 587 kJ/mol

Electronegativity: 1.3

Atomic Radius: 179 pm

Thoriumium

231.035

+5

Pa

91

State at 25°C: solid

Density: 15.37 g/cm³

Melting Point: 1873.2 K

Boiling Point: 4500 K

Electron Affinity:

1st Ion Energy: 568 kJ/mol

Electronegativity: 1.5

Atomic Radius: 163 pm

Protactinium

238.03

+6

U

92

State at 25°C: solid

Density: 19.05 g/cm³

Melting Point: 1405.2 K

Boiling Point: 4203 K

Electron Affinity:

1st Ion Energy: 584 kJ/mol

Electronegativity: 1.7

Atomic Radius: 156 pm

Uranium

[237.05] +5

Np

93

State at 25°C: solid

Density: 20.45 g/cm³

Melting Point: 913.2 K

Boiling Point: 4175 K

Electron Affinity:

1st Ion Energy: 597 kJ/mol

Electronegativity: 1.3

Atomic Radius: 155 pm

neptunium

[244.06] +4

Pu

94

State at 25°C: solid

Density: 19.86 g/cm³

Melting Point: 914.2 K

Boiling Point: 3503 K

Electron Affinity:

1st Ion Energy: 585 kJ/mol

Electronegativity: 1.3

Atomic Radius: 159 pm

Plutonium

[243.06] +3

Am

95

State at 25°C: solid

Density: 13.67 g/cm³

Melting Point: 1267.2 K

Boiling Point: 2873 K

Electron Affinity:

1st Ion Energy: 578 kJ/mol

Electronegativity: 1.3

Atomic Radius: 173 pm

Americium

[247.07] +3

Cm

96

State at 25°C: solid

Density: 13.51 g/cm³

Melting Point: 1613.2 K

Boiling Point:

Electron Affinity:

1st Ion Energy: 581 kJ/mol

Electronegativity: 1.3

Atomic Radius: 174 pm

Curium

[247.07] +3

Bk

97

State at 25°C: solid

Density: 14.78 g/cm³

Melting Point: 1259.2 K

Boiling Point:

Electron Affinity:

1st Ion Energy: 601 kJ/mol

Electronegativity: 1.3

Atomic Radius: 170 pm

Berke
lium

[251.08]

+3

Cf

98

State at 25°C:

Density: 15.1 g/cm³

Melting Point: 1173.2 K

Boiling Point:

Electron Affinity:

1st Ion Energy: 608 kJ/mol

Electronegativity: 1.3

Atomic Radius: 186 pm

Californium

[252.08] +3

Es

99

State at 25°C:

Density: ~13.5 g/cm³

Melting Point: 1133.2 K

Boiling Point:

Electron Affinity:

1st Ion Energy: 619 kJ/mol

Electronegativity: 1.3

Atomic Radius: 186 pm

Einsteiniium

[257.10] +3

Fm

100

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy: 627 kJ/mol

Electronegativity: 1.3

Atomic Radius:

Fermium

[258.10]

+3

Md

101

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy: 635 kJ/mol

Electronegativity: 1.3

Atomic Radius:

Mendeleevium

[259.10] +2

No

102

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy: 642 kJ/mol

Electronegativity: 1.3

Atomic Radius:

nobelium

[262.11]

+3

Lr

103

State at 25°C:

Density: $>9.84 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Lawrencium

[265.12]

+4

Rf

104

State at 25°C:

Density: 18.1 g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Rutherfordordium

[268.13]

+5

Db

105

State at 25°C:

Density: ~39 g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Dubnium

[271.12]

+6

Sg

106

State at 25°C:

Density: $\sim 35 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

seaborgium

[270]

+7

Bh

107

State at 25°C:

Density: $\sim 37 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Bohrium

[277.15]

+8

Hs

108

State at 25°C:

Density: $\sim 41 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Hassium

[276.15]

Mt

109

State at 25°C:

Density: $\sim 35 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Meitnerium

[281.16]

Ds

110

State at 25°C:

Density: $>21.46 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Darmstadtium

[280.16]

Rg

111

State at 25°C:

Density: $>19.282 \text{ g/cm}^3$

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Roentgenium

[285.17]

Cn

112

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Copernicium

[284.18]

Uut

113

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Uununnun

[289.19]

Fl

114

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Flerovium

[288.19]

Uup

115

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Uunupentium

[293]

Lv

116

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Livermorium

[294]

Uus

117

State at 25°C:

Density: g/cm^3

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Ununseptium

[294]

Uuo

118

State at 25°C:

Density: g/cm³

Melting Point:

Boiling Point:

Electron Affinity:

1st Ion Energy:

Electronegativity:

Atomic Radius:

Ununocottium