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AMETEK®
MATERIALS ANALYSIS DIVISION

	meters	dm	cm	mm	µm	nm	Å
1Å =	10^{-10}	10^{-9}	10^{-8}	10^{-7}	10^{-4}	10^{-1}	1
1nm =	10^{-9}	10^{-8}	10^{-7}	10^{-6}	10^{-3}	1	10
1µm =	10^{-6}	10^{-5}	10^{-4}	10^{-3}	1	10^{3}	10^{4}
1mm =	10^{-3}	10^{-2}	10^{-1}	1	10^{3}	10^{6}	10^{7}
1cm =	10^{-2}	10^{-1}	1	10	10^{4}	10^{7}	10^{8}
1dm =	10^{-1}	1	10	10^{2}	10^{5}	10^{8}	10^{9}
1m =	1	10	10^{2}	10^{3}	10^{6}	10^{9}	10^{10}

Crystal Structures

- Cubic, face centered
- Cubic, body centered
- Cubic
- Hexagonal
- Monoclinic
- Orthorhombic
- Tetragonal
- Rhombohedral

IA	IIA	IIIB	IVB	VB	VIB	VIIB	VIII			IB	IIB	IIIA	IVA	VA	VIA	VIIA	VIIIA
1 1.008 H Hydrogen																	2 4.003 He Helium
3 6.941 Li Lithium 0.055 – –	4 9.012 Be Beryllium 0.108 – –											5 10.811 B Boron 0.185 – –	6 12.011 C Carbon 0.277 – –	7 14.007 N Nitrogen 0.392 – –	8 15.999 O Oxygen 0.523 – –	9 18.998 F Fluorine 0.677 – –	10 20.180 Ne Neon 0.848 – –
11 22.990 Na Sodium 1.040 – –	12 24.305 Mg Magnesium 1.254 0.048 –											13 26.982 Al Aluminum 1.486 0.073 –	14 28.086 Si Silicon 1.740 0.092 –	15 30.974 P Phosphorus 2.013 0.117 –	16 32.066 S Sulfur 2.307 0.149 –	17 35.453 Cl Chlorine 2.622 0.183 –	18 39.948 Ar Argon 2.957 0.221 –
19 39.098 K Potassium 3.313 0.260 –	20 40.08 Ca Calcium 3.691 0.341 –	21 44.956 Sc Scandium 4.090 0.395 –	22 47.88 Ti Titanium 4.510 0.452 –	23 50.942 V Vanadium 4.952 0.511 –	24 51.996 Cr Chromium 5.414 0.573 –	25 54.938 Mn Manganese 5.898 0.637 –	26 55.847 Fe Iron 6.403 0.705 –	27 58.933 Co Cobalt 6.929 0.776 –	28 58.70 Ni Nickel 7.477 0.851 –	29 63.546 Cu Copper 8.040 0.930 –	30 65.39 Zn Zinc 8.637 1.012 –	31 69.72 Ga Gallium 9.250 1.098 –	32 72.61 Ge Germanium 9.885 1.188 –	33 74.922 As Arsenic 10.542 1.282 –	34 78.96 Se Selenium 11.220 1.379 –	35 79.904 Br Bromine 11.922 1.480 –	36 83.80 Kr Krypton 12.649 1.586 0.093
37 85.468 Rb Rubidium 13.393 1.694 0.097	38 87.62 Sr Strontium 14.163 1.806 0.114	39 88.906 Y Yttrium 14.955 1.922 0.133	40 91.22 Zr Zirconium 15.776 2.042 0.151	41 92.906 Nb Niobium 16.617 2.166 0.171	42 95.94 Mo Molybdenum 17.481 2.293 0.192	43 (98) Tc Technetium 18.368 2.424 0.214	44 101.07 Ru Ruthenium 19.282 2.558 0.237	45 102.906 Rh Rhodium 20.217 2.696 0.260	46 106.42 Pd Palladium 21.180 2.838 0.282	47 107.868 Ag Silver 22.166 2.984 0.310	48 112.41 Cd Cadmium 23.175 3.133 0.341	49 114.82 In Indium 24.209 3.286 0.370	50 118.71 Sn Tin 25.272 3.443 0.401	51 121.76 Sb Antimony 26.359 3.604 0.433	52 127.60 Te Tellurium 27.471 3.768 0.470	53 126.905 I Iodine 28.615 3.937 0.497	54 131.29 Xe Xenon 29.779 4.109 0.531
55 132.905 Cs Cesium 30.971 4.286 –	56 137.33 Ba Barium 32.196 4.465 0.779	57 138.906 La Lanthanum 33.441 4.650 0.833	72 178.49 Hf Hafnium 55.801 7.898 1.644	73 180.948 Ta Tantalum 57.450 8.145 1.709	74 183.85 W Tungsten 59.305 8.396 1.774	75 186.207 Re Rhenium 61.122 8.651 1.842	76 190.2 Os Osmium 62.989 8.910 1.910	77 192.22 Ir Iridium 64.906 9.174 1.978	78 195.08 Pt Platinium 66.834 9.441 2.048	79 196.967 Au Gold 68.804 9.712 2.120	80 200.59 Hg Mercury 70.806 9.987 2.191	81 204.38 Tl Thallium 72.869 10.256 2.268	82 207.2 Pb Lead 74.989 10.550 2.342	83 208.980 Bi Bismuth 77.091 10.837 2.419	84 (209) Po Polonium 79.272 11.129 2.505	85 (210) At Astatine 81.513 11.425 2.585	86 (222) Rn Radon 83.771 11.725 2.665
87 (223) Fr Francium 86.098 12.029 2.747	88 226.025 Ra Radium 88.480 12.338 2.830	89 227.028 Ac Actinium 90.880 12.650 2.915															

