

Stable isotopes of xenon available from ISOFLEX

Isotope	Z(p)	N(n)	Atomic Mass	Natural Abundance	Enrichment Level	Chemical Form
Xe-124	54	70	123.905895	0.10%	99.90%	Gas
Xe-126	54	72	125.904268	0.09%	99.90%	Gas
Xe-128	54	74	127.903531	1.91%	99.90%	Gas
Xe-129	54	75	128.9047780	26.40%	99.90%	Gas
Xe-130	54	76	129.903509	4.10%	99.90%	Gas
Xe-131	54	77	130.905083	21.20%	99.90%	Gas
Xe-132	54	78	131.904155	26.90%	99.90%	Gas
Xe-134	54	80	133.905395	10.40%	99.90%	Gas
Xe-136	54	82	135.90722	8.90%	99.90%	Gas



Xenon was discovered in 1898 by Sir William Ramsay and Morris W. Travers. Its name derives from the Greek word *xenos*, meaning “stranger.”

Xenon is a filling gas for light bulbs in high-intensity lamps and in flash lamps for photography. It forms a beautiful blue glow under vacuum in electric discharge tubes. It can also be used as an anesthetic gas in surgery. Radioactive xenon is used as a biological tracer.

Properties of Xenon

Name	Xenon
Symbol	Xe
Atomic number	54
Atomic weight	131.29
Standard state	Gas at 298 °K
CAS Registry ID	7440-63-3
Group in periodic table	18

Properties of Xenon (continued)

Group name	Noble gas
Period in periodic table	5
Block in periodic table	p-block
Color	Colorless
Classification	Nonmetallic
Freezing point	-111.75 °C
Liquefaction point	-108.40 °C
Melting point	-111.70 °C
Boiling point	-108 °C
Thermal conductivity	0.00565 (gas) W/(m·K)
Electronegativity	2.6
Heat of vaporization	12.64 kJ·mol ⁻¹
Heat of fusion	2.30 kJ·mol ⁻¹
Density of gas	0.0059 g/cm ³
Density of liquid	3.06 g/cm ³ at -108 °C
Electron configuration	[Kr]4d ¹⁰ 5s ² 5p ⁶
Atomic radius	1.31 Å
Oxidation state	Usually 0, but known to form compounds with fluorine and oxygen
Critical pressure	57.64 atm
Critical temperature	16.06 °C
Critical volume	118.00 cm ³ /mol