

SAFETY DATA SHEET

Preparation Date: 9/2/2015

Revision date 09/18/2019

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: S1681
Product Name: STRONTIUM NITRATE, TECHNICAL

Other means of identification

Synonyms: Nitric acid, Strontium salt
 Strontium dinitrate
CAS #: 10042-76-9
RTECS # WK9800000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: In pyrotechnics. In fireworks. Coloring agent. Research and Development.
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: Tom Tyner (USA - West Coast)

Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

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

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Oxidizing solids	Category 3

Label elements

Warning

Hazard statements

Harmful if swallowed
 Causes skin irritation
 Causes serious eye irritation

May cause respiratory irritation
May intensify fire; oxidizer



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep/Store away from clothing and other combustible materials
Take any precaution to avoid mixing with combustibles
Wear protective gloves
Wear eye/face protection

Precautionary Statements - Response

IN CASE OF FIRE: Use water to extinguish. Do not use dry chemicals or foams. CO₂ or Halon may provide limited control.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
IF ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Strontium Nitrate	10042-76-9	100

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you

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have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact:	Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.
Eye Contact:	Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms	Causes serious eye irritation Causes skin irritation Exposure to nitrites/nitrates can cause gastroenteritis, abdominal pain, nausea, vomiting, diarrhea, metabolic acidosis, purging, methemoglobinemia, cyanosis, muscle weakness, dizziness, lightheadedness, loss of coordination, fatigue, headache, seizures, convulsions, dyspnea, dysrhythmias, coma, and death. Can affect the liver, metabolism (weight loss), blood (methemoglobinemia), cardiovascular system (bradycardia/tachycardia, hypotension, vasodilation, irregular heartbeat), kidneys
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Indication of any immediate medical attention and special treatment needed

Notes to Physician:	Treat symptomatically.
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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:	Water. CO2 may be of no value in extinguishing fires involving oxidizers and may only provide limited control.
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Unsuitable Extinguishing Media:	Dry chemical. Foam. Halons.
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Specific hazards arising from the chemical

Hazardous combustion products	Strontium oxide. Nitrogen oxides (NOx).
Specific hazards	Oxidizer. Keep away from combustible materials (wood, paper, oil, clothing, etc.) The product is not flammable, but it may cause fire when in contact with other material. Contact with combustible or organic materials may cause fire. Contact with finely divided (powdered) metals may cause ignition (fire) or explosion. Will accelerate burning when involved in a fire. Container explosion may occur under fire conditions or when heated.

Special Protective Actions for Firefighters

Specific Methods:	For large fires, flood fire area with water from a distance Cool affected containers with flooding quantities of water
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Do not get water inside containers DO NOT use combustible materials such as sawdust

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. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid dust formation. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material. Remove all sources of ignition.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering 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. Do not use combustible materials such as paper towels, sawdust, clothing, etc. to clean up spill. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

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

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. Keep away from heat and sources of ignition. Keep away from combustible material. 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. Store away from incompatible materials. Store in a segregated and approved area. Do not store near combustible materials. Keep away from heat and sources of ignition.

Incompatible Materials:

Combustible materials
Reducing agents
Organic materials
Halogens
Strong acids
Alkyl esters
Metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Strontium Nitrate	10042-76-9	None	None	None	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Strontium Nitrate	10042-76-9	None	None	None	None

Australia and Mexico

Component	CAS No	Australia	Mexico
Strontium Nitrate	10042-76-9	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:	Goggles or Safety glasses with side-shields.
Skin and body protection:	Chemical resistant apron Gloves Long sleeved clothing
Respiratory protection:	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Solid

Appearance:
Crystals.

Color:
White.

Odor:
Odorless.

Taste
No information available.

Formula
 $\text{Sr}(\text{NO}_3)_2$

Molecular/Formula weight (g/mole):
211.63

Flammability (solid, gas)
no data available

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

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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): 570°C/1058°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 645°C/1193°F	Bulk density: No information available	Density (g/cm3): 2.986
Specific gravity: No information available	pH 5.0-7.0 (5%)	Vapor pressure @ 20°C (kPa): No information available
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: Easily soluble in water Slightly soluble in alcohol Slightly soluble in Acetone	

10. STABILITY AND REACTIVITY

Reactivity

Oxidizer. Reacts with reducing agents, organic material, combustible materials, and powdered metals
Contact with combustible materials (wood, paper, oil, clothing, etc.) may cause fire
Contact with powdered metals may cause fire or explosion
Can react vigorously on contact with reducing materials

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Contact with combustible materials (wood, paper, oil, clothing, etc.).

Incompatible Materials: Combustible materials
Reducing agents
Organic materials
Halogens
Strong acids
Alkyl esters
Metals

Hazardous decomposition products: Nitrogen oxides (NO_x). Strontium oxide.

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. Ingestion.

