

## SAFETY DATA SHEET

Preparation Date: 9/2/2015

Revision date 09/18/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** S1680  
**Product Name:** STRONTIUM NITRATE, CRYSTAL, REAGENT, ACS

#### 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

**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:** Water. CO2 may be of no value in extinguishing fires involving oxidizers and may only provide limited control.

**Unsuitable Extinguishing Media:** Dry chemical. Foam. Halons.

**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.

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

<b>Eye protection:</b>	Goggles or Safety glasses with side-shields.
<b>Skin and body protection:</b>	Chemical resistant apron Gloves Long sleeved clothing
<b>Respiratory protection:</b>	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
<b>Hygiene measures:</b>	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**  
Sr(NO<sub>3</sub>)<sub>2</sub>

**Molecular/Formula weight (g/mole):**  
211.63

**Flammability (solid, gas)**  
no data available

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

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<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 570°C/1058°F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 645°C/1193°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 2.986
<b>Specific gravity:</b> No information available	<b>pH</b> 5.0-7.0 (5%)	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> 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<sub>x</sub>). 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.

*Strontium Nitrate - 10042-76-9*

**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

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**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

<b>15. REGULATORY INFORMATION</b>
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**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	PresentACTIV E	Present KE-32235	Present	Present (1)-490	Present	Present	Present 233-131-9

**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**

**WHMIS 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)**

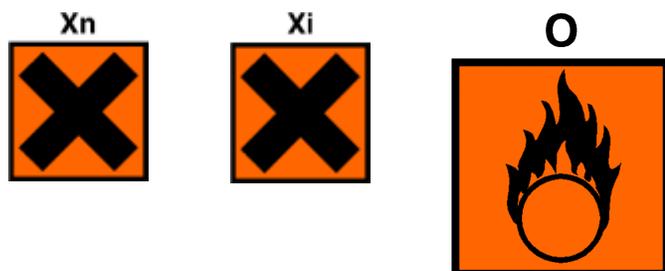
S 2 - Keep out of the reach of children.  
 S17 - Keep away from combustible material  
 S24/25 - Avoid contact with skin and eyes  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

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.

**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**