

Periodic Table of the Elements

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VIIIA

GROUP 1
IA

1	1.00794	¹ H	1.00794	Atomic Weight
1	² S _{1/2}	2,2	2,2	Ground-State Level
1	0,0899	13,5984		*Electronegativity (Pauling)
	-259,14	-252,87		
	(v) 37			
	1s ¹			
	+1,-1			

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1	² S _{1/2}	2,2	2,2	Ground-State Level
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	-259,14	-252,87		
	(v) 37			
	1s ¹			
	+1,-1			

2	4.002602	² He	4.002602	Atomic Weight
2	¹ S ₀			Ground-State Level
2	0,1785	24,5874		*Electronegativity (Pauling)
	-268,93			
	(v) 32			
	1s ²			
	0			

3	6.941	³ Li	6.941	Atomic Weight
3	² S _{1/2}			Ground-State Level
3	0,535	5,3917		*Electronegativity (Pauling)
	180,34	1342		
	(m) 152	BCC		
	[He] 2s ¹			
	+1			

4	9.012182	⁴ Be	9.012182	Atomic Weight
4	¹ S ₀			Ground-State Level
4	1,848	9,3227		*Electronegativity (Pauling)
	1287	2470		
	(m) 112	HCP		
	[He] 2s ²			
	+2			

Phase at STP
Gas Liquid Solid Synthetic

Alkali Metals	Noble Gas
Alkaline Earth Metals	Halogens
Transition Metals	Non Metals
Lanthanide Series	
Poor Metals	Metalloids

Common Constants		Source: physics.nist.gov	
Absolute Zero	-273.15 °C	Gravitation Constant	G 6.67428x10 ⁻¹¹ m ³ kg ⁻¹ s ⁻²
Atomic Mass Unit	m _u 1.660539x10 ⁻²⁷ kg	Molar Gas Constant	R 8.314472 J mol ⁻¹ K ⁻¹
Avogadro Constant	6.022142x10 ²³ mol ⁻¹	Molar Volume (Ideal Gas)	0.02241410 m ³ /mol
Base of Natural Logarithms	e 2.718281828	Planck Constant	h 6.626069x10 ⁻³⁴ J s
Boltzmann constant	k 1.380650x10 ⁻²³ J/K	Proton-Electron Mass Ratio	m _p /m _e 1836.15267247
Electron Mass	m _e 9.10938215x10 ⁻³¹ kg	Rydberg Constant	R _∞ 10 973 732 m ⁻¹
Electron Radius (Classical)	r ₀ 2.817940x10 ⁻¹⁶ m	Second Radiation Constant	R _∞ hc 1.36057 eV
Electron Volt	eV 1.602176x10 ⁻¹⁹ J	Speed of Light in a Vacuum	c 299 792 458 m/s
Elementary Charge	e 1.602176x10 ⁻¹⁹ C	Speed of sound in air at STP	343.2 m/s
Faraday Constant	F 96 485.3399 C/mol	Standard Pressure	101 325 Pa
fine-structure constant	α 0.0072973525		
First Radiation Constant	2 πhc ² 3.7417749x10 ⁻¹⁸ W m ²		

5	10.811	⁵ B	10.811	Atomic Weight
5	² S _{1/2}			Ground-State Level
5	2,46	8,2980		*Electronegativity (Pauling)
	2075	4000		
	(v) 82	rhomb.		
	[He] 2s ² 2p ¹			
	+3			

13	10.811	¹³ Al	10.811	Atomic Weight
13	³ S _{1/2}			Ground-State Level
13	2,7	9,8588		*Electronegativity (Pauling)
	660,32	2519		
	(m) 143	cubic		
	[Ne] 3s ² 3p ¹			
	+3			

14	12.0107	¹⁴ C	12.0107	Atomic Weight
14	² S _{1/2}			Ground-State Level
14	2,26	11,2603		*Electronegativity (Pauling)
	3550	4027		
	(v) 77	hex		
	[He] 2s ² 2p ²			
	+2,4,-4			

