1: Identification

Product identifier

Product name: Sodium selenite, anhydrous

Stock number: 12585
CAS Number: 10102-18-8
EC number: 233-267-9
Index number: 034-003-00-3

Relevant identified uses of the substance or mixture and uses advised against. No further relevant information available.

Identified use: SU24  Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:
During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2: Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS06 Skull and crossbones
Acute Tox. 2 H300 Fatal if swallowed.
Acute Tox. 3 H331 Toxic if inhaled.

GHS07
Skin Sens. 1 H317 May cause an allergic skin reaction.

Hazard not otherwise classified No information known.

Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

GHS06

Signal word Danger

Hazard statements
H300 Fatal if swallowed.
H331 Toxic if inhaled.
H317 May cause an allergic skin reaction.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D1A - Very toxic material causing immediate and serious toxic effects
D2B - Toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4) (Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>Health (acute effects)</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3: Composition/information on ingredients

Chemical characterization: Substances

CAS® Description: 10102-18-8 Sodium selenite
Identification number(s): EC number: 233-267-9
4: First-aid measures

Description of first aid measures
General information
Immediately remove any clothing soiled by the product. Remove breathing apparatus only after contaminated clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Do not induce vomiting; immediately call for medical help.

Information for doctor
Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5: Fire-fighting measures

Extinguishing media
Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
- Sodium oxide
- Selenium dioxide (SeO₂)

Advice for firefighters
Protective equipment:
- Wear self-contained respirator.
- Wear fully protective impervious suit.

6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7: Handling and storage

Handling
Precautions for safe handling
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:
Store away from water/moisture.
Do not store together with acids.

Further information about storage conditions:
Store under dry inert gas.
This product is hygroscopic.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and water.

Specific end use(s): No further relevant information available.

8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10102-18-8 Sodium selenite (100.0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL (USA)</td>
<td>Long-term value: 0.2 mg/m³ as Se</td>
<td></td>
</tr>
<tr>
<td>REL (USA)</td>
<td>Long-term value: 0.2 mg/m³ as Se</td>
<td></td>
</tr>
<tr>
<td>TLV (USA)</td>
<td>Long-term value: 0.2 mg/m³ as Se</td>
<td></td>
</tr>
<tr>
<td>EL (Canada)</td>
<td>Long-term value: 0.1 mg/m³ as Se</td>
<td></td>
</tr>
</tbody>
</table>

Additional information: No data
Exposure controls

Personal protective equipment

General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use self-contained respiratory protective device in emergency situations.

Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves Nitrile rubber, NBR

Penetration time of glove material (in minutes) 480

Glove thickness 0.11 mm

Eye protection: Safety glasses

Body protection: Protective work clothing.

9: Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Various forms (powder/flake/crystalline/beads, etc.)

Color: White

Odor: Odorless

Odor threshold: Not determined.

pH-value (50 g/l) at 20 °C (68 °F): 9

Change in condition

Melting point/Melting range: >350 °C (>662 °F)

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Flammability (solid, gaseous) Not determined.

Ignition temperature: Not determined

Decomposition temperature: Not determined

Auto igniting: Not determined.

Danger of explosion: Not determined.

Explosion limits:

Lower: Not determined

Upper: Not determined

Vapor pressure: Not applicable.

Density: Not determined

Relative density Not determined.

Vapor density Not applicable.

Evaporation rate Not applicable.

Solubility in / Miscibility with

Water at 20 °C (68 °F): 950 g/l

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not applicable.

kinematic: Not applicable.

Other information No further relevant information available.

10: Stability and reactivity

Reactivity Contact with acids liberates toxic gas.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions Contact with acids liberates toxic gas.

Conditions to avoid No further relevant information available.

Incompatible materials:

Water/moisture

Acids

Hazardous decomposition products:

Sodium oxide

Selenium dioxide (SeO2)

11: Toxicological information

Information on toxicological effects

Acute toxicity:

Fatal if swallowed.

Toxic if inhaled.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

LD50 7 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity: EPA-D: Not classifiable as to human carcinogenicity; inadequate human and animal evidence of carcinogenicity or no data are available.

IARC-3: Not classifiable as to carcinogenicity to humans.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.
Product name: Sodium selenite, anhydrous

Aspiration hazard: No effects known.
Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Carcinogenic categories
OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12: Ecological information
Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13: Disposal considerations
Waste treatment methods
Recommendation: Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14: Transport information
UN-Number
DOT, IMDG, IATA: UN2630
UN proper shipping name
DOT: RQ Selenates (Sodium selenite anhydrous)
IMDG, IATA: SELENITES (Sodium selenite anhydrous)

Transport hazard class(es)
DOT
Class 6.1 Toxic substances.
Label 6.1
Class 6.1 (T5) Toxic substances
Label 6.1
IMDG, IATA
Class 6.1 Toxic substances.
Label 6.1

Packing group
DOT, IMDG, IATA: I

Environmental hazards:
Environmentally hazardous substance, solid

Special precautions for user
Warning: Toxic substances
EMS Number:
F-A,S-A

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information:
DOT
Hazardous substance: 100 lbs, 45.4 kg
Marine Pollutant (DOT): No
UN "Model Regulation": UN2630, Selenates (Sodium selenite anhydrous), 6.1, I

15: Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)
10102-18-8 Sodium selenite
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: Substance is not listed.
Product name: Sodium selenite, anhydrous

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Date of preparation / last revision 10/17/2015 / -

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- OSHA: Occupational Safety and Health Administration (USA)
- NTP: National Toxicology Program (USA)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)
- Acute Tox. 2: Acute toxicity, Hazard Category 2
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1