

## Material Safety Data Sheet

# Strontium Oxide

Report No.: VIH241031006-1  
Version: 2.1  
Preparation Date: 31/10/2024  
Revision Date: 31/10/2024

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

|              |                 |
|--------------|-----------------|
| Product Name | Strontium oxide |
| Product No.  | 300800          |
| Formula      | SrO             |
| CAS No.      | 1314-11-0       |
| Synonyms     | None            |

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

|                      |   |
|----------------------|---|
| Identified uses      | Laboratory chemicals, Scientific research |
| Uses advised against | Consulting manufacturers                  |

### 1.3 Details of the supplier of the safety data sheet

|              |   |
|--------------|---|
| Company Name | VI HALBLEITERMATERIAL GmbH                                  |
| Street       | Bergener Straße 14.,  |
| City         | Hannover  |
| State        | Niedersachsen   |
| Zip Code     | 30625   |
| Country      | Germany   |
| Tel          | 0049 1626484175   |
| Email        | info@vimaterial.de  |
| Website      | <a href="https://vimaterial.de/">https://vimaterial.de/</a> |

### 1.4 Emergency telephone number

|                   |                 |
|-------------------|-----------------|
| Emergency Phone # | 0049 1626484175 |
|-------------------|-----------------|

## 2. Hazards Identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

## Physical hazards

Not Classified

## Health hazards

|                                   |                    |
|-----------------------------------|--------------------|
| Skin Corrosion/Irritation         | Category 1B (H314) |
| Serious Eye Damage/Eye Irritation | Category 1 (H318)  |

## Environmental hazards

Not Classified

Full text of Hazard Statements: see section 16

## 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

|             |  |
|-------------|--|
| Signal Word | Danger   |
| Pictograms  |  |

## Hazard Statements

|      |   |
|------|---|
| H314 | Causes severe skin burns and eye damage |
|------|---|

## Precautionary Statements

|                    |   |
|--------------------|---|
| <b>Prevention</b>  |   |
| P264               | Wash contaminated skin thoroughly after handling.   |
| P271               | Use only outdoors or in a well-ventilated area  |
| P280               | Wear protective gloves/protective clothing.   |
| <b>Response</b>    |   |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting   |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower                           |
| P304 + P340        | IF INHALED: Remove person to fresh air and keep comfortable for breathing   |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P310               | Immediately call a POISON CENTER or doctor  |
| P362 + P364        | Take off contaminated clothing and wash it before reuse   |
| <b>Storage</b>     |   |
| P403 + P233        | Store in a well-ventilated place. Keep container tightly closed   |
| <b>Disposal</b>    |   |

|      |  |
|------|--|
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations |
|------|--|

### 2.3 Other hazards

None identified.

## 3. Composition/information on ingredients

### 3.1 Substances

|                 |         |
|-----------------|---------|
| Chemical Family | Ceramic |
|-----------------|---------|

| Component             | CAS No.   | EC No.    | Concentration |
|-----------------------|-----------|-----------|---------------|
| Strontium Oxide (SrO) | 1314-11-0 | 215-219-9 | <=100%        |

## 4. First aid measures

### 4.1 Description of first aid measures

|                   |  |
|-------------------|--|
| General Treatment | Show this safety data sheet to the doctor in attendance.<br>Immediate medical attention is required  |
| Inhalation        | Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| Skin              | Take off immediately all contaminated clothing. Rinse skin with water/ shower. Seek medical attention.   |
| Eyes              | Rinse with pure water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention.   |
| Ingestion         | Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.   |

### 4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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## 5. Firefighting Measures

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### 5.1 Extinguishing Media

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

### 5.2 Special hazards arising from the substance or mixture

|   |  |
|---|--|
| 1 | Strontium oxides                             |
| 2 | Non-flammable.                               |
| 3 | May not get in touch with: Water             |
| 4 | Ambient fire may liberate hazardous vapours. |

### 5.3 Advice for firefighters

|   |  |
|---|--|
| 1 | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |
| 2 | Fight fire from a safe distance and with adequate protection.<br>Do not allow firefighting water to enter drains or water courses.     |
| 3 | Collect contaminated firefighting water separately.  |

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## 6. Accidental Release Measures

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### 6.1 Personal precautions, protective equipment and emergency procedures

|                             |   |
|-----------------------------|---|
| For non-emergency personnel | Remove persons to safety. Use personal protective equipment as required. Avoid dust formation. Avoid substance contact. |
| For emergency responders    | Wear breathing apparatus if exposed to vapours/dust/spray/gases.  |

### 6.2 Environmental Precautions

|   |   |
|---|---|
| 1 | Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. |
|---|---|

### 6.3 Methods and material for containment and cleaning up

|                                  |  |
|----------------------------------|--|
| Advice on how to contain a spill | Covering of drains, Take up mechanically.          |
| Advice on how to clean up        | Take up mechanically. Take care not to raise dust. |

|   |  |
|---|--|
| a spill   |  |
| Other information relating to spills and releases | Place in appropriate containers for disposal. Ventilate affected area. |

#### 6.4 Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## 7. Handling and Storage

### 7.1 Precautions for safe handling

|                  |  |
|------------------|--|
| Recommendations  | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Keep workplace dry. Do not allow product to come into contact with water.   |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work. |

### 7.2 Conditions for safe storage, including any incompatibilities

|                          |   |
|--------------------------|---|
| Ventilation requirements | Keep containers tightly closed in a dry and well-ventilated place. Under an inert atmosphere. |
| Storage class            | 8A, corrosive hazardous materials   |
| Incompatible materials   | See section 10.5.   |

### 7.3 Specific end use(s)

Use in laboratories.

## 8. Exposure Controls/Personal Protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of

properly designed ventilation systems, should be adopted to control hazardous materials at source.

### Personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles) (European standard - EN166) and face protection.

#### Skin protection

-Hand Protection

Protective gloves (The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.)

-Other protection measures

Wear appropriate protective gloves and clothing to prevent skin exposure. Wash hands thoroughly after handling.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

|                                   |   |
|-----------------------------------|---|
| <b>Large scale/emergency use</b>  | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced<br>Recommended Filter type: Particulates filter conforming to EN 143  |
| <b>Small scale/Laboratory use</b> | Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.<br>Recommended half mask:- Particle filtering: EN149:2001<br>When RPE is used a face piece Fit Test should be conducted |

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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## 9. Physical and Chemical Characteristics

### 9.1 Information on basic physical and chemical properties

|                |               |
|----------------|---------------|
| Physical State | Powder. Solid |
| Colour         | White         |
| Odor           | Odorless      |

|   |                       |
|---|-----------------------|
| Melting Point/Range                     | No data available     |
| Boiling Point/Range                     | No data available     |
| Flammability (liquid)                   | Not applicable        |
| Flammability (solid, gas)               | No data available     |
| Explosion limits                        | No data available     |
| Flash Point                             | No data available     |
| Autoignition Temperature                | No data available     |
| Decomposition Temperature               | No data available     |
| pH                                      | No data available     |
| Viscosity                               | Not applicable        |
| Water Solubility                        | Reacts with water     |
| Solubility in other solvents            | No data available     |
| Partition Coefficient (n-octanol/water) | No data available     |
| Vapor Pressure                          | No data available     |
| Density / Specific Gravity              | 4,7 g/cm <sup>3</sup> |
| Vapor Density                           | Not applicable        |
| Particle characteristics                | No data available     |

## 9.2 Other information

|                   |                        |
|-------------------|------------------------|
| Molecular formula | SrO                    |
| Molecular weight  | 103,62 g/mol           |
| Evaporation Rate  | Not applicable - Solid |

## 10. Stability and reactivity

### 10.1 Reactivity

None known, based on information available

### 10.2 Chemical stability

Moisture sensitive.

### 10.3 Possibility of hazardous reactions

**Hazardous Polymerization:** No information available

**Hazardous Reactions:** Reacts violently with water

### 10.4 Conditions to avoid

Moisture.

### 10.5 Incompatible materials

Water.

## 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## 11. Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

|                                   |                       |                    |
|-----------------------------------|-----------------------|--------------------|
| Acute toxicity                    | Oral:                 | No data available  |
|                                   | Dermal:               | No data available  |
|                                   | Inhalation:           | No data available  |
| Skin corrosion/irritation         | Category 1 B          |                    |
| Serious eye damage/irritation     | Category 1            |                    |
| Respiratory or skin sensitization | Respiratory           | No data available. |
|                                   | Skin                  | No data available. |
| Germ cell mutagenicity            | No data available.    |                    |
| Carcinogenicity                   | No data available.    |                    |
| Reproductive toxicity             | No data available.    |                    |
| STOT - single exposure            | No data available.    |                    |
| STOT - repeated exposure          | No data available.    |                    |
| Aspiration hazard                 | Not applicable. Solid |                    |

### 11.2 Information on other hazards

**Endocrine Disrupting Properties:** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

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## 12. Ecological Information

### 12.1 Toxicity

|                     |                    |
|---------------------|--------------------|
| Ecotoxicity effects | No data available. |
|---------------------|--------------------|

### 12.2 Persistence and degradability

|               |                    |
|---------------|--------------------|
| Persistence   | No data available. |
| Degradability | No data available. |

### 12.3 Bioaccumulative potential

|                           |                    |
|---------------------------|--------------------|
| Bioaccumulative potential | No data available. |
|---------------------------|--------------------|

### 12.4 Mobility in soil

|                  |                    |
|------------------|--------------------|
| Mobility in soil | No data available. |
|------------------|--------------------|

## 12.5 Results of PBT and vPvB assessment

|                                    |  |
|------------------------------------|--|
| Results of PBT and vPvB assessment | In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment. |
|------------------------------------|--|

## 12.6 Endocrine disrupting properties

|                                 |  |
|---------------------------------|--|
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors. |
|---------------------------------|--|

## 12.7 Other adverse effects

|                              |                    |
|------------------------------|--------------------|
| Persistent Organic Pollutant | No data available. |
| Ozone Depletion Potential    | No data available. |

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## 13. Disposal Considerations

### 13.1 Waste treatment methods

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

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## 14. Transport information

### IMDG

|                                  |  |
|----------------------------------|--|
| 14.1. UN number                  | UN3262   |
| 14.2. UN Proper shipping name    | Corrosive solid, basic, inorganic, n.o.s.(Strontium oxide) |
| 14.3. Transport hazard class(es) | 8  |
| 14.4. Packaging group            | II   |

### ADR/RID/ADN

|                                  |  |
|----------------------------------|--|
| 14.1. UN number                  | UN3262   |
| 14.2. UN Proper shipping name    | Corrosive solid, basic, inorganic, n.o.s.(Strontium oxide) |
| 14.3. Transport hazard class(es) | 8  |
| 14.4. Packaging group            | II   |

## ICAO-IATA/DGR

|                                  |  |
|----------------------------------|--|
| 14.1. UN number                  | UN3262   |
| 14.2. UN Proper shipping name    | Corrosive solid, basic, inorganic, n.o.s.(Strontium oxide) |
| 14.3. Transport hazard class(es) | 8  |
| 14.4. Packaging group            | II   |

|   |                                 |
|---|---------------------------------|
| 14.5. Environmental hazards                                   | No                              |
| 14.6. Special precautions for user                            | No special precautions required |
| 14.7. Maritime transport in bulk according to IMO instruments | Not applicable, packaged goods  |

## 15. Regulatory information

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

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/878.

#### Authorisations/Restrictions

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: Not applicable

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: Not applicable

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: Not applicable

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## 16. Other information

### Revision information

|                  |            |
|------------------|------------|
| Preparation date | 31/10/2024 |
|------------------|------------|

|                 |            |
|-----------------|------------|
| Revision date   | 31/10/2024 |
| Revision reason | Creation.  |

## Abbreviations and acronyms

|      |   |
|------|---|
| CAS  | Chemical Abstracts Service  |
| ADR  | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| RID  | Regulation concerning the International Carriage of Dangerous Goods by Rail         |
| IATA | International Air Transportation Association  |
| IMDG | International Maritime Dangerous Goods  |
| LC50 | Lethal Concentration 50%  |
| LD50 | Lethal Dose 50%   |
| TWA  | Time Weighted Average   |
| STOT | Specific target organ toxicity  |
| PBT  | Persistent, Bioaccumulative, Toxic  |
| vPvB | Very Persistent, very Bioaccumulative   |
| WEL  | Workplace exposure limit  |

## References

- [1] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- [2] ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- [3] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- [4] Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- [5] HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- [6] IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- [7] IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- [8] ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

|      |   |
|------|---|
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage               |

## Disclaimer

The information of this safety data sheet is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks

incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products. For further information please contact [info@vimaterial.de](mailto:info@vimaterial.de).