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

1.1. Product identifier

Aluminium chloride hexahydrate for analysis chrystalline

CAS No:	10102-18-8
Index No:	034-003-00-3
EC No:	233-267-9

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

Use of the substance/mixture

Laboratory chemical
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH		
Street:	Stempelstraße 6		
Place:	D-47167 Duisburg		
Telephone:	0203/5194-0	Telefax:	0203/5194-290
E-mail:	info@analytichem.de		
Contact person:	Abteilung Produktsicherheit	Telephone:	0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de		
Internet:	www.analytichem.de		
Responsible Department:	Abteilung Produktsicherheit		

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute Tox. 1; H330
Acute Tox. 2; H300
Skin Irrit. 2; H315
Eye Irrit. 2; H319
Skin Sens. 1; H317
Aquatic Chronic 2; H411

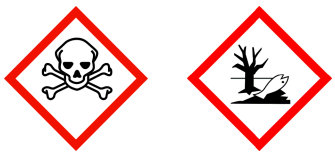
Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



Hazard statements

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

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Special labelling of certain mixtures

EUH031	Contact with acids liberates toxic gas.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: Na2O3Se

Molecular weight: 172,94 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
10102-18-8	sodium selenite			100 %
	233-267-9	034-003-00-3		
	Acute Tox. 1, Acute Tox. 2, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H330 H300 H315 H319 H317 H411 EUH031			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
10102-18-8	233-267-9	sodium selenite	100 %
	inhalation: ATE = 0,05 mg/l (vapours); inhalation: ATE = 0,005 mg/l (dusts or mists); oral: LD50 = 7 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Wash immediately with: Water, Soap
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

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

Irritant
Pulmonary oedema
Liver and kidney damage
Tremor
Vomiting

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

Extinguishing powder

Unsuitable extinguishing media

No data available

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products
In case of fire may be liberated: Metal oxide smoke, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.
Avoid contact with skin, eyes and clothes.

Additional information

Suppress gases/vapours/mists with water spray jet.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid exposure - obtain special instructions before use.
Keep container dry. Do not allow contact with water.
If handled uncovered, arrangements with local exhaust ventilation have to be used.
Avoid dust formation.
Do not breathe dust.
Read label before use.
Use extractor hood (laboratory).

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a dry place.
Store in a place accessible by authorized persons only.

Hints on joint storage

Keep away from: Water, Acid

Further information on storage conditions

Store in a well-ventilated place. Keep container tightly closed.
Protect against: Humidity

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
10102-18-8	sodium selenite		
Worker DNEL, long-term	inhalation	systemic	0,11 mg/m³
Worker DNEL, long-term	dermal	systemic	15,33 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,033 mg/m³
Consumer DNEL, long-term	dermal	systemic	9,42 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,00942 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
10102-18-8	sodium selenite
Freshwater	0,00585 mg/l
Freshwater (intermittent releases)	0,012 mg/l
Marine water	0,00438 mg/l
Freshwater sediment	18 mg/kg
Marine sediment	13,6 mg/kg
Secondary poisoning	2,19 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,285 mg/l
Soil	0,22 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.
Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is

recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: dust formation
Filtering device with filter or ventilator filtering device of type: P3

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Odour threshold:	not determined	
Melting point/freezing point:		>350 °C
Boiling point or initial boiling point and boiling range:		not determined
Flammability:		not determined not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		not determined
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value:		not determined
Viscosity / kinematic:		not determined
Water solubility: (at 25 °C)		898 g/L

Solubility in other solvents

not determined

Dissolution rate:	not determined
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	not determined
Vapour pressure:	not determined
Vapour pressure:	not determined
Density:	not determined
Relative density:	not determined
Bulk density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

not determined

Sustaining combustion:	No data available

Self-ignition temperature

Solid:	> 400 °C
Gas:	not applicable

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined
Solid content:	100%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined

not determined:

Viscosity / dynamic:	not determined
Flow time:	not determined

Further Information

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.
Protect against: Humidity

10.3. Possibility of hazardous reactions

Strong acid

10.4. Conditions to avoid

Do not allow contact with water.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

Toxicocinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

Acute toxicity

Fatal if inhaled.

