

Engineering Information

Atomic Weight (O=16)

Atomic weight (symbol: Ar) is a dimensionless physical quantity, the ratio of the average mass of atoms of an element (from a given source) to 1/12 of the mass of an atom of carbon-12 (known as the unified atomic mass unit). The term is usually used, without further qualification, to refer to the standard atomic weights published at regular intervals by the International Union of Pure and Applied Chemistry (IUPAC) and which are intended to be applicable to normal laboratory materials. These standard atomic weights are reprinted in a wide variety of textbooks, commercial catalogues, wallcharts etc, and in the table below.

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ATOMIC WEIGHT (O=16)					
Element and Symbol	Atom. Wt.	Valency	Element and Symbol	Atom. Wt.	Valency
Aluminium Al	26.970	3.0	Manganese Mn	54.930	2, 3, 4
Antimony Sb	121.760	3.5	Mercury Hg	200.600	1, 2
Argon A	39.944	—	Molybdenum Mo	95.950	3, 6
Arsenic As	74.930	3.5	Nickel Ni	58.690	2, 3, 4
Barium Ba	137.360	—	Neon Ne	20.18	—
Bismuth Bi	208.000	3.5	Nitrogen N	14.010	3, 5
Boron B	10.820	3.4	Oxygen O	16.000	2
Bromine Br	79.920	1.5, 7	Phosphorus P	30.980	3, 5
Cadmium Cd	112.400	2	Platinum Pt	195.200	2, 4
Calcium Ca	40.070	2	Potassium K	39.100	1
Carbon C	12.000	2, 4	Radium Ra	226.050	2
Chlorine Cl	35.450	1, 5, 7	Selenium Se	78.960	2, 6
Chromium Cr	52.010	3, 6	Silicon Si	28.060	4
Cobalt Co	58.950	2, 3	Silver Ag	107.880	1
Copper Cu	63.570	1, 2	Sodium Na	23.000	1
Fluorine F	19.000	1.0	Strontium Sr	87.630	2
Gold Au	197.200	1, 3	Sulphur S	32.060	2, 4
Helium He	4.003	—	Tellurium Te	127.610	2, 6
Hydrogen H	1.008	1, 3, 5	Titanium Ti	47.900	3, 4
Iodine I	126.900	1	Tin Sn	118.700	2, 4
Iridium Ir	193.100	2, 3, 4	Tungsten W	184.000	3, 4, 6
Iron Fe	55.840	2, 3	Uranium U	238.070	4, 6
Lead Pb	207.200	2, 4	Vanadium V	50.950	1 to 5
Lithium Li	6.940	1	Zinc Zn	65.380	2
Magnesium Mg	24.320	2	Zirconium Zr	91.220	3, 4

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WEIGHTS OF STEEL						
0.7843 kg/cm ² per metre						
Black Sheets	Plates		Chequered Plates		Wt. per	
Thick-ness	B.G.	sq. Metre	Thick-ness	Sq. metre	Thick-ness	Sq. metre
in mm.	kg.	in mm.	in mm.	in kg.	in mm.	in kg.
3.15	10	24.70	05	39.2	07	61.1
2.50	12	19.61	07	55.0	10	84.6
2.00	14	15.69	10	78.5	12	100.3
1.66	16	12.55	12	94.2		
1.25	18	9.80	14	109.9		
1.00	20	7.84	16	125.6		
0.80	22	6.27	18	141.3		
0.63	24	4.94	20	157.0		
0.50	26	3.91	22	172.7		
0.44	28	3.10	25	196.2		

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