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

1.1 Product identifier

Natriumselenit

IUPAC	Sodium selenite
EU-INDEX	034-002-00-8
EINECS/ELINCS	233-267-9
CAS	10102-18-8

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

1.2.1 Relevant uses

Biogas plants additive

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Kanadevia Inova Schmack GmbH
Bayernwerk 8
92421 Schwandorf / GERMANY
Phone +49 9431 751-277
Fax +49 (0)9431-751-204
Homepage www.kanadevia-inova.com/schmack-biogas
E-mail info@kanadevia-inova.com

Address enquiries to

Technical information	info@kanadevia-inova.com
Safety Data Sheet	sdb@chemiebuero.de (No dispatch of safety data sheets) Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Company	+49 (0)9431-751-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Acute Tox. 2: H300 Fatal if swallowed.
Acute Tox. 2: H330 Fatal if inhaled.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Irrit. 2: H315 Causes skin irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Aquatic Acute 1: H400 Very toxic to aquatic life.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

Signal word DANGER

Contains: Sodium selenite EU-INDEX 034-002-00-8

Hazard statements

H300 Fatal if swallowed.
H330 Fatal if inhaled.
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
P302+P352 IF ON SKIN: Wash with plenty of water / soap.
P308+P313 IF exposed or concerned: Get medical advice / attention.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling EUH031 Contact with acids liberates toxic gas.

2.3 Other hazards

Human health dangers The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Environmental hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

The product is a substance.

Range [%]	Substance
> 99	Sodium selenite
	CAS: 10102-18-8, EINECS/ELINCS: 233-267-9, EU-INDEX: 034-002-00-8, Reg-No.: 01-2119985427-23-XXXX
	GHS/CLP: Acute Tox. 2: H300 - Acute Tox. 2: H330 - Eye Irrit. 2: H319 - Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Aquatic Acute 1: H400 - Aquatic Chronic 2: H411

Comment on component parts For full text of H-statements: see SECTION 16.

3.2 Mixtures

not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change powdered clothing immediately.

Inhalation

Ensure supply of fresh air.
Get medical advice.

Skin contact

In case of contact with skin wash off immediately with soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Seek medical advice immediately.
Rinse mouth.
After unintentional swallowing, induce vomiting only if fully conscious.
Consult a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used: Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Avoid dust formation.
Use personal protection (including gloves and a suitable dust mask).
Only trained personnel inserting.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Avoid raising dust.
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use personal protective equipment.
Avoid the formation and deposition of dust.
Provide vacuuming if dust raised.

Wash hands before breaks and after work.
Use barrier skin cream.
Do not eat, drink, smoke or take drugs at work.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Store in a dry place.
Store locked up.
Keep container tightly closed and store it at a well-ventilated place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

not relevant

DNEL

Substance
Sodium selenite, CAS: 10102-18-8
Industrial, inhalative (dust), Long-term - systemic effects, 0,11 mg/m³
Industrial, dermal, Long-term - systemic effects, 15,33 mg/kg bw/day
general population, inhalative (dust), Long-term - systemic effects, 0,033 mg/m³
general population, dermal, Long-term - systemic effects, 9,42 mg/kg bw/day
general population, oral, Long-term - systemic effects, 9,42 µg/kg bw/day

PNEC

Substance
Sodium selenite, CAS: 10102-18-8
freshwater, 5,85 µg/L
seawater, 4,31 µg/L
sewage treatment plants (STP), 3,285 µg/L
sediment (freshwater), 18 mg/kg
sediment (seawater), 13,44 mg/kg
soil, 0,22 mg/kg

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Using suitable discharges or exhaust ventilation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	0,4 mm; butyl rubber, > 120 min (EN 374) The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Do not inhale dust. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Avoid contact during pregnancy/ while nursing.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter P2. (DIN EN 143)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	powder
Color	white beige
Odor	odourless
Odour threshold	not applicable
pH-value	9 (50 g/L)
pH-value [1%]	not determined
Boiling point or initial boiling point and boiling range [°C]	not applicable
Flash point [°C]	not applicable
Flammability	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/cm³]	3,1
Relative density	not determined
Bulk density [kg/m³]	not determined
Solubility in water	898 g/L
Solubility other solvents	No information available.
Partition coefficient n-octanol/water (log value)	not applicable
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Melting point [°C]	Decomposition
Auto-ignition temperature [°C]	> 400
Decomposition temperature [°C]	not determined
Particle characteristics	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

See SECTION 7.2.