Acute Toxicity

Component Information

Strontium Nitrate	
CAS No	10042-76-9

LD50/oral/rat = 2750 mg/kg Oral LD50 Rat = 1892 mg/kg Oral LD50 Rat

LD50/oral/mouse = 1028 mg/kg oral LD50 mouse

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 = 3077 mg/kg oral LD50 guinea pig
1600-3685 mg/kg oral LD50 rabbit

Product Information

LD50/oral/rat =

Value - Acute Toxicity = 1892 mg/kg

LD50/oral/mouse =

Value - Acute Tox = 1028 mg/kg

LD50/dermal/rabbit

Value - Acute Toxicity = No information available

LD50/dermal/rat

VALUE - Acute Tox = 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 skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation May cause respiratory irritation. Symptoms may include coughing and wheezing, and shortness of breath.

Ingestion Harmful if swallowed. May cause gastroenteritis. May cause abdominal pain.

Ingestion may cause nausea, vomiting, diarrhea. May cause flushing or redness of skin. May cause methemoglobinemia, (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin). Signs and symptoms of methemoglobinemia include shortness of breath, cyanosis (a bluish discoloration of the skin, lips, mucous membranes), mental status changes such as headache, mental impairment, fatigue, muscular weakness, exercise intolerance, lightheadedness, dizziness, incoordination, seizures, and loss of consciousness. Arterial blood with elevated methemoglobin levels has a characteristic chocolate-brown color as compared to normal bright red oxygen containing arterial blood. Severe methemoglobinemia is characterized by bradycardia or tachycardia (slow or fast heart beat), dysrhythmias, seizures, coma and death. May cause metabolic acidosis. May cause respiratory paralysis/respiratory failure. May affect the cardiovascular system (hypotension).

Aspiration hazard No information available.

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

Chronic Toxicity Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the heart. Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may affect the blood (changes in clotting factors).

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Probably carcinogenic to humans. IARC group 2A - Listed under Nitrate or Nitrite (ingested) under conditions that result in endogenous nitrosation.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Strontium Nitrate	10042-76-9	Not listed	Not listed	Not listed	Present	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 central nervous system. respiratory system.
STOT - repeated exposure No information available.
Target Organs: Central nervous system. Liver. Kidneys. Blood.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:	Aquatic environment.
<i>Strontium Nitrate - 10042-76-9</i>	
Fish	LC50: >97.45mg/L (96h, Cyprinus carpio)
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available.
Mobility in soil	No information available
Other adverse effects	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.

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Strontium Nitrate	10042-76-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1507
Proper Shipping Name:	Strontium nitrate
Hazard Class	5.1
Subsidiary Class	No information available
Packing group:	III
Emergency Response Guide Number	140
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	A1, A29, IB8, IP3, T1, TP33
Symbol(s):	No information available
Description:	UN1507, Strontium nitrate, 5.1, III

TDG (Canada)

UN-No:	UN1507
Proper Shipping Name:	Strontium nitrate
Hazard Class	5.1
Subsidiary Risk:	No information available
Packing Group:	III
Marine Pollutant	No Information available
Description:	UN1507, Strontium nitrate, 5.1, III

ADR

UN Number UN1507
Proper Shipping Name: Strontium nitrate
Transport hazard class(es) 5.1
Packing group III
Subsidiary Risk: No information available
Description: UN1507, Strontium nitrate, 5.1, III

IMDG

UN-No: UN1507
Proper Shipping Name: Strontium nitrate
Hazard Class: 5.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No information available
EMS: F-A
Description UN1507, Strontium nitrate, 5.1, III

RID

UN Number UN1507
Proper Shipping Name: Strontium nitrate
Transport hazard class(es) 5.1
Subsidiary Risk: No information available
Packing group III
Description: UN1507, Strontium nitrate, 5.1, III

ICAO (air)

UN-No: UN1507
Proper Shipping Name: Strontium nitrate
Hazard Class 5.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN1507, Strontium nitrate, 5.1, III

IATA

UN Number UN1507
Proper Shipping Name: Strontium nitrate
Transport hazard class(es) 5.1
Subsidiary Risk: No information available
Packing group III
Precautionary Statements - Response 5L
Special Provisions No information available
Description: UN1507, Strontium nitrate, 5.1, III

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Strontium Nitrate	10042-76-9	PresentACTIVE	PresentKE-32235	Present	Present(1)-490	Present	Present	Present233-131-9

U.S. Regulations

Strontium Nitrate
 Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 1743
3722
New Jersey (EHS) List: Present
Pennsylvania RTK: Present

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)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Strontium Nitrate	10042-76-9	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	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 Nitrate	10042-76-9	None	None	None	None	1.0 % deminimis concentration

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Strontium Nitrate	10042-76-9	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

Canada Hazardous Products Regulation This product has not 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

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Strontium Nitrate	10042-76-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Strontium Nitrate	10042-76-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Strontium Nitrate	10042-76-9	Not listed

EU Classification

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Strontium Nitrate	10042-76-9	

EU - CLP (1272/2008)

R-phrase(s)

R 8 - Contact with combustible material may cause fire.

R22 - Harmful if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

S -phrase(s)

S 2 - Keep out of the reach of children.

S17 - Keep away from combustible material

S24/25 - Avoid contact with skin and eyes

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Strontium Nitrate	10042-76-9		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC**Indication of danger:**

Xn - Harmful

Xi - Irritant

O - Oxidising.

Xn



Xi



O

**16. OTHER INFORMATION**

Preparation Date: 9/2/2015
Revision date: 09/18/2019
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