

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Thiourea

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 2)

Skin sensitization (Category 1)

Carcinogenic (category 2)

Reproductive toxicity (category 2)

Acute aquatic toxicity (Category 2)

Chronic aquatic toxicity (Category 2)

Label elements

Pictogram



Signal word Warning

Hazard statement(s)

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H361 Suspected of damaging the unborn child.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P203 Obtain, read and follow all safety instructions before use.

P261 Avoid inhaling dust/smoke/gas/smoke/steam/spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothes should not be taken out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P317 If swallowed by mistake: Seek medical attention.

P302 + P352 IF ON SKIN: wash with plenty of water.

P318	If you have been exposed or have concerns, seek medical attention.
P321	