Fatal if swallowed.

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
10102-18-8	sodium selenite					
	oral	LD50	7 mg/kg	Rat	Toxicology and applied pharmalcology, 20	No guideline mentioned in the publicatio
	inhalation vapour	ATE	0,05 mg/l			
	inhalation dust/mist	ATE mg/l	0,005			

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (sodium selenite)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

Irritant

Pulmonary oedema

Liver and kidney damage
Tremor
Vomiting

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
10102-18-8	sodium selenite						
	Acute fish toxicity	LC50	2,06 mg/l	96 h	Pimephales promelas	Archives of Environmental Contamination	EPA OPP 72-1
	Acute algae toxicity	ErC50	45 mg/l	96 h	Dunaliella viridis	Environmental Toxicology and Chemistry 2	other: EPA 600/491002: Short-term method
	Acute crustacea toxicity	EC50	0,55 mg/l	48 h	Daphnia magna	Environmental Toxicology and Chemistry 1	other: EPA-660/3-75-009: Methods for Acu
	Fish toxicity	NOEC	0,33 mg/l	60 d	Lepomis macrochirus	Aquatic Toxicology 27, 265-279 (1993)	Juvenile fish were exposed for 60 days t
	Algae toxicity	NOEC	0,995 mg/l	10 d	Anabaena flos-aquae	Archives of Environmental Contamination	10-d experiment on the toxicity of selen
	Crustacea toxicity	NOEC	0,07 mg/l	28 d	Daphnia magna	Department of Entomology, Fisheries and	OECD Guideline 211
	Acute bacteria toxicity	(EC50	180 mg/l)	3 h	activated sludge of a predominantly domestic sewag	Study report (2012)	OECD Guideline 209

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

BCF

CAS No	Chemical name	BCF	Species	Source
10102-18-8	sodium selenite	0,56	Oncorhynchus tschawytscha	Environmental Toxico

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
No data available

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.
No data available

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not mix with other wastes.
Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2630
14.2. UN proper shipping name:	SELENITES (sodium selenite)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	I
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E5
Transport category:	1
Hazard No:	66
Tunnel restriction code:	C/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2630
14.2. UN proper shipping name:	SELENITES (sodium selenite)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	I
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274 802
Limited quantity:	0
Excepted quantity:	E5

Marine transport (IMDG)

14.1. UN number or ID number:	UN 2630
14.2. UN proper shipping name:	SELENITES (sodium selenite)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	I
Hazard label:	6.1
Special Provisions:	274
Limited quantity:	0
Excepted quantity:	E5
EmS:	F-A, S-A

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 2630
14.2. UN proper shipping name:	SELENITES (sodium selenite)
14.3. Transport hazard class(es):	6.1

14.4. Packing group:	I	
Hazard label:	6.1	
Limited quantity Passenger:	Forbidden	
Passenger LQ:	Forbidden	
Excepted quantity:	E5	
IATA-packing instructions - Passenger:		666
IATA-max. quantity - Passenger:		5 kg
IATA-packing instructions - Cargo:		673
IATA-max. quantity - Cargo:		50 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	sodium selenite

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

EU regulatory information

Information according to 2012/18/EU (SEVESO III):	H1 ACUTE TOXIC
Additional information:	E2

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	2 - obviously hazardous to water

SECTION 16: Other information

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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
Acute Tox: Acute toxicity
Skin Irrit: Skin irritation
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
Aquatic Chronic: Chronic aquatic hazard

Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H300+H330	Fatal if swallowed or if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H330	Fatal if inhaled.
H411	Toxic to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.
The receiver of our product is singularly responsible for adhering to existing laws and regulations.