

CHEMICAL PRODUCTS CORPORATION

MATERIAL SAFETY DATA SHEET

MSDS No. 174

Revised August 2001

Most Recent Re-approval Date: February 2010

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1. PRODUCT IDENTIFIER

NAME: **Strontium Nitrate, Low Barium**

SYNONYMS: Nitric Acid, Strontium Salt.

MANUFACTURER: Chemical Products Corporation (CPC)
P.O. Box 2470
102 Old Mill Road, S.E.
Cartersville, Georgia 30120
Telephone: Day, 770-382-2144; Night, 770-382-2212

24-hour Emergency Phone Number: CHEMTREC 800-424-9300

2. INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS #</u>	<u>EXPOSURE LIMITS</u>	<u>% BY WT</u>
Barium Nitrate	10022-31-8	OSHA PEL: 0.5 mg/cu m as Ba. 0.9 mg/cu m as Ba(NO ₃) ₂ ACGIH TLV-TWA: Same	ca 0.4%
Strontium Nitrate	10042-76-9	OSHA PEL: Nuisance Dust, 15 mg/cu m	ca 98%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! OXIDIZER. Contact with other materials may cause fire.

This product will not burn.

The nitrate ion is harmful if ingested or inhaled. Barium nitrate is a minor impurity in this product and is harmful if ingested or inhaled. Strontium is essentially non-toxic through oral, dermal, or inhalation exposure.

POTENTIAL HEALTH EFFECTS: Nitrates can cause weakness, general depression, and headache if ingested. May cause mild chemical burns to eyes.

Routes of Entry: Ingestion and inhalation.

Human Effects: Strontium is essentially non-toxic and nitrates exhibit a low toxicity. Cyanosis in infants who drink well water is a frequently encountered clinical manifestation of nitrate toxicity.

Acute Inhalation: Physical blockage of breathing passages with choking sensation. Nitrates cause general depressed activity and diarrhea.

Chronic Inhalation: Headache.

Acute Skin Contact: Product is slightly irritating.

Chronic Skin Contact: May cause drying of the skin.

Acute Eye Contact: Severe irritation and possibly mild chemical burns.

Chronic Eye Contact: Irritation.

Acute Ingestion: Nitrate causes weakness, general depression, headache, and diarrhea.

Chronic Ingestion: Headache.

Carcinogenicity: NTP.....: Not listed.

IARC.....: Not listed.

OSHA.....: Not regulated.

Medical Conditions Aggravated by Exposure: None are known.

4. FIRST AID MEASURES

Ingestion: Have victim drink one tablespoon of Epsom Salts (magnesium sulfate) or Glauber's Salt (sodium sulfate) dissolved in water. If victim is not vomiting, induce vomiting by giving Syrup of Ipecac or by sticking finger down throat.

Inhalation: Flush mouth and nasal passages with water as much as possible.

Eye Contact: Flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Wash with water and use soap if available.

5. FIRE FIGHTING MEASURES

Flashpoint: Non-Flammable.

Flammability: None.

Autoignition: None.

General Hazard: This product is an oxidizer. Spontaneous chemical reaction with low flash point organics or reducing agents may occur.

Fire Fighting Instructions: No special instructions.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Hazardous Combustion Products: Toxic fumes of nitrogen oxides may be generated.

6. ACCIDENTAL RELEASE MEASURES

Small Spill: Sweep or scoop up spilled material.

Large Spill: Try to keep material dry. Avoid contact with organics or reducing agents. Scoop up spilled material and dispose of in accordance with local, state, and federal regulations.

7. HANDLING AND STORAGE

Storage Temperature: Not critical.

Storage Pressure: Not critical.

General: Avoid contacting this product with organics or reducing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Control airborne concentrations below the exposure limits. Use only with adequate ventilation.

Respiratory Protection: Use a NIOSH-approved dust mask if excessive dust is present.

Skin Protection: Cover exposed skin areas and wear general-purpose gloves.

Eye Protection: Wear safety glasses. Use chemical goggles if excessive dust is present.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid.

Vapor Pressure: Not applicable.

Specific Gravity: 3.0

Solubility in Water: 89 grams per 100 ml of water at 25 Deg. C. (77 Deg. F.)

pH: Neutral

Boiling Point: Not applicable.

Melting Point: Decomposes at about 500 Deg. C. producing oxides of nitrogen.

Vapor Density: Not applicable.

Evaporation Rate: Not applicable.

Odor: None.

Appearance: White crystalline powder or granules.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable in the absence of heat or shock.

Incompatibility: Organics and reducing agents.

Hazardous Decomposition Products: Toxic fumes of nitrogen oxides.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Eye: No data. Expected to cause mild chemical burns to the eye.

Skin: No data. Not expected to be absorbed through intact skin.

Ingestion: Strontium nitrate Oral Rat LD50 = 2750 mg/kg.
Barium nitrate Oral Rat LD50 = 355 mg/kg.

Inhalation: No data. Expected to be similar to ingestion.

Sub-chronic: Not known. No effects expected.

Chronic/Carcinogenic: Not known. No evidence of carcinogenic effects.

Teratogenic: Not known. No effects expected.

Reproductive: Not known. No effects expected.

Mutagenic: Not known. No effects expected.

12. ECOLOGICAL INFORMATION

TOXICITY: Low.

DISTRIBUTION: The element strontium is widely distributed in the natural environment.

CHEMICAL FATE: Probably slowly converted to insoluble strontium carbonate or sulfate because of carbonate and sulfate availability in the environment. Nitrates become a part of the natural nitrogen cycle.

13. WASTE MANAGEMENT INFORMATION

If disposed of in its original form, this product is a hazardous waste because of the small amount of soluble barium in the product.

More than 100 ppm soluble barium in the TCLP extract constitutes a RCRA hazardous waste. This is equal to 0.2 % soluble barium in a waste. This product contains about 0.26 % soluble barium. The barium in this product can be rendered non-leachable by reacting it with sulfuric acid or any soluble sulfate to form highly-insoluble barium sulfate. Barium sulfate is not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

D.O.T. Shipping Name..... : Strontium nitrate.

Technical Shipping Name..... : Strontium nitrate.

D.O.T. Hazard Class..... : 5.1 Oxidizer.

U.N./N.A. Number..... : UN 1507

Product R.Q. (lbs)..... : None.

D.O.T. Label..... : Oxidizer.

D.O.T. Placard..... : 5.1 Oxidizer.

Freight Class Bulk..... : Not Applicable.

Freight Class Package..... : Inorganic Chemical.

Product Label..... : Strontium Nitrate.

15. REGULATORY INFORMATION

OSHA Status..... : This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200. It is classified as toxic.

TSCA Status..... : Listed on TSCA Inventory.

CERCLA Reportable Quantity..... : None.

SARA Title III:

Section 302, Extremely Hazardous Substances.... : None.

Section 311/312, Hazard Categories..... : Category 1 (Acute Hazard).

Section 313, Toxics Release Inventory..... : None.

RCRA Status.....: This product contains enough barium nitrate as an impurity to be a hazardous waste when tested by the RCRA TCLP test.

16. OTHER INFORMATION

NFPA Rating (National Fire Protection Association):

Health - 2 (Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given).

Fire - 0 (Materials that are non-flammable).

Reactivity - 1 (Materials which in themselves are normally stable even under fire exposure conditions, and which are not reactive with water).

Special - NA

Reason for Issue.....: Revision of hazard information to conform to ANSI Z129.1 - 2000.

Prepared by..... : Jerry A. Cook.

Title..... : Technical Director.

Supersedes Date..... : October 1995.

Approval Date..... : August 2001.

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