SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
- Trade name: STRONTIUM CARBONATE - HIGH PURITY
- Chemical name: Strontium carbonate
- Synonyms: Strontionit
- Molecular formula: SrCO3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses of the Substance / Mixture
- Manufacture of pyrotechnical products
- Use in welding electrode coating
- Manufacture of glazes, frits and enamels
- Manufacture of ceramic materials
- Manufacture of electro-ceramic materials
- Manufacture of other strontium compounds
- Use in zinc electrolysis

Uses advised against
- none

1.3 Details of the supplier of the safety data sheet

Company
SOLVAY FLUORIDES, LLC
3737 Buffalo Speedway,
Suite 800,
Houston, TX 77098
USA
Tel: 800-515-6065

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although WHMIS has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects

2.1 Classification of the substance or mixture
- Not classified as hazardous product under the regulation above.

2.2 Label elements

Hazardous Products Regulations (WHMIS 2015)
- Not labelled as hazardous product under the regulation above.
2.3 Other hazards which do not result in classification

- Harmful: possible risk of irreversible effects through inhalation.
- Chronic exposure to the product can cause bone calcification disorders.

SECTION 3: Composition/information on ingredients

3.1 Substance

**WHMIS Hazardous Ingredients and Impurities**

- No ingredients are hazardous.

3.2 Mixture

Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first-aid measures

**In case of inhalation**

- Move to fresh air.
- If symptoms persist, call a physician.

**In case of skin contact**

- Wash off with soap and water.

**In case of eye contact**

- Rinse thoroughly with plenty of water, also under the eyelids.
- If eye irritation persists, consult a specialist.

**In case of ingestion**

- Rinse mouth with water.
- Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

**In case of inhalation**

- May cause nose, throat, and lung irritation.
  **Repeated or prolonged exposure**
  - Risk of pulmonary overload (respirable particulates)
  - Possible risk of irreversible effects through inhalation.

**In case of skin contact**

- Prolonged skin contact may cause skin irritation.

**In case of eye contact**

- Contact with eyes may cause irritation.
In case of ingestion

Effects
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed
- no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
- None.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting
- Not combustible.

Hazardous combustion products:
- Strontium oxide
- Barium oxide
- Other hazardous decomposition products may be formed.

5.3 Advice for firefighters

Special protective equipment for fire-fighters
- In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel
- Evacuate personnel to safe areas.
- Avoid dust formation.

Advice for emergency responders
- Use personal protective equipment.
- Sweep up to prevent slipping hazard.
- Prevent further leakage or spillage.

6.2 Environmental precautions
- Should not be released into the environment.
- Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

- Pick up and transfer to properly labeled containers.
- Keep in suitable, closed containers for disposal.
 SECTION 7: Handling and storage

7.1 Precautions for safe handling
- Ensure adequate ventilation.
- Minimize dust generation and accumulation.
- Avoid contact with skin and eyes.
- Keep away from incompatible products

Hygiene measures
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
- Store in original container.
- Keep in a well-ventilated place.
- Keep in a dry place.
- Keep in properly labeled containers.
- Keep container closed.
- In bulk: in silo or in heap (covered and isolated from the ground) on a well-drained surface.

- Keep away from:
- Incompatible products

Packaging material

Suitable material
- Paper.
- Polyethylene

7.3 Specific end use(s)
- Contact your supplier for additional information

 SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters
- Contains no substances with occupational exposure limit values above their regulatory reporting threshold.
8.2 Exposure controls

Control measures

Engineering measures
- Provide appropriate exhaust ventilation at places where dust is formed.

Individual protection measures

Respiratory protection
- Use only respiratory protection that conforms to international/national standards.
- Use NIOSH approved respiratory protection.
- Respirator with a particle filter (EN 143)

Hand protection
- Wear suitable gloves.

Suitable material
- PVC
- Natural Rubber

Unsuitable material
- Do not wear neoprene gloves, as neoprene absorbs nanoparticles.

Eye protection
- Goggles

Skin and body protection
- Dust impervious protective suit

Suitable material
- PVC

Hygiene measures
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Form:</th>
<th>hygroscopic, powder, pellets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical state:</td>
<td>solid</td>
</tr>
<tr>
<td></td>
<td>Color:</td>
<td>white</td>
</tr>
<tr>
<td></td>
<td>Particle size:</td>
<td>0.8 - 1.8 µm</td>
</tr>
<tr>
<td></td>
<td>d 50</td>
<td></td>
</tr>
</tbody>
</table>

