



## Safety Data Sheet

### Ammonium thiocyanate

#### Section 1: Chemical Product and Company Identification

**Product Name:** Ammonium thiocyanate

**Catalog Codes:** 495

**CAS#:** 1762-95-4

**RTECS:** XK875000

**Synonym:** Ammonium rhodanate, Ammonium sulfocyanate, Ammonium sulfocyanide

**Chemical Name:** Ammonium thiocyanate

**Chemical Formula:**  $\text{NH}_4\text{SCN}$

**Contact Information:**

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Ammonium thiocyanate	1762-95-4	100

**Toxicological Data on Ingredients:** LD50 Oral - Rat - 750 mg/kg.

#### Section 3: Hazards Identification

**Classification of the substance or mixture**

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

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Serious eye damage (Category 1), H318

Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Label elements**

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

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 statement(s)

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

P301 + P312

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P302 + P352 + P312

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU)

EUH032 Contact with acids liberates very toxic gas.

**Reduced Labeling (<= 125 ml)**

Pictogram



Signal word

Danger

Hazard statement(s)

H318

Causes serious eye damage.

H412

Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU)

EUH032 Contact with acids liberates very toxic gas.

**Other 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.

## Section 4: First Aid Measures

### Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

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

No data available

## Section 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Sulfur oxides

Not combustible.

Fire may cause evolution of:

nitrogen oxides, Sulfur oxides, Ammonia, Hydrogen cyanide (hydrocyanic acid)

Ambient fire may liberate hazardous vapours.

#### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

**Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

**Environmental precautions**

Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

**Reference to other sections**

For disposal see section 13.

## Section 7: Handling and Storage

**Precautions for safe handling**

**Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

**Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 3.

**Conditions for safe storage, including any incompatibilities**

Storage conditions

Protected from light. Tightly closed. Dry.

Do not store near acids.

Recommended storage temperature see product label.

**Storage class**

Storage class (TRGS 510): 13: Non Combustible Solids

## Section 8: Exposure Controls/Personal Protection

### Control parameters

### Ingredients with workplace control parameters

### Exposure controls

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

#### Skin protection

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)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

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)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: KCL 741 Dermatril® L

#### Body Protection

protective clothing

#### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

#### Control of environmental exposure

Do not let product enter drains.

## Section 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

a) Appearance	Form: solid
Color: colorless	
b) Odor	odorless
c) Odor Threshold	Not applicable
d) pH	4,0 - 5,5 at 76,1 g/l at 25 °C
e) Melting point/freezing point	Melting point/range: 152 - 154 °C
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid,gas)	The product is not flammable. - Flammability (solids)
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	< 0,1 hPa at 20 °C - OECD Test Guideline 104
l) Vapor density	No data available
m) Density	1,300 g/cm <sup>3</sup>
Relative density	1,31 at 20 °C - OECD Test Guideline 109
n) Water solubility	ca.76,1 g/l at 20 °C
o) Partition coefficient: n-octanol/water	- Not applicable for inorganic substances
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available

s) Explosive properties                      No data available

t) Oxidizing properties                      none

**Other safety information**

Bulk density 600 - 700 kg/m<sup>3</sup>

## Section 10: Stability and Reactivity Data

**Reactivity**

Contact with acids liberates very toxic gas.

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

Generates dangerous gases or fumes in contact with:

Acids

**Conditions to avoid**

no information available

**Incompatible materials**

various metals

**Hazardous decomposition products**

In the event of fire: see section 5

## Section 11: Toxicological Information

**Information on toxicological effects**

**Acute toxicity**

LD50 Oral - Rat - 750 mg/kg

Remarks: (RTECS)

Symptoms: Nausea, Vomiting, Diarrhea

Acute toxicity estimate Inhalation - 4 h - 1,6 mg/l

(Expert judgment)

Acute toxicity estimate Dermal - 1.100,1 mg/kg

(Expert judgment)

**Skin corrosion/irritation**

Skin - EPIKIN Human Skin Model Test

Result: No skin irritation - 5 min

(Regulation (EC) No. 440/2008, Annex, B.46)

**Serious eye damage/eye irritation**

Eyes - Bovine cornea

Result: Causes serious eye damage. - 4 h  
(OECD Test Guideline 437)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: sodium thiocyanate

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 92 d - NOAEL (No observed adverse effect level) - 20 mg/kg

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Section 12: Ecological Information****Toxicity**

Toxicity to fish                      static test LC50 - Oncorhynchus mykiss (rainbow trout) - 65 mg/l -96 h  
(OECD Test Guideline 203)



Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 3,56 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata - 116 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test NOEC - activated sludge - 50 mg/l - 12 h Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Potassium thiocyanate The value is given in analogy to the following substances: Ammonium thiocyanate

#### **Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d  
Result: 80 % - Readily biodegradable.  
(OECD Test Guideline 301D)

#### **Bioaccumulative potential**

No data available

#### **Mobility in soil**

No data available

#### **Results of PBT and vPvB assessment**

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 adverse effects**

Discharge into the environment must be avoided.

### **Section 13: Disposal Considerations**

#### **Waste treatment methods**

##### **Product**

Waste material must be disposed of in accordance with the national and local regulations.  
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

## Section 14: Transport Information

**UN number**

ADR/RID: -

IMDG: -

IATA: -

**UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

**Packaging group**

ADR/RID: -

IMDG: -

IATA: -

**Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**Special precautions for user****Further information**

Not classified as dangerous in the meaning of transport regulations.

## Section 15: Other Regulatory Information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

**Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

## Section 16: Other Information

**References:** Not available

**Other Special Considerations:** Not available

**Created:** 01/09/2022

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