



Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

THIOUREA 99% AR

PRODUCT CODE : O-5219

CAS No : 62-56-6

FORMULA : $\text{NH}_2\cdot\text{CS}\cdot\text{NH}_2$

UN No : 3077

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THIOUREA 99% AR



MSDS Number : 0392

Date : Aug 29th, 2024

Version : 1.0

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

- 1.1 Product Name** : THIOUREA 99% AR
Synonyms : Sulfourea, Thiocarbamide
CAS No. : 62-56-6
HS Code : 2930 90 10
Molecular Weight : 76.12 g/mol
Chemical Formula : H_2NCSNH_2 Hill : $\text{CH}_4\text{N}_2\text{S}$
Product Code : O-5219
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302
 Carcinogenicity (Category 2), H351
 Reproductive toxicity (Category 2), H361d
 Long-term (chronic) aquatic hazard (Category 2), H411

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

danger

Hazard statement(s)

H302 Harmful if swallowed.
 H351 Suspected of causing cancer.
 H361d Suspected of damaging the unborn child.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.
 P273 Avoid release to the environment.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

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P308 + P313

IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements

none

2.3 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 3: Composition/information on ingredients

3.1 Substances

Synonyms : Sulfourea, Thiocarbamide
 CAS-No. : 62-56-6
 Chemical Formula : H_2NCSNH_2 Hill : $\text{CH}_4\text{N}_2\text{S}$
 Molecular Weight : 76.12 g/mol
 EC-No. : 200-543-5
 Index-No. : 612-082-00-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Thiourea	Acute Tox. 4; Carc. 2; Repr. 2; Aquatic Chronic 2; H302, H351, H361d, H411	<= 100 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the 3 labeling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 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 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Handle and store under inert gas

Storage class

Storage class (TRGS 510): 11: Combustible Solids

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7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	dermal	Long-term systemic effects	1 mg/m ³
Worker DNEL, longterm	inhalation	Long-term systemic effects	
Consumer DNEL, longterm	dermal	Long-term systemic effects	
Consumer DNEL, longterm	inhalation	Long-term systemic effects	0,2 mg/m ³
Consumer DNEL, longterm	oral	Long-term systemic effects	

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0,01 mg/l
Fresh water sediment	0,072 mg/kg
Sea water	0,001 mg/l
Sea sediment	0,007 mg/kg
Sewage treatment plant	0,38 mg/l
Soil	2,725 mg/kg

8.2 Exposure controls

Appropriat engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill®

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Splash contact
 Material: Nitrile rubber
 Minimum layer thickness: 0,11 mm
 Break through time: 480 min
 Material tested: Dermatrill®

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: crystalline Colour: white
Odour	odourless
Odour Threshold	No data available
pH	5,0 - 7 at 50 g/l at 20 °C
Melting point/freezingpoint	Melting point/range: 170 - 176 °C - lit.
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1,405 g/cm ³ at 20 °C
Water solubility	137 g/l at 20 °C
Partition coefficient: octanol/water	log Pow: -0,919 at 20 °C
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

Surface tension
 ca.65,4 mN/m at 1g/l at 20 °C - OECD Test Guideline 115

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SECTION 10: Stability and reactivity**10.1 Reactivity**

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Risk of explosion with:

chlorates Violent reactions possible with: acryl aldehyde Exothermic reaction with: Acrolein Strong oxidizing agents Strong acids and strong bases hydrogen peroxide with Nitric acid

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

LD50 Oral - Rat - female - 2.000 - 2.500 mg/kg (OECD Test Guideline 423)

LC50 Inhalation - Rat - male and female - 4 h - > 195 mg/l - dust/mist (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - > 2.800 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Carcinogenicity

Suspected of causing cancer

Reproductive toxicity

Suspected of damaging the unborn child. Suspected of damaging fertility.

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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

Endocrine disrupting properties

Product:

Assessment :

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.

Repeated dose toxicity - Mouse - male and female - Oral - 2 yr - NOAEL (No observed adverse effect level) - 6,88 mg/kg - LOAEL (Lowest observed adverse effect level) - 27,5 mg/kg

Remarks: (ECHA)

RTECS: YU2800000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

static test LC50 - Pimephales promelas (fathead minnow) - > 600 mg/l - 96 h Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 5,6 - 18,0 mg/l - 48 h Remarks: (ECOTOX Database)

Toxicity to algae

EC50 - Desmodesmus subspicatus (green algae) - 6,8 mg/l - 96 h Remarks: (External MSDS)

Toxicity to bacteria

EC10 - Pseudomonas putida - 1.265 mg/l - 18 h Remarks: (IUCLID)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 34 d

Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301C)

Biochemical Oxygen Demand (BOD) 13 mg/g

Remarks: (IUCLID)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

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12.5 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.

12.6 Other adverse effects

No data available

Endocrine disrupting properties

Product:

Assessment :

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.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

No data available

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 3077

IMDG: 3077

IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thiourea)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thiourea)

IATA: Environmentally hazardous substance, solid, n.o.s. (Thiourea)

14.3 Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA : 9

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

Authorisations and/or restrictions on use**National legislation**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

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ENVIRONMENTAL HAZARDS

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

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H302	Harmful if swallowed.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

NFPA Rating

Health hazard: 2

Fire Hazard: 0

Reactivity Hazard: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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