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

1.1. Product identifier

Product name: Strontium Carbonate
EC No: 216-643-7
CAS No: 1633-05-2
REACH Registration No: 01-2119502545-46-XXXX
Synonyms: Strontionit

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

1.2.1. Relevant identified uses

Use of the substance/preparation:
Substance used as such, in formulation or in formulation of products such as:
- Glass industry
- Pyrotechnics
- Ceramics
- Electronic industry
- Chemical industry

1.2.2. Uses advised against

- None

Full text of use descriptors: see section 16.

1.3. Details of the supplier of the safety data sheet

Simba Materials Limited t/a CTM Potters Supplies
Unit 7-8
Broomhouse Lane Industrial Estate
Broomhouse Lane
Edlington
Doncaster
DN12 1EQ
T +44 (0)1709 770801 - F +44 (0)1709 770803
doncaster@ctmpotterssupplies.co.uk – www.ctmpotterssupplies.co.uk - admin@ctmpotterssupplies.co.uk

1.4. Emergency telephone number

T +44 (0)1709 770801
+44 (0)1709 770801 (Office hours only)
doncaster@ctmpotterssupplies.co.uk
SECTION 2: Hazards identification.

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 (CLP)
None

No pictogram required.

2.3. Other hazards
This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

SECTION 3: Composition/information on ingredients.

3.1. Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS Number</th>
<th>EC No.</th>
<th>%</th>
<th>Classification EC1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium Carbonate</td>
<td>1633-05-2</td>
<td>216-648-7</td>
<td>&gt;98%</td>
<td>Not classified</td>
</tr>
<tr>
<td>Barium Carbonate</td>
<td>513-77-9</td>
<td>208-167-3</td>
<td>&lt;2.0</td>
<td>Acute Tox. 4 – H302</td>
</tr>
</tbody>
</table>

Formula: CH₂O₃·Sr
Full text of H- and EUH-phrases: see section 16

REACH Registration number: 01-2119502545-46-XXXX
SECTION 4: First aid measures.

4.1. Description of first aid measures
Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues. DO NOT INDUCE VOMITING.
Skin contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs get medical attention/advice. Remove clothing and wash thoroughly before use.
Eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed
Inhalation: Irritation of nose, throat and airway. Harmful: possible risk of irreversible effects through inhalation.
Ingestion: May cause discomfort if swallowed. Nausea, diarrhoea.
Skin contact: Prolonged contact may cause redness, irritation and dry skin.
Eye contact: Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures.

5.1. Extinguishing media
Suitable extinguishing media: Water, dry powder, carbon dioxide, foam
Unsuitable extinguishing media: None

5.2. Special hazards arising from the substance or mixture
Fire hazard: Non combustible.
Explosion hazard: No explosive properties known.
Reactivity: No information available.
Hazardous combustion products: When heated and in case of fire, irritating vapours/gases may be formed.

5.3. Advice for firefighters
Protection during firefighting: Use of approved supplied air or self-contained breathing apparatus operated in positive pressure mode are satisfactory. Totally impervious protective suits, gloves, and boots must be worn.
SECTION 6: Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1. For non-emergency personnel
Avoid inhalation of dust. Provide adequate ventilation. Avoid handling which leads to dust formation.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production. Do not flush with water or aqueous cleaning agents.

6.4. Reference to other sections
See section 8 and 13 for more information.

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Precautions for safe handling: Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packagings: Even those that are empty, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene measures: When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)
The identified uses for this product are detailed in section 1.2
### SECTION 8: Exposure controls/personal protection.

#### 8.1. Control parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>STD</th>
<th>TWA (Total dust)</th>
<th>TWA (Resp. dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium carbonate (Not listed *)</td>
<td>WEL</td>
<td>10 mg/m³</td>
<td>4 mg/m³</td>
</tr>
<tr>
<td>Barium Carbonate (as Ba)</td>
<td>WEL</td>
<td>0.5mg/m³</td>
<td>N/A</td>
</tr>
</tbody>
</table>

WEL: Workplace exposure limit. (* Treat as nuisance dust)

### STRONTIUM CARBONATE

#### DNEL’s

<table>
<thead>
<tr>
<th>End Use</th>
<th>Route/Exposure</th>
<th>Time</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Dermal</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>27.9mg/kg/day</td>
</tr>
<tr>
<td>Industry</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>3.5mg/m³</td>
</tr>
<tr>
<td>Industry</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Local Effect</td>
<td>0.84mg/m³</td>
</tr>
<tr>
<td>Industry</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>1mg/m³</td>
</tr>
<tr>
<td>Consumer</td>
<td>Oral</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>0.8mg/kg/day</td>
</tr>
<tr>
<td>Consumer</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Local Effect</td>
<td>0.17mg/m³</td>
</tr>
</tbody>
</table>

#### PNEC’s

<table>
<thead>
<tr>
<th>End Use</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater</td>
<td>2.06mg/l</td>
</tr>
<tr>
<td>Sediment (freshwater)</td>
<td>1.781mg/kg</td>
</tr>
<tr>
<td>Soil</td>
<td>323.6mg/kg</td>
</tr>
<tr>
<td>STP</td>
<td>4.2mg/l</td>
</tr>
</tbody>
</table>

The units are expressed in “mg/µg” of: Strontium.

### BARIUM CARBONATE

#### DNEL’s

<table>
<thead>
<tr>
<th>End Use</th>
<th>Route/Exposure</th>
<th>Time</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Local Effects</td>
<td>0.72mg/m³</td>
</tr>
<tr>
<td>Consumer</td>
<td>Inhalation</td>
<td>Long Term</td>
<td>Local Effects</td>
<td>0.14mg/m³</td>
</tr>
</tbody>
</table>

#### PNEC’s

<table>
<thead>
<tr>
<th>End Use</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater</td>
<td>227.8 Ba/L (327.3)*</td>
</tr>
<tr>
<td>STP</td>
<td>50.1 mg/Ba/L (72)*</td>
</tr>
<tr>
<td>Sediment (Freshwater)</td>
<td>792.7mg/Ba/kg dw (1138)*</td>
</tr>
<tr>
<td>Soil</td>
<td>207.7mg Ba/kg dw (298.4)*</td>
</tr>
</tbody>
</table>

*mgBaCo3/L}. PNEC values are derived using the information provided in section 12.
8.2. Exposure controls

**Appropriate engineering controls:** Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

**Hand protection:** Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves’ manufacturer.

**Eye protection:** Wear safety glasses with side shields according EN 166.

**Skin and body protection:** Wear closed protective clothing.

**Respiratory protection:** Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

### SECTION 9: Physical and chemical; properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid powder, granule, pellet</td>
</tr>
<tr>
<td>Colour</td>
<td>White /off white</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7 to 8 (at 20°C)</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>1,700°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto ignition temperature</td>
<td>ca. 667°C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Percent volatility</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>3.79</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>300 - 700kg/m³</td>
</tr>
<tr>
<td>Solubility value (g/100g H₂O@20°C)</td>
<td>Slightly soluble</td>
</tr>
<tr>
<td>Log Kow</td>
<td>0.34</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not explosive</td>
</tr>
</tbody>
</table>

9.2. Other information

Mol. weight: 147.63
SECTION 10: Stability and reactivity.

10.1. Reactivity
Violent reaction with: Strong acids.

10.2. Chemical stability
Stable under normal conditions, temperatures and pressures. The substance is hygroscopic and will absorb water by contact with the moisture in the air.

10.3. Possibility of hazardous reactions
Contact with acid liberates CO₂. Violent reaction with: Acids

10.4. Conditions to avoid
Avoid excessive heat for prolonged periods.

10.5. Incompatible materials
Strong acids.

10.6. Hazardous decomposition products
Carbon dioxide (CO₂) Carbon monoxide (CO), Oxides of: Strontium, Barium

SECTION 11: Toxicological information.

11.1. Information on toxicological effects
Toxicology information
Based on available data the classification criteria are not met – According to Regulation (EC) No. 1907/2006 (REACH)

Acute Toxicity:
- LD50 Oral Rat: >2,000mg/kg
  Strontium Nitrate. Read across approach.

Acute Toxicity:
- LD50 Dermal: Scientifically unjustified

Acute Toxicity:
- LC50 Inhalation Mouse (4 hours): >4.5mg/l (dust/mist)
  Strontium Nitrate. Read across approach.

Skin Corrosion/Irritation:
Data lacking.

Serious eye damage/Irritation:
Data lacking.

Respiratory or skin sensitisation:
Skin sensitisation: Guinea pig maximization test (GPMT)
  Strontium Chloride. Read across approach – Non sensitising

Germ cell mutagenicity:
Genotoxicity – In Vitro: Chromosome aberration.
  Strontium Nitrate. Read across approach - Negative
Genotoxicity – In Vivo: Data lacking.

Carcinogenicity:
No evidence of carcinogenicity in animal studies.
Reproductive Toxicity:
Reproductive Toxicity: - Development
Developmental toxicity: - Oral Mouse
Target Organs: Skeleton, Bone, observed effect.
Conclusive data but not sufficient for classification.

Specific target organ toxicity – repeated exposure:
STOT – Repeated exposure:
LOAEL 634mg.kg Oral Rat
Target Organs: Bone structure.
Conclusive data but not sufficient for classification.

General information:
Chronic exposure to the product can cause bone calcification disorders.

Inhalation:
Harmful: possible risk of irreversible effects through inhalation.

Ingestion:
May cause discomfort if swallowed.

Skin contact:
Powder may irritate skin.

Eye contact:
Particles in the eyes may cause irritation and smarting.

Specific effects:
No data exists on the effects of nanometre sized particles on the body.

SECTION 12: Ecological information.

12.1. Toxicity
The product has poor water-solubility. Based on available data the classification criteria are not met.
LC50 96 hours >97.45 mg/l Cyprinus carpio (Common carp)
Read across approach: Strontium Nitrate.

Acute Toxicity – Aquatic Invertebrates: EC50 48 hours 125 mg.l Daphnia magna.
Read across approach: Strontium Chloride.

12.2. Persistence and degradability
Degradability: In water and Soil: Slow ionization and precipitation of the cation, Sr (+). In the presence of sulphates and carbonates.
Biodegradation: Not applicable – Inorganic chemical.

12.3. Bioaccumulative potential
Biodaccumulative potential: Potential accumulation of the strontium cation in terrestrial plants.
Partition coefficient: Not applicable – Inorganic chemical.

12.4. Mobility in soil
Mobility: Slightly soluble in water
Adsorption/Desorption Coefficient: Soil – Considerable adsorption.

12.5. Results of PBT and vPvB assessment
This substance/mixture does not meet the PBT or vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects
Do not allow large quantities of this material to reach ground water, water course or sewerage system.
SECTION 13: Disposal considerations.

13.1. Waste treatment methods

Waste treatment methods: Dispose of this material and residues in accordance with local authority requirements.

Additional information: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

Ecology - waste materials: See the European waste catalogue.

SECTION 14: Transport information.

14.1. UN number
The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name
Not classified for transportation.

14.3. Transport hazard class(es)
Not classified for transportation.

14.4. Packing group
Not classified for transportation.

14.5. Environmental hazards
Other information: Not environmental hazards known with this product.

14.6. Special precautions for user
Not classified for transportation.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

Approved code of practice:
Classification and labelling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.

Guidance notes:
Workplace Exposure Limits EH40.
EU Legislation:

15.2. Chemical Safety Assessment.
No chemical safety assessment has been carried out.

SECTION 16: Other information.

Abbreviations and acronyms:
ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways
ADR: European Agreement concerning international carriage of Dangerous goods by Road
AF: Assessment factor
BCF: Bioconcentration factor
Bw: Body weight
CAS: Chemical Abstracts Service
CLP: Classification, labelling, packaging
CSR: Chemical Safety Report
DMEL: Derived maximum effect level
DNEL: Derivative No effect Level
EC: European Community
ELV: Emission limit values
EN: European Norm
EUH: European Hazard Statement
EWC: European Waste catalogue
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
LC50: Median lethal concentration
LD50: Median lethal dose
NOAEL: No-observed-adverse-effect-level
NOEC: No observed effect concentration
NOEL: No observed effect level
OEL: Operator exposure level
PBT: Persistent, bioaccumulative, Toxic
PEC: Predicted effect level
PNEC: Predicted No effect Concentration
REACH: Registration, evaluation and autorisation of chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail
STEL: Short Term Exposure Limit
TWA: Time weighted average
vPvB: Very persistent, very bioaccumulative.

Training advice: None.

No R, S or H phrases applicable.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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