

## MOLAR ELECTRON AFFIBITY VALUES OF ELEMENTS

The electron affinity (EA) gives a measure of the tendency of an atom to change into an anion



Electron affinity is defined as the amount of energy released when an electron is added to a gaseous isolated atom or ion.

Following table has electron affinity values in electron volt (eV per atom) or kJ/mol.

The electron affinity can also be defined as energy required to remove an electron from a singly charged gaseous negative ion.

The greater the energy released in the process of taking up the extra electron, the greater is the electron affinity. The electron affinity of an atom measures the tightness with which it binds an additional electron to itself.

<b>At. No.</b>	<b>NAME</b>	<b>S Y M B O L</b>	<b>Electron Affinity (kJ/mol)</b>	<b>Electron Affinity (eV/atom)</b>
1	Hydrogen	H	72.769	0.75419
2	Helium	He	-50	-0.52
3	Lithium	Li	59.632	0.61805
4	Beryllium	Be	-50	-0.52
5	Boron	B	26.989	0.2797
6	Carbon	C	121.776	1.26212
7	Nitrogen	N	-0.07	-0.000725
8	Oxygen	O	140.976	1.461113
9	Fluorine	F	328.164	3.401189
10	Neon	Ne	-120	-1.2
11	Sodium	Na	52.867	0.547926
12	Magnesium	Mg	-40	-0.415
13	Aluminium	Al	41.762	0.43283
14	Silicon	Si	134.068	1.38952
15	Phosphorus	P	72.037	0.7466
16	Sulphur	S	200.41	2.077104
17	Chlorine	Cl	348.575	3.612724
18	Argon	Ar	-96.00	-1.00
19	Potassium	K	48.383	0.501459
20	Calcium	Ca	2.37	0.02455
21	Scandium	Sc	18.00	0.188
22	Titanium	Ti	8.00	0.084
23	Vanadium	V	50.911	0.52766
24	Chromium	Cr	65.21	0.67584

<b>At. No.</b>	<b>NAME</b>	<b>S Y M B O L</b>	<b>Electron Affinity (kJ/mol)</b>	<b>Electron Affinity (eV/atom)</b>
25	Manganese	Mn	-50.00	-0.52
26	Iron	Fe	14.785	0.153236
27	Cobalt	Co	63.898	0.66226
28	Nickel	Ni	111.65	1.1516
29	Copper	Cu	119.235	1.23578
30	Zinc	Zn	-60.00	-0.62
31	Gallium	Ga	41.00	0.43
32	Germanium	Ge	118.935	1.232676
33	Arsenic	As	77.65	0.8048
34	Selenium	Se	194.958	2.020604
35	Bromine	Br	324.537	3.363588
36	Krypton	Kr	-60.00	-0.62
37	Rubidium	Rb	46.884	0.485916
38	Strontium	Sr	5.023	0.05206
39	Yttrium	Y	29.6	0.307
40	Zirconium	Zr	41.81	0.4333
41	Niobium	Nb	88.5169	0.91740
42	Molybdenum	Mo	72.10	0.7473
43	Technetium	Tc	53.067	0.55
44	Ruthenium	Ru	100.96	1.04638
45	Rhodium	Rh	110.27	1.14289
46	Palladium	Pd	54.24	0.56214
47	Silver	Ag	125.862	1.30447
48	Cadmium	Cd	-70	-0.725

<b>At. No.</b>	<b>NAME</b>	<b>S Y M B O L</b>	<b>Electron Affinity (kJ/mol)</b>	<b>Electron Affinity (eV/atom)</b>
49	Indium	In	28.95	0.30
50	Tin	Sn	107.298	1.11207
51	Antimony	Sb	101.059	1.047401
52	Tellurium	Te	190.161	1.970875
53	Iodine	I	295.1531	3.0590465
54	Xenon	Xe	-80	-0.83
55	Caesium	Cs	45.505	0.471630
56	Barium	Ba	13.954	0.14462
57	Lanthanum	La	45.3	0.47
58	Cerium	Ce	62.75	0.65
59	Praseodymium	Pr	93	0.962
60	Neodymium	Nd	184.87	1.916
61	Promethium	Pm	12.45	0.129
62	Samarium	Sm	15.63	0.162
63	Europium	Eu	83.36	0.864
64	Gadolinium	Gd	13.22	0.136
65	Terbium	Tb	112.4	1.165
66	Dysprosium	Dy	33.96	0.352
67	Holmium	Ho	32.61	0.338
68	Erbium	Er	30.10	0.312
69	Thulium	Tm	99	1.029
70	Ytterbium	Yb	-1.93	-0.02
71	Lutetium	Lu	33.4	0.346

<b>At. No.</b>	<b>NAME</b>	<b>S Y M B O L</b>	<b>Electron Affinity (kJ/mol)</b>	<b>Electron Affinity (eV/atom)</b>
72	Hafnium	Hf	1.64	0.017
73	Tantalum	Ta	31	0.323
74	Tungsten	W	78.76	0.81626
75	Rhenium	Re	5.8273	0.060396
76	Osmium	Os	106.10	1.1
77	Iridium	Ir	150.94	1.56436
78	Platinum	Pt	205.041	2.12510
79	Gold	Au	222.747	2.308610
80	Mercury	Hg	-50	-0.52
81	Thallium	Tl	36.4	0.377
82	Lead	Pb	34.4204	0.356743
83	Bismuth	Bi	90.924	0.942362
84	Polonium	Po	183.3	1.9
85	Astatine	At	221.9	2.3
86	Radon	Rn	-70	-0.725
87	Francium	Fr	46.89	0.486
88	Radium	Ra	9.6485	0.10
89	Actinium	Ac	33.77	0.35
90	Thorium	Th	112.72	1.17
91	Protactinium	Pa	53.03	0.55
92	Uranium	U	50.94	0.53
93	Neptunium	Np	45.85	0.48
94	Plutonium	Pu	-48.33	-0.50

<b>At. No.</b>	<b>NAME</b>	<b>S Y M B O L</b>	<b>Electron Affinity (kJ/mol)</b>	<b>Electron Affinity (eV/atom)</b>
95	Americium	Am	9.93	0.10
96	Curium	Cm	27.17	0.28
97	Berkelium	Bk	-165.24	-1.72
98	Californium	Cf	-97.31	-1.01
99	Einsteinium	Es	-28.60	-0.30
100	Fermium	Fm	33.96	0.35
101	Mendelevium	Md	93.91	0.98
102	Nobelium	No	-223.22	-2.33
103	Lawrencium	Lr	-30.04	-0.31
104	Rutherfordium	Rf	-	-
105	Dubnium	Db	-	-
106	Seaborgium	Sg	-	-
107	Bohrium	Bh	-	-
108	Hassium	Hs	-	-
109	Meitnerium	Mt	-	-
110	Darmstadtium	Ds	-	-
111	Roentgenium	Rg	151.0	1.565
112	Copernicium	Cn		
113	Nihonium	Nh	66.60	0.69
114	Flerovium	Fl		
115	Moscovium	Mc	35.30	0.366
116	Livermorium	Lv	74.90	0.776
117	Tennesine	Ts	165.90	1.719