15	14.0064	¹⁵ N	14.0064	Atomic Weight
15	² S _{1/2}			Ground-State Level
15	1,251	14,5341		*Electronegativity (Pauling)
	1429	13,6181		
	(v) 75	-		
	[He] 2s ² 2p ²			
	+2,3,4,5,-2,-3			

16	15.9994	¹⁶ O	15.9994	Atomic Weight
16	² S _{1/2}			Ground-State Level
16	1,696	17,4228		*Electronegativity (Pauling)
	219,6	-182,9		
	(v) 71	-		
	[He] 2s ² 2p ⁴			
	+2			

11	22.989770	¹¹ Na	22.989770	Atomic Weight
11	³ S _{1/2}			Ground-State Level
11	0,968	5,1391		*Electronegativity (Pauling)
	97,72	883		
	(m) 186	BCC		
	[Ne] 3s ¹			
	+1			

12	24.3050	¹² Mg	24.3050	Atomic Weight
12	¹ S ₀			Ground-State Level
12	1,738	7,6462		*Electronegativity (Pauling)
	650	1090		
	(m) 180	HCP		
	[Ne] 3s ²			
	+2			

19	39.0983	¹⁹ K	39.0983	Atomic Weight
19	⁴ D _{3/2}			Ground-State Level
19	0,856	4,3407		*Electronegativity (Pauling)
	63,38	759		
	(m) 227	BCC		
	[Ar] 4s ¹			
	+1			

20	40.078	²⁰ Ca	40.078	Atomic Weight
20	⁴ D _{3/2}			Ground-State Level
20	1,55	6,1132		*Electronegativity (Pauling)
	842	1484		
	(m) 197	HCP		
	[Ar] 4s ²			
	+2			

37	85.4678	³⁷ Rb	85.4678	Atomic Weight
37	⁵ S _{1/2}			Ground-State Level
37	1,532	4,1771		*Electronegativity (Pauling)
	39,31	688		
	(m) 248	BCC		
	[Kr] 5s ¹			
	+1			

38	87.62	³⁸ Sr	87.62	Atomic Weight
38	⁵ S _{1/2}			Ground-State Level
38	2,63	5,6949		*Electronegativity (Pauling)
	777	1382		
	(m) 248	BCC		
	[Kr] 5s ²			
	+2			

87	(223)	⁸⁷ Fr	(223)	Atomic Weight
87	⁷ S _{1/2}			Ground-State Level
87	10,07	5,17		*Electronegativity (Pauling)
	1050	3200		
	(m) 179	FCC		
	[Rn] 7s ¹			
	+3			

88	(226)	⁸⁸ Ra	(226)	Atomic Weight
88	⁷ S _{1/2}			Ground-State Level
88	11,724	6,3067		*Electronegativity (Pauling)
	1750	4820		
	(m) 179	FCC		
	[Rn] 6d ⁷ 7s ²			
	+4			

Notes:

- Density units are g/cm³ for solids and g/L or kg/cm³ at 0° Celsius for gases
- Atomic Weight based on ¹²C
- () indicate mass number of most stable isotope
- Common Oxidation States in bold
- Electron Configuration based on IUPAC guidelines
- § indicates crystal structure is unusual or may require explanation
- (m) Metallic radius, (v) Covalent radius

References:

†Nist.gov, *Wolfram.com (Mathematic), CRC Handbook of Chemistry and Physics 81st Edition, 2000-2001, and others

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57	138.9055	⁵⁷ La	138.9055	Atomic Weight
57	⁵ D _{3/2}			Ground-State Level
57	6,146	5,5769		*Electronegativity (Pauling)
	920	3464		
	(m) 187	§hex		
	[Xe] 4f ¹ 5d ¹ 6s ²			
	+3			

Lanthanides

Actinides

ORDINE DEI CHIMICI DI TRIESTE
Con il contributo di

UNIVERSITÀ DEGLI STUDI DI TRIESTE
Dipartimento di Scienze Chimiche e Farmaceutiche