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

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

Acute oral toxicity

Substance
Sodium selenite, CAS: 10102-18-8
LD50, oral, Rat, 7 mg/kg

Acute dermal toxicity

Acute inhalational toxicity

Substance
Sodium selenite, CAS: 10102-18-8
LC50, inhalativ (dust), Rat, 0,052 µg/L

Serious eye damage/irritation

Irritant
Based on the available information, the classification criteria are fulfilled.
On basis of test data

Substance
Sodium selenite, CAS: 10102-18-8
Eye, 3D reconstituted human corneal epithelium model, OECD 437, irritant

Skin corrosion/irritation

Irritant
Based on the available information, the classification criteria are fulfilled.
On basis of test data

Substance
Sodium selenite, CAS: 10102-18-8
dermal, Reconstituted human epidermis model, OECD 439, irritant

Respiratory or skin sensitisation

May cause an allergic skin reaction.
Based on the available information, the classification criteria are fulfilled.
On basis of test data

Substance
Sodium selenite, CAS: 10102-18-8
dermal, mouse, OECD 429, sensitising

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Substance
Sodium selenite, CAS: 10102-18-8
in vitro, OECD 476, negativ

Reproduction toxicity

Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity

Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard

Based on the available information, the classification criteria are not fulfilled.

General remarks

none

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information

none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Sodium selenite, CAS: 10102-18-8
LC50, (48h), Daphnia magna, 550 µg Se/L
LC50, (96h), Morone saxatilis, 3300 µg Se/L
NOEC, (72h), Algae, 11000 µg Se/L

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	The methods for determining the boilogical degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

not applicable

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

For recycling, consult manufacturer.

Waste no. (recommended) 060313*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150102
150104

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	2630
Inland navigation (ADN)	2630
Marine transport in accordance with IMDG	2630
Air transport in accordance with IATA	2630

14.2 UN proper shipping name

Transport by land according to ADR/RID	sodium selenite
- Classification Code	T5
- Label	
- ADR LQ	0 kg
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 1
Inland navigation (ADN)	sodium selenite
- Classification Code	T5
- Label	
Marine transport in accordance with IMDG	Sodium selenite, solution
- EMS	F-A, S-A
- Label	
- IMDG LQ	0 l
Air transport in accordance with IATA	Sodium selenite, solution
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	6.1
Inland navigation (ADN)	6.1
Marine transport in accordance with IMDG	6.1 (6.1)
Air transport in accordance with IATA	6.1

14.4 Packing group

Transport by land according to ADR/RID	I
Inland navigation (ADN)	I
Marine transport in accordance with IMDG	I
Air transport in accordance with IATA	I

14.5 Environmental hazards

Transport by land according to ADR/RID	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EG (2000/532/EC); 2010/75/EU; 2004/42/EG; (EG) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EWG ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 2024/573; (EU) 2019/1148; (EU) 2019/1021, (EU) 2023/707
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances ≥ 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains ≥ 0.1% of substances with the following restrictions. 75
TRANSPORT-REGULATIONS	ADR (2025); IMDG-Code (2025, 42. Amdt.); IATA-DGR (2025)
NATIONAL REGULATIONS (EU):	
- Observe employment restrictions for people	Observe employment restrictions for women of child-bearing age, for mothers-to-be and nursing mothers and for young people.
- VOC (2010/75/CE)	not relevant

15.2 Chemical safety assessment

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H411 Toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H300 Fatal if swallowed.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

This document does not comply with Regulation (EC) No 1907/2006, article 31 (5) and may be used for internal purposes only.

Classification procedure

Acute Tox. 2: H300 Fatal if swallowed. (Calculation method)
Acute Tox. 2: H330 Fatal if inhaled. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Acute 1: H400 Very toxic to aquatic life. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)

Modified position

none