1

H

Fuel

Used as rocket fuel and in hydrogen cars and fusion

1.008

2

He

Balloons

Used in balloons and as inert atmosphere for welding

4.0026

3

Li

Batteries

Used in rechargeable batteries and mood stabilizers

6.94

4

Be

Alloys

Used in aerospace alloys and nuclear reactors

9.0122

5

B

Ceramics

Used in ceramics, glass, and as neutron absorber

10.81

6

C

Steel

Essential for all life and used in steel production

12.011

7

N

Fertilizers

Used in fertilizers and as liquid nitrogen coolant

14.007

8

O

Breathing

Essential for breathing and used in steel production

15.999

9

F

Toothpaste

Used in toothpaste and water fluoridation

18.998

10

Ne

Signs

Used in neon signs and as inert gas in lighting

20.18

11

Na

Salt

Used in table salt and street lighting

22.99

12

Mg

Flares

Used in flares, alloys, and as dietary supplement

24.305

13

Al

Cans

Used in beverage cans, foil, and aircraft parts

26.982

14

Si

Glass

Used in computer chips, glass, and construction

28.085

15

P

Matches

Used in fertilizers, matches, and DNA structure

30.974

16

S

Rubber

Used in rubber vulcanization and gunpowder

32.06

17

Cl

Pools

Used in pool disinfection and PVC production

35.45

18

Ar

Welding

Used in welding and incandescent light bulbs

39.948

19

K

Fertilizer

Used in fertilizers and soap production

39.098

20

Ca

Bones

Used in bones, teeth, and concrete production

40.078

21 **Sc**

Aerospace

Used in aerospace alloys and baseball bats

44.956

22 **Ti**

Implants

Used in aircraft, medical implants, and paints

47.867

23 **V**

Steel

Used in steel alloys and as catalyst

50.942

24 **Cr**

Stainless

Used in stainless steel and chrome plating

51.996

25 **Mn**

Batteries

Used in steel production and battery electrodes

54.938

26 **Fe**

Magnets

Used in construction, tools, and magnets

55.845

27 **Co**

Motors

Used in magnets, catalysts, and blue glass

58.933

28 **Ni**

Coins

Used in coins, batteries, and stainless steel

58.693

29 **Cu**

Wire

Used in electrical wiring and plumbing pipes

63.546

30 **Zn**

Galvanizing

Used in galvanizing steel and brass alloys

65.38

31 **Ga**

Electronics

Used in semiconductors and LEDs

69.723

32 **Ge**

Semiconductors

Used in fiber optics and transistors

72.63

33 **As**

Pesticides

Used in wood preservatives and semiconductors

74.922

34 **Se**

Glass

Used in photoconductors and glass coloring

78.971

35 **Br**

Antiseptic

Used as antiseptic and in flame retardants

79.904

36 **Kr**

Lasers

Used in energy-efficient windows and lasers

83.798

37 **Rb**

Atomic

Used in atomic clocks and medical tracers

85.468

38 **Sr**

Fireworks

Used in fireworks and flares for red color

87.62

39 **Y**

Catalysts

Used in lasers and as cancer treatment

88.906

40 **Zr**

Jet

Used in nuclear reactors and ceramics

91.224

41 **Nb**

Steel

Used in jet engines and MRI scanners

92.906

42 **Mo**

Lubricants

Used in steel alloys and high-temp lubricants

95.95

43 **Tc**

Medicine

Used in medical imaging and as tracer

98

44 **Ru**

Electronics

Used in electrical contacts and hard disks

101.07

45 **Rh**

Catalysts

Used in catalytic converters and jewelry

102.91

46 **Pd**

Jewelry

Used in catalytic converters and dentistry

106.42

47 **Ag**

Mirrors

Used in jewelry, mirrors, and photography

107.87

48 **Cd**

Batteries

Used in batteries, pigments, and solar panels

112.41

49 **In**

Semiconductors

Used in semiconductors and LCD screens

114.82

50 **Sn**

Solder

Used in solder, cans, and bronze alloys

118.71

51 **Sb**

Flame

Used in flame retardants and semiconductors

121.76

52 **Te**

Solar

Used in solar panels and rubber vulcanization

127.6

53 **I**

Antiseptic

Used as antiseptic and in photography

126.9

54 **Xe**

Anesthesia

Used in ion drives and medical anesthesia