58 140.12 Ce Cerium 34.717 4.839 0.883	59 140.908 Pr Praseodymium 36.031 5.033 0.929	60 144.24 Nd Neodymium 37.358 5.229 0.978	61 (145) Pm Promethium 38.725 5.432 1.032	62 150.36 Sm Samarium 40.118 5.635 1.081	63 151.97 Eu Europium 41.534 5.845 1.137	64 157.25 Gd Gadolinium 42.992 6.056 1.185	65 158.925 Tb Terbium 44.476 6.272 1.240	66 162.50 Dy Dysprosium 45.997 6.494 1.293	67 164.930 Ho Holmium 47.534 6.719 1.347	68 167.26 Er Erbium 49.100 6.947 1.405	69 168.934 Tm Thulium 50.730 7.179 1.462	70 173.04 Yb Ytterbium 52.362 7.414 1.521	71 174.967 Lu Lutetium 54.078 7.654 1.581
90 232.038 Th Thorium 93.382 12.967 2.991	91 231.036 Pa Protoactinium 95.886 13.288 3.077	92 238.029 U Uranium 98.434 13.612 3.165	93 237.048 Np Neptunium 100.800 13.941 3.253	94 (244) Pu Plutonium 103.320 14.275 3.344	95 (243) Am Americium 105.970 14.615 3.435	96 (247) Cm Curium 108.737 14.961 3.539	97 (247) Bk Berkelium 111.676 15.309 3.634	98 (251) Cf Californium 114.778 15.661 3.731	99 (252) Es Einsteinium – 16.018 3.829	100 (257) Fm Fermium	101 (258) Md Mendelevium	102 (259) No Nobelium	103 (260) Lr Lawrencium

Atomic Number — Atomic Weight
Symbol
K α Energy (•)
L α Energy (•)
M Energy (•)
Crystal Structure

- Alkali Earth
- Alkaline Earth
- Rare Earth
- Other Metals
- Non-Metals
- Halogens
- Transition Metals
- Metalloids
- Noble Gases
- Actinides