THE ELEMENTS OF CRITICAL MINERALS AND MATERIALS

NON-ELEMENTAL CRITICAL MINERALS (USGS)

- Natural Graphite
- Phosphate
- Potash
- Metallurgical Coal

NON-ELEMENTAL CRITICAL MATERIALS (DOE)

- Natural Graphite
- Electrical Steel
- Metallurgical Coal
- Silicon Carbide

60 mineral commodities (USGS)

Critical materials (DOE)

1 1.0078 H Hydrogen																	2 4.0026 He Helium
3 6.9410 Li Lithium	14 9.0122 Be Beryllium											5 10.811 B Boron	6 12.011 C Carbon	7 14.007 N Nitrogen	8 15.999 O Oxygen	9 18.998 F Fluorine	10 20.180 Ne Neon
11 22.990 Na Sodium	12 24.305 Mg Magnesium											13 26.982 Al Aluminium	14 28.086 Si Silicon	15 30.974 P Phosphorus	16 32.065 S Sulfur	17 35.453 Cl Chlorine	18 39.948 Ar Argon
19 39.098 K Potassium	20 40.078 Ca Calcium	21 44.956 Sc Scandium	22 47.867 Ti Titanium	23 50.942 V Vanadium	24 51.996 Cr Chromium	25 54.938 Mn Manganese	26 55.845 Fe Iron	27 58.933 Co Cobalt	28 58.693 Ni Nickel	29 63.546 Cu Copper	30 65.380 Zn Zinc	31 69.723 Ga Gallium	32 72.640 Ge Germanium	33 74.922 As Arsenic	34 78.960 Se Selenium	35 79.904 Br Bromine	36 83.798 Kr Krypton
37 85.468 Rb Rubidium	38 87.620 Sr Strontium	39 88.906 Y Yttrium	40 91.224 Zr Zirconium	41 92.906 Nb Niobium	42 95.950 Mo Molybdenum	43 98 Tc Technetium	44 101.07 Ru Ruthenium	45 102.91 Rh Rhodium	46 106.42 Pd Palladium	47 107.87 Ag Silver	48 112.41 Cd Cadmium	49 114.82 In Indium	50 118.71 Sn Tin	51 121.76 Sb Antimony	52 127.60 Te Tellurium	53 126.90 I Iodine	54 131.29 Xe Xenon
55 132.91 Cs Caesium	56 137.33 Ba Barium	57 138.91 La Lanthanum	72 178.49 Hf Hafnium	73 180.95 Ta Tantalum	74 183.84 W Tungsten	75 186.21 Re Rhenium	76 190.23 Os Osmium	77 192.22 Ir Iridium	78 195.08 Pt Platinum	79 196.97 Au Gold	80 200.59 Hg Mercury	81 204.38 Tl Thallium	82 207.20 Pb Lead	83 208.98 Bi Bismuth	84 209 Po Polonium	85 210 At Astatine	86 222 Rn Radon
87 223 Fr Francium	88 226 Ra Radium	89 227 Ac Actinium	104 261 Rf Rutherfordium	105 262 Db Dubnium	106 Sg Seaborgium	107 264 Bh Bohrium	108 269 Hs Hassium	109 278 Mt Meitnerium	110 281 Ds Darmstadtium	111 282 Rg Roentgenium	112 285 Cn Copernicium	113 286 Nh Nihonium	114 289 Fl Flerovium	115 289 Mc Moscovium	116 293 Lv Livermorium	117 Ts Tennessine	118 294 Og Oganesson

58 140.12 Ce Cerium	59 140.91 Pr Praseodymium	60 144.24 Nd Neodymium	61 145 Pm Promethium	62 150.36 Sm Samarium	63 151.96 Eu Europium	64 157.25 Gd Gadolinium	65 158.93 Tb Terbium	66 162.5 Dy Dysprosium	67 164.93 Ho Holmium	68 167.26 Er Erbium	69 168.93 Tm Thulium	70 173.04 Yb Ytterbium	71 174.97 Lu Lutetium
90 232.04 Th Thorium	91 231.04 Pa Protactinium	92 238.03 U Uranium	93 237.05 Np Neptunium	94 244 Pu Plutonium	95 243 Am Americium	96 247 Cm Curium	97 247 Bk Berkelium	98 251 Cf Californium	99 252 Es Einsteinium	100 257 Fm Fermium	101 258 Md Mendelevium	102 259 No Nobelium	103 262 Lr Lawrencium

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https://www.energy.gov/sites/default/files/2023-07/doe-critical-material-assessment_07312023.pdf
Critical minerals shown here are from the 2025 List of Critical Minerals https://www.usgs.gov/programs/mineral-resources-program/science/about-2025-list-critical-minerals

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