

MATERIAL SAFETY DATA SHEET

Solvay Minerals, Inc. (Solvay Performance Chemicals)
(Solvay Performance Chemicals is a marketing unit of Solvay Minerals Inc.)
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Issued by: P J Luzmoor, Safety/Training Dept.

HAZARDOUS MATERIAL INFORMATION SYSTEM(HMS?) H = 1 F = 0 R = 0 PERSONAL PROTECTION =B

The following information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations of mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product).

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1. PRODUCT IDENTIFICATION

- 1.1 Product Name: **STRONTIUM CARBONATE**
- 1.2 Chemical Name: strontium carbonate powder (types A & B) or granulates (types C & D)
- 1.3 Formula: SrCO₃
- 1.4 Molecular Weight: 147.6
- 1.5 CAS Number: 1633-05-2
- 1.6 EINECS Number: 216-643-7

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS/FORMULA	CAS #	UN #	PERCENT
Strontium Carbonate	1633-05-2	NA	>=97.5%
Barium Carbonate	513-77-9	1564	<=1.5%

3. HAZARD IDENTIFICATION

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MSDS # PAGE 1 OF 4



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- 3.1 Presents little hazard to human health and the environment. Chronic exposure to the product can induce bone calcification disorders.
- 3.2 **Route(s) of Entry:** Inhalation-YES Skin-NO Ingestion-NO
- 3.3 **Effects of exposure: Inhalation (dusts):** At high concentrations, risk of chemical pneumonia.
Eyes & Skin: Minor irritation from the particulates generated by the product.
Ingestion: NA

4. FIRST AID MEASURES

- 4.1 **Inhalation:** Remove the subject from dusty environment and let him blow his nose. Consult with a physician in case of respiratory symptoms.
Eyes: While keeping the eyelids wide open, flush eyes with running water for at least 15 minutes. Consult with an ophthalmologist in case of persistent pain.
Skin: Wash the affected skin with soap and water for at least 15 minutes. Clean contaminated clothing. Consult with a physician in case of persistent pain or redness.
Ingestion: Contact a physician for advice. If the subject is completely conscious, rinse mouth and administer fresh water.

5. FIRE FIGHTING MEASURES

- 5.1 **Flash Point:** NA
- 5.2 **Auto-ignition Temperature:** NA
- 5.3 **Fire Fighting Procedures:** In case of fire in close proximity, all means of extinguishing are acceptable.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 **Spills:** Collect the product with suitable means avoiding dust formation. Place everything into a closed, labeled container compatible with the product. Prevent discharges into the environment (sewers, rivers & soils).

7. HANDLING AND STORAGE

- 7.1 Operate in a well-ventilated area. Keep away from reactive products. Store in a dry area in original closed packaging. Avoid dust and formation of dust clouds.
- 7.2 **Packaging:** Paper or PE

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **Exposure Limits: Strontium carbonate:** PNO (particulates not otherwise classified)-2000-2001 ACGIH Inhalable: 10 mg/m³ Respirable: 3 mg/m³ OSHA: Total dust-15 mg/m³ Respirable-5 mg/m³.
Barium Carbonate: TLV (ACGIH) 2000-2001: TWA = 0.5 mg/m³ In Ba, soluble compounds of Ba.

- 8.2 **Ventilation:** Maintain employee exposures to levels below the applicable exposure limits.
- 8.3 **Respiratory Protection:** NIOSH approved respiratory protection for toxic dusts.
- 8.4 **Eye Protection:** Wear protective goggles for all industrial operations.
- 8.5 **Skin Protection:** NA
- 8.6 **Other Protective Clothing or Equipment:** An eyewash and safety shower should be nearby and ready for use. Use good hygiene practices when handling this product including changing work clothes after use. Do not eat, drink or smoke in areas where this material is handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 **Appearance:** Powder, pellets. Color: white. Odor: odorless.
- 9.1 **Melting Point:** NA
- 9.2 **Boiling Point:** NA
- 9.3 **Specific Gravity (H₂O=1):** 3.7
- 9.4 **Vapor Density (air=1):** Not applicable
- 9.5 **Vapor Pressure:** Not applicable
- 9.6 **Solubility:** 0.01 g/l @ 18° C (64.4° F)
- 9.7 **Decomposition Temperature:** >1,000°C (2012°F)
- 9.8 **Viscosity:** Not applicable
- 9.9 **pH:** 7 to 8 @ 20° C (68° F) Saturated solution

10. STABILITY AND REACTIVITY

- 10.1 **Stability:** Stable under normal conditions of use.
- 10.2 **Hazardous Decomposition Products:** Strontium oxide.
- 10.3 **Materials and Substances to Avoid:** Contact with acids liberates CO₂, sometimes violently.

11. TOXICOLOGICAL INFORMATION

- 11.1 **Acute toxicity:** Oral route, LD₅₀, > 2000 mg/kg, Rat.
- 11.2 **Chronic toxicity:** Oral route (diet), after repeated exposure, rat, Target organ: skeleton, observed effect. Intra-tracheal route, after a single exposure, rat, Target organ: Respiratory system observed effect: Risk of chronic pulmonary inflammation

12. ECOLOGICAL INFORMATION

Acute & Chronic Ecotoxicity: no data. **Mobility:** Air: mobility as solid aerosols. Water/soil: low solubility and mobility. **Abiotic degradation:** Water/soil: Slow ionization and cation precipitation in presence of Sulfates or carbonates. **Biotic degradation:** not applicable (inorganic compound). **Potential for bioaccumulation:** Bio-concentration: Terrestrial plants, various species. Result: potential

accumulation of the cation. **General Comments:** Product is not significantly hazardous for the environment. Persistent product mainly as inert form.

13. DISPOSAL CONSIDERATIONS

- 13.1 **Waste treatment:** Spilled product should be disposed of in an EPA approved disposal facility in accordance with applicable national, state and local environmental laws and regulations.
- 13.2 **Packaging treatment:** Containers that cannot be cleaned must be treated as waste. Dispose of the containers in an approved facility. The empty and clean containers are to be reused in conformity with regulations.
- 13.2 **RCRA waste #:** Product may be a RCRA hazardous waste (characteristic) for barium (D-005) per CFR 40-261.24.

14. TRANSPORT INFORMATION

- 14.1 **Not regulated by DOT, TDG OR IMO**

15. REGULATORY INFORMATION

- 15.1 **NFPA:** *Health- not listed Flammability- not listed Reactivity- not listed Special- not listed*
HMIS: *Health-1 Fire-0 Reactivity-0 Personal Protection-B-*
WHMIS: CLASS D-2
- 15.2 **Regulatory/Carcinogenicity Status:** NTP:). IARC:). OSHA:). NA
- 15.3 **TSCA Listing:** YES
- 15.4 **Canadian DSL Registration:** Yes
- 15.5 **CERCLA-SARA- listing:** NA
- 15.6 **ECC Labeling:** Not dangerous according to Dir. 92/32/EEC.

16. OTHER INFORMATION: NA

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