Odor
odorless

Odor Threshold
No data available

Molecular weight
147.6 g/mol
### SAFETY DATA SHEET

**STRONTIUM CARBONATE - HIGH PURITY**

**Revision Date** 01/18/2018

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td>7.0 - 8.0 (68 °F (20 °C)) saturated aqueous solution</td>
</tr>
<tr>
<td><strong>pKa:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>Melting point/range: Decomposition: yes</td>
</tr>
<tr>
<td><strong>Initial boiling point and boiling range</strong></td>
<td>Boiling point/boiling range: Thermal decomposition: yes</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Evaporation rate (Butylacetate = 1)</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td><strong>Flammability / Explosive limit</strong></td>
<td>Explosiveness: Not explosive</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>Bulk density: 300 - 700 kg/m³ powder</td>
</tr>
<tr>
<td></td>
<td>1,200 - 2,000 kg/m³ pellets</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>3.79</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Water solubility: 3.4 mg/l (68 °F (20 °C)) slightly soluble</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>ca. 1233 °F (667 °C)</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Viscosity, dynamic: Not applicable</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>Not considered as oxidizing.</td>
</tr>
</tbody>
</table>

**P00000021634**

Version : 1.04 / CA (Z8)

www.solvay.com
9.2 Other information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
- Risk of violent reaction.

10.2 Chemical stability
- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
- Contact with acids liberates CO2, sometimes violently.

10.4 Conditions to avoid
- none

10.5 Incompatible materials
- Acids

10.6 Hazardous decomposition products
- Strontium oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

- Acute oral toxicity No data available
- Acute inhalation toxicity No data available
- Acute dermal toxicity No data available
- Acute toxicity (other routes of administration) No data available

Skin corrosion/irritation No data available

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available
Mutagenicity

Genotoxicity in vitro No data available
Genotoxicity in vivo No data available

Carcinogenicity No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by: ACGIH

Toxicity for reproduction and development

Toxicity to reproduction / fertility No data available
Developmental Toxicity/Teratogenicity No data available

STOT

STOT-single exposure No data available
STOT-repeated exposure No data available
Experience with human exposure No data available

Aspiration toxicity No data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish No data available
Acute toxicity to daphnia and other aquatic invertebrates. No data available

Toxicity to aquatic plants No data available
Toxicity to microorganisms No data available
Chronic toxicity to fish No data available
Chronic toxicity to daphnia and other aquatic invertebrates. No data available
Chronic Toxicity to aquatic plants  No data available

12.2 Persistence and degradability

Abiotic degradation  No data available

Physical- and photo-chemical elimination  No data available

Biodegradation  No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water  No data available

Bioconcentration factor (BCF)  No data available

12.4 Mobility in soil

Adsorption potential (Koc)  No data available

Known distribution to environmental compartments  No data available

12.5 Results of PBT and vPvB assessment  No data available

12.6 Other adverse effects  No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product Disposal
- Where possible recycling is preferred to disposal or incineration.
- If recycling is not practicable, dispose of in compliance with local regulations.
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.
- Dispose of wastes in an approved waste disposal facility.
- In accordance with local and national regulations.

Advice on cleaning and disposal of packaging
- Dispose of as unused product.
- Where possible recycling is preferred to disposal or incineration.
### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>not regulated</td>
</tr>
<tr>
<td>DOT</td>
<td>not regulated</td>
</tr>
<tr>
<td>NOM</td>
<td>not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>not regulated</td>
</tr>
</tbody>
</table>

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.
SECTION 15: Regulatory information

15.1 Notification status

<table>
<thead>
<tr>
<th>Inventory Information</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States TSCA Inventory</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Mexico INSQ (INSQ)</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Canadian Domestic Substances List (DSL)</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>New Zealand. Inventory of Chemical Substances</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Australia Inventory of Chemical Substances (AICS)</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Japan. CSCL - Inventory of Existing and New Chemical Substances</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Korea. Korean Existing Chemicals Inventory (KECI)</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>China. Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Listed on Inventory</td>
</tr>
<tr>
<td>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Listed on Inventory</td>
</tr>
</tbody>
</table>

EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)

- When purchased from a European Solvay legal entity, this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered. When purchased from a legal entity outside of Europe, please contact your local representative for additional information.

15.2 National Regulations

No data available

SECTION 16: Other information

Revision Date:
01/18/2018

NFPA (National Fire Protection Association) - Classification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1 slight</td>
</tr>
<tr>
<td>Flammability</td>
<td>0 minimal</td>
</tr>
<tr>
<td>Instability or Reactivity</td>
<td>0 minimal</td>
</tr>
<tr>
<td>Special Notices</td>
<td>None</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

STRONTIUM CARBONATE - HIGH PURITY

Revision Date 01/18/2018

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

<table>
<thead>
<tr>
<th>Health</th>
<th>1 slight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0 minimal</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0 minimal</td>
</tr>
<tr>
<td>PPE</td>
<td>Determined by User; dependent on local conditions</td>
</tr>
</tbody>
</table>

Further information

- This sheet was updated (refer to the date at the top of this page). Subheadings and text which have been modified since the previous version are indicated with two vertical bars.
- Distribute new edition to clients

- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.