

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Ammonium thiocyanate pure

Revision date: 04.07.2023

Product code: 15200

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

### 1.1. Product identifier

Ammonium thiocyanate pure

REACH Registration Number: 01-2119543696-28-0000  
CAS No: 1762-95-4  
Index No: 615-004-00-3  
EC No: 217-175-6

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

#### Use of the substance/mixture

Laboratory chemicals

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  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

### 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

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute Tox. 4; H332  
Acute Tox. 4; H312  
Acute Tox. 4; H302  
Eye Dam. 1; H318  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:



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**Hazard statements**

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
H318 Causes serious eye damage.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
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/doctor.

**Special labelling of certain mixtures**

EUH032 Contact with acids liberates very toxic gas.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Sum formula: NH4SCN  
Molecular weight: 76,12 g/mol

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
1762-95-4	ammonium thiocyanate			100 %
	217-175-6	615-004-00-3	01-2119543696-28-0000	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Eye Dam. 1, Aquatic Chronic 3; H332 H312 H302 H318 H412 EUH032			

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		
1762-95-4	217-175-6	ammonium thiocyanate	100 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 508 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.

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#### After contact with skin

Wash immediately with: Water  
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.  
Protect uninjured eye.

#### 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  
Vomiting  
Gastrointestinal complaints  
Circulatory collapse  
Blood pressure drop  
Spasms  
Narcotic effects  
Respiratory complaints  
Dyspnoea  
Release of: Hydrogen cyanide (hydrocyanic acid)

#### 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

Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

no restriction

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

Non-combustible solids  
Hazardous combustion products  
In case of fire may be liberated:  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides  
Ammonia (NH<sub>3</sub>)  
Hydrogen cyanide (hydrocyanic acid)

#### 5.3. Advice for firefighters

Do not inhale explosion and combustion gases.  
Avoid contact with skin, eyes and clothes.  
In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Suppress gases/vapours/mists with water spray jet.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.  
Move undamaged containers from immediate hazard area if it can be done safely.  
Use water spray jet to protect personnel and to cool endangered containers.

## SECTION 6: Accidental release measures

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#### **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.
- Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

##### **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**

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Avoid contact with skin, eyes and clothes.
- Provide adequate ventilation. Avoid dust formation. Do not breathe dust.

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

##### **Advice on general occupational hygiene**

- Keep away from food, drink and animal feedingstuffs.
- Make available sufficient washing facilities
- 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.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

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#### Requirements for storage rooms and vessels

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

#### Further information on storage conditions

Store in a dry place.  
storage temperature +5°C - +30°C

#### 7.3. Specific end use(s)

Laboratory chemicals

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
1762-95-4	ammonium thiocyanate			
Worker DNEL, long-term		inhalation	systemic	2,8 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,7 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	2 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day

#### PNEC values

CAS No	Substance	Value
1762-95-4	ammonium thiocyanate	
Environmental compartment		
Freshwater		0,095 mg/l
Freshwater (intermittent releases)		0,027 mg/l
Marine water		0,009 mg/l
Freshwater sediment		0,543 mg/kg
Marine sediment		0,054 mg/kg
Secondary poisoning		1,667 mg/kg
Micro-organisms in sewage treatment plants (STP)		30 mg/l
Soil		6,336 mg/kg

### 8.2. Exposure controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe dust. Avoid dust formation.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

goggles

##### Hand protection

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

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By long-term hand contact  
Trade name/designation KCL 741 Dermatril® L  
Suitable 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  
Suitable 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](http://www.kcl.de)).

#### Skin protection

Wear suitable protective clothing.  
Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

#### Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
Filtering device with filter or ventilator filtering device of type: P2

#### 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:	colourless
Odour:	odourless
Melting point/freezing point:	150 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	170 °C
pH-Value (at 20 °C):	4,8-5,8 (50 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	1600 g/L
Solubility in other solvents	No data available
Partition coefficient n-octanol/water:	No data available
Vapour pressure: (at 20 °C)	0,000152 hPa hPa
Vapour pressure:	No data available
Density:	1,31 g/cm <sup>3</sup>
Bulk density:	600-700 kg/m <sup>3</sup>
Relative vapour density:	No data available

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#### **9.2. Other information**

##### **Information with regard to physical hazard classes**

Explosive properties

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

##### **Other safety characteristics**

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

0

Solid content:

0

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

##### **Further Information**

No data available

## SECTION 10: Stability and reactivity

### **10.1. Reactivity**

No data available

### **10.2. Chemical stability**

Protect against: Light

### **10.3. Possibility of hazardous reactions**

Oxidising agent

Acid

Nitrate

### **10.4. Conditions to avoid**

Light

Heat

sensitive to impact Handle with care - avoid bumps, friction and impact.

### **10.5. Incompatible materials**

Metal

### **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**

#### **Toxicokinetics, metabolism and distribution**

No data available

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**Acute toxicity**

Harmful if swallowed.  
Harmful in contact with skin.  
Harmful if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1762-95-4	ammonium thiocyanate				
	oral	LD50 508 mg/kg	Japanese quail	Study report (1999)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2003)	OECD Guideline 402
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			

**Irritation and corrosivity**

Causes serious eye damage.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

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

**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  
Vomiting  
Gastrointestinal complaints  
Circulatory collapse  
Blood pressure drop  
Spasms  
Narcotic effects  
Respiratory complaints  
Dyspnoea



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Release of: Hydrogen cyanide (hydrocyanic acid)

**SECTION 12: Ecological information**

**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1762-95-4	ammonium thiocyanate					
	Acute fish toxicity	LC50 65 mg/l	96 h	Oncorhynchus mykiss	Study report (1999)	EU Method C.1
	Acute algae toxicity	ErC50 116 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1999)	OECD Guideline 201
	Acute crustacea toxicity	EC50 3,56 mg/l	48 h	Daphnia magna	Study report (1999)	OECD Guideline 202
	Fish toxicity	NOEC 1,84 mg/l	124 d	Pimephales promelas	Study report (1994)	Test was based on exposing juvenile fath
	Crustacea toxicity	NOEC 1,25 mg/l	21 d	Daphnia magna	Study report (2005)	OECD Guideline 211

**12.2. Persistence and degradability**

Readily biodegradable (according to OECD criteria).

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
1762-95-4	ammonium thiocyanate	-2,29

**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.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains.

Discharge into the environment must be avoided.

**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 allow to enter into surface water or drains.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

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## SECTION 14: Transport information

## Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

## Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

## Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

## Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

## SECTION 15: Regulatory information

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

## National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water

## SECTION 16: Other information

## Changes

This data sheet contains changes from the previous version in section(s): 12.

## Abbreviations and acronyms

Acute Tox: Acute toxicity  
Eye Dam: Eye damage  
Aquatic Chronic: Chronic aquatic hazard

## Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H318	Causes serious eye damage.
H332	Harmful if inhaled.

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H412 Harmful to aquatic life with long lasting effects.  
EUH032 Contact with acids liberates very 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.