131.29

55 **Cs**

Atomic

Used in atomic clocks and oil drilling

132.91

56 **Ba**

X-rays

Used in X-ray imaging and drilling fluids

137.33

57 **La**

Lighter

Used in lighter flints and camera lenses

138.91

58 **Ce**

Catalysts

Used in catalysts and glass polishing

140.12

59 **Pr**

Magnets

Used in aircraft engines and magnets

140.91

60 **Nd**

Magnets

Used in powerful permanent magnets

144.24

61 **Pm**

Batteries

Used in nuclear batteries and research

145

62 **Sm**

Magnets

Used in magnets and cancer treatment

150.36

63 **Eu**

Phosphors

Used in red phosphors for TV screens

151.96

64 **Gd**

MRI

Used in MRI contrast agents and neutron capture

157.25

65 **Tb**

Magnets

Used in green phosphors and magnets

158.93

66 **Dy**

Lasers

Used in lasers and hard disk drives

162.5

67 **Ho**

Magnets

Used in magnets and medical devices

164.93

68 **Er**

Fiber

Used in fiber optic amplifiers and lasers

167.26

69 **Tm**

X-rays

Used in X-ray sources and portable equipment

168.93

70 **Yb**

Lasers

Used in lasers and stress gauges

173.05

71 **Lu**

Catalysts

Used in catalysts and medical imaging

174.97

72 **Hf**

Carbide

Used in tungsten carbide and nuclear reactors

178.49

73 **Ta**

Electronics

Used in electronics and surgical instruments

180.95

74 **W**

Bulbs

Used in light bulb filaments and X-ray tubes

183.84

75 **Re**

Catalysts

Used in catalysts and jet engine parts

186.21

76 **Os**

Fountain

Used in fountain pen tips and electrical contacts

190.23

77 **Ir**

Catalysts

Used in spark plugs and cancer treatment

192.22

78 **Pt**

Jewelry

Used in jewelry, catalysts, and electronics

195.08

79 **Au**

Electronics

Used in jewelry, electronics, and dentistry

196.97

80 **Hg**

Thermometers

Used in thermometers, dental fillings, and switches

200.59

81
Electronics
Tl

Used in electronics and medical imaging
204.38

82
Batteries
Pb

Used in car batteries, bullets, and radiation shielding
207.2

83
Medicine
Bi

Used in medicine and cosmetics
208.98

84
Detectors
Po

Used in antistatic devices and neutron sources
209

85
Medicine
At

Used in medicine and scientific research
210

86
Gas
Rn

Used as tracer gas and in dating
222

87
Research
Fr

Used in research and atomic clocks
223

88
Medicine
Ra

Used in cancer treatment and luminous paints
226

89
Medicine
Ac

Used in cancer treatment and neutron sources
227

90
Gas
Th

Used in gas mantles and nuclear fuel
232.04

91
Nuclear
Pa

Used in nuclear research and dating
231.04

92
Fuel
U

Used in nuclear fuel and weapons
238.03

93
Detectors
Np

Used in smoke detectors and research
237

94
Weapons
Pu

Used in nuclear weapons and power
244

95
Detectors
Am

Used in smoke detectors and neutron sources
243

96
Research
Cm

Used in research and space missions
247

97
Research
Bk

Used in research and as electron source
247

98
Research
Cf

Used in research and neutron sources
251

99
Research
Es

Used in research and medical applications
252

100
Research
Fm

Used in research only
257

101 Research

Md

Used in research only

258

102 Research

No

Used in research only

259

103 Research

Lr

Used in research only

262

104 Research

Rf

Used in research only

267

105 Research

Db

Used in research only

270

106 Research

Sg

Used in research only

271

107 Research

Bh

Used in research only

270

108 Research

Hs

Used in research only

277

109 Research

Mt

Used in research only

276

110 Research

Ds

Used in research only

281

111 Research

Rg

Used in research only

282

112 Research

Cn

Used in research only

285

113 Research

Nh

Used in research only

286

114 Research

Fl

Used in research only

289

115 Research

Mc

Used in research only

290

116 Research

Lv

Used in research only

293

117 Research

Ts

Used in research only

294

118 Research

Og

Used in research only

294