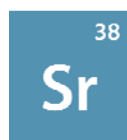


Stable isotopes of strontium available from ISOFLEX

Isotope	Z(p)	N(n)	Atomic Mass	Natural Abundance	Enrichment Level	Chemical Form
Sr-84	38	46	83.913426	0.56%	68.70-82.00%	Carbonate
Sr-86	38	48	85.909265	9.86%	>96.00%	Carbonate
Sr-87	38	49	86.908882	7.00%	>90.00%	Carbonate
Sr-88	38	50	87.905617	82.58%	99.90%	Carbonate



Strontium was discovered in 1790 by Adair Crawford. It is named for the village of Strontian in Scotland.

A silvery-white metal when freshly cut, strontium rapidly turns yellow on exposure to air, forming a thin oxide coating. It has a face-centered cubic structure, is malleable and ductile, and is chemically similar to calcium. Soluble in alcohol, ethanol and acids, strontium is also a reactive metal. In its finely-divided form, the metal is pyrophoric and ignites in air to form both the oxide SrO and the peroxide SrO₂. Similarly, when heated with chlorine gas or bromine vapor, it burns brightly, forming its halides, SrCl₂ or SrBr₂. Strontium is also a reducing agent: it reduces oxides and halides of metals at elevated temperatures to metallic form. Spontaneously flammable in powder form, strontium ignites when heated above its melting point. It reacts with water to evolve hydrogen.

Elemental strontium has only minor uses, since most applications also involve calcium and barium. Strontium's alloys are used as "getters" for vacuum tubes. Strontium is incorporated in glass to make picture tubes for color televisions. Its compounds are used in tracer bullets and in fireworks to produce red signal flares. Strontium titanate is a gemstone. The radioactive isotope Strontium-90, with a half-life of 29 years, is a product of nuclear fission and a high-energy beta emitter. This isotope is a lightweight nuclear-electric power source in space vehicles and remote weather stations.

Strontium's radioactive isotopes emit high-energy beta radiation, causing damage — including cancer — to bone marrow and blood-forming organs.

Properties of Strontium

Name	Strontium
Symbol	Sr
Atomic number	38
Atomic weight	87.62
Standard state	Solid at 298 °K

Properties of Strontium (continued)

CAS Registry ID	7440-24-6
Group in periodic table	2
Group name	Alkaline earth metal
Period in periodic table	5
Block in periodic table	s-block
Color	Silvery white
Classification	Metallic
Melting point	777 °C
Boiling point	1384 °C
Vaporization point	1382 °C
Thermal conductivity	35.4 W/(m·K) at 298.2 °K
Electrical resistivity	23.0 μΩ·cm at 20 °C
Electronegativity	1.0
Specific heat	0.3 kJ/kg K
Heat of vaporization	137 kJ·mol ⁻¹
Heat of fusion	8 kJ·mol ⁻¹
Density of liquid	2.38 g/cm ³ at 777 °C
Density of solid	2.64 g/cm ³
Electron configuration	[Kr]5s ²
Atomic radius	2.15 Å
Oxidation state	+2
Ionic radius	Sr ²⁺ : 1.26 Å and 1.44 Å (coordination numbers 8 and 12, respectively)