

SAFETY DATA SHEET

Preparation Date: 9/18/2018

Revision Date: Not Applicable

Revision Number: Not Applicable

1. IDENTIFICATION

Product identifier

Product code: S1129
Product Name: STRONTIUM OXIDE

Other means of identification

Synonyms: Strontia
 Strontium monoxide
CAS #: 1314-11-0
RTECS # WK9810000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Label elements

Danger

Hazard statements
 Causes severe skin burns and eye damage

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Reacts with water to evolve heat and form a caustic solution

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response*Immediately call a POISON CENTER or doctor/physician*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Strontium Oxide	1314-11-0	100

4. FIRST AID MEASURES**First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

Eye Contact:

Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the

substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms Corrosive
Severe skin and eye irritation or burns
Can cause burns, especially if the skin is moist or wet
May cause chemical burns to the respiratory tract
May cause coughing and shortness of breath
May cause nausea, headache, vomiting
May cause pulmonary edema
May cause inflammation of the lungs (pneumonitis)
May affect the liver
It may affect the kidneys
It may affect the heart
Causes digestive (gastrointestinal) tract irritation
May cause gastrointestinal (digestive) tract burns

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: Water.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: The product is not flammable. Reacts with water to evolve heat and form a caustic solution.

Special Protective Actions for Firefighters

Specific Methods: Do not get water inside containers. Do not use water on material itself.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not expose spill to water. Do not get water inside containers.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly. Do not flush with water. Do not allow contact with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Do not breathe dust. Do not ingest. Protect from moisture. Never add water to this product. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Protect from moisture. Flushed with nitrogen. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Water
Oxidizing agents
Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Strontium Oxide	1314-11-0	None	None	None	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
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Strontium Oxide	1314-11-0	None	None	None	None
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Australia and Mexico

Components	CAS-No.	Australia	Mexico
Strontium Oxide	1314-11-0	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Face-shield. or Goggles

Skin and body protection: Chemical resistant apron
Gloves
Long sleeved clothing
Boots

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Solid

Appearance:
Powder.

Color:
Colorless. White.

Odor:
Odorless.

Taste
No information available.

Formula:
SrO

Molecular/Formula weight (g/mole):
103.62 g/mol

Flammability:
No information available

Flashpoint (°C/°F):
No information available.

Flash Point Tested according to:
Not available

Autoignition Temperature (°C/°F):
No information available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

Melting point/range(°C/°F):
2531°C/4588°F

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
3200°C/5790°F

Bulk density:
No information available

Density (g/cm3):
4.7

Specific gravity:
No information available

pH:
No information available

Vapor pressure @ 20°C (kPa):
No information available

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Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

Partition coefficient (n-octanol/water):
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Reacts with water
Decomposes in water
Insoluble in Acetone
Insoluble in Ether
Slightly soluble in alcohol

10. STABILITY AND REACTIVITY

Reactivity

Exothermic reaction with water
Reacts violently with water
Reactive with oxidizing agents

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Exposure to water. Exposure to moisture. Decomposes when moist. Excess Heat. Incompatible materials.

Incompatible Materials: Water
Oxidizing agents
Acids

Hazardous decomposition products: Strontium hydroxide.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Skin. Eyes. Inhalation.

Acute Toxicity

Component Information

Strontium Oxide

CAS-No. | 1314-11-0

LD50/oral/rat = No information available

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 667 mg/kg intraperitoneal LD50 mouse

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes severe skin irritation and possible burns, especially if skin is wet or moist.
Eye Contact:	Causes eye burns. Corrosive to the eyes and may cause severe damage including blindness.
Inhalation	Causes respiratory tract (nose, throat, lung) irritation with coughing and shortness of breath. May cause chemical burns to the respiratory tract. May cause chemical pneumonitis. It may cause pulmonary edema.
Ingestion	Irritating to mouth, throat and stomach. May cause digestive (gastrointestinal) tract burns. May cause headache, nausea, vomiting. It may affect the blood (blood clotting factors).
Aspiration hazard	No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	Chronic exposure may affect the liver and kidneys. Prolonged or repeated exposure may affect the heart.
Sensitization:	No information available.
Mutagenic Effects:	No information available
Carcinogenic effects:	Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Strontium Oxide	1314-11-0	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: Blood. Kidneys. Adrenal gland.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal. Do not re-use empty containers
Dispose of as unused product.

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Strontium Oxide	1314-11-0	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8

Product code: S1129

Product name: STRONTIUM OXIDE

Subsidiary Class No information available
Packing group: III
Emergency Response Guide Number 154
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions IB8, IP3, T1, TP33
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III

TDG (Canada)

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No Information available
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III

ADR

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Special Provisions 274
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III

IMO / IMDG

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No information available
EMS: F-A
Special Provisions 223, 274
Description UN3262, Corrosive solid, basic, inorganic, n.o.s. (STRONTIUM OXIDE), 8, III

RID

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Special Provisions 274
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III

ICAO

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III
Special Provisions A3

IATA

Product code: S1129

Product name: STRONTIUM OXIDE

UN-No: UN3262
Proper Shipping Name: Corrosive solid, basic, inorganic, n.o.s. (strontium oxide)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Special Provisions No information available
Description: UN3262, Corrosive solid, basic, inorganic, n.o.s., 8, III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Strontium Oxide	1314-11-0	PresentACTIV E	Present KE-32238	Not present	Present (9)-2441	Present	Present	Present 215-219-9

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Strontium Oxide	1314-11-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Strontium Oxide	1314-11-0	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Strontium Oxide	1314-11-0	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
 Strontium Oxide
 1314-11-0 (100)

WHMIS 2015 Hazard Classification
 Serious eye damage/irritation - Category 1 Causes serious eye damage (H318); Skin corrosion/irritation - Category 1 Causes severe skin burns and eye damage (H314); Health hazards not otherwise classified (corrosion) - Category 1 - Causes severe damage to the respiratory tract.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Strontium Oxide	1314-11-0	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Strontium Oxide	1314-11-0	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Strontium Oxide	1314-11-0	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Strontium Oxide	1314-11-0	

EU - CLP (1272/2008)

R-phrase(s)

R14 - Reacts violently with water.
R34 - Causes burns.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 - After contact with skin, wash immediately with plenty of water
S30 - Never add water to this product.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 1/2 - Keep locked up and out of the reach of children.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Strontium Oxide	1314-11-0		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

Preparation Date: 9/18/2018
Revision Date: Not Applicable
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet