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MSDS Number: **S6962** \* \* \* \* *Effective Date: 05/17/01* \* \* \* \* *Supersedes: 06/30/98*

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**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



Mallinckrodt  
CHEMICALS



24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

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# STRONTIUM NITRATE ANHYDROUS

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## 1. Product Identification

**Synonyms:** Strontium (II) nitrate (1:2); nitric acid, strontium salt

**CAS No.:** 10042-76-9

**Molecular Weight:** 212

**Chemical Formula:** Sr(NO<sub>3</sub>)<sub>2</sub>

**Product Codes:**

J.T. Baker: 4053, 5133

Mallinckrodt: 8256

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## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
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Strontium Nitrate	10042-76-9	100%	Yes

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## 3. Hazards Identification

## Emergency Overview

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**DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED.**

**J.T. Baker SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

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Health Rating: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 3 - Severe (Oxidizer)

Contact Rating: 1 - Slight

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Yellow (Reactive)

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## Potential Health Effects

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### Inhalation:

Irritant to the nasal and respiratory passages due largely to the nitrate radical. Coughing, sneezing and some difficulty in breathing can occur in cases of exceptional dust inhalation.

Higher levels may cause a chemical pneumonia.

### Ingestion:

Toxicity rating is low (2-3) because strontium salts are poorly absorbed from the digestive system. Large doses may, however, upset the osmotic balance and cause vomiting and diarrhea as well as nitrate irritation.

### Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

### Eye Contact:

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

### Chronic Exposure:

Repeated exposure has caused damage to heart muscle, lungs, liver, kidneys, and blood-forming organs; and effects the nervous system in animals. Repeated exposure causes strontium nitrate to accumulate in the body and effects can persist after exposure stops.

### Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems or impaired liver or kidney function may be more susceptible to the effects of the substance. Persons on diets low in calcium may be at greater risk of absorbing more strontium nitrate.

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## 4. First Aid Measures

### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

### Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and

shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizable substances may cause extremely violent combustion. Poisonous gases are produced in fire, including oxides of nitrogen.

**Explosion:**

Strong oxidants may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapor explosions. Sensitive to mechanical impact. Sensitive to static discharge.

**Fire Extinguishing Media:**

Dry chemical, foam, carbon dioxide, or water spray.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. Keep the substance out of a confined space, such as a sewer, because of the possibility of an explosion.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibles, combustibles, organic or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

- OSHA Permissible Exposure Limit (PEL):

15 mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction for nuisance dusts.

- ACGIH Threshold Limit Value (TLV):

10 mg/m<sup>3</sup> total dust containing no asbestos and < 1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Maintain eye wash fountain and quick-drench facilities in work area. Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible.

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## 9. Physical and Chemical Properties

**Appearance:**

White powder or granules.

**Odor:**

Odorless.

**Solubility:**

71 g/100 ml water at 18C

**Density:**

2.98

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

No information found.

**Boiling Point:**

645C (1193F)

**Melting Point:**

570C (1058F)

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Oxides of nitrogen and toxic metal fumes may form when heated to decomposition.

**Hazardous Polymerization:**

This substance does not polymerize.

**Incompatibilities:**

Reducing agents, organic compounds, halogens.

**Conditions to Avoid:**

Heat, flames, ignition sources and incompatibles.

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## 11. Toxicological Information

Oral rat LD50: 2750 mg/kg.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
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Strontium Nitrate (10042-76-9)	No	No	None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

### Domestic (Land, D.O.T.)

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**Proper Shipping Name:** STRONTIUM NITRATE

**Hazard Class:** 5.1

**UN/NA:** UN1507

**Packing Group:** III

**Information reported for product/size:** 50KG

### International (Water, I.M.O.)

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**Proper Shipping Name:** STRONTIUM NITRATE

**Hazard Class:** 5.1

**UN/NA:** UN1507

**Packing Group:** III

**Information reported for product/size:** 50KG

## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----  
Ingredient TSCA EC Japan Australia  
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Strontium Nitrate (10042-76-9) Yes Yes Yes Yes

-----\Chemical Inventory Status - Part 2\-----  
Ingredient Korea DSL NDSL Phil.  
-----  
Strontium Nitrate (10042-76-9) Yes Yes No Yes

-----\Federal, State & International Regulations - Part 1\-----  
Ingredient -SARA 302- -SARA 313-  
RQ TPQ List Chemical Catg.  
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Strontium Nitrate (10042-76-9) No No No Nitrate Cmpd

-----\Federal, State & International Regulations - Part 2\-----  
Ingredient CERCLA -RCRA- -TSCA-  
261.33 8(d)  
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Strontium Nitrate (10042-76-9) No No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** 1[T]**Poison Schedule:** None allocated.**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

**NFPA Ratings:** Health: 1 Flammability: 0 Reactivity: 0 Other: **Oxidizer****Label Hazard Warning:**

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.  
CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED.

**Label Precautions:**

Keep from contact with clothing and other combustible materials.

Store in a tightly closed container.

Do not get in eyes, on skin, or on clothing.

Avoid breathing dust.

Use only with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

No Changes.

**Disclaimer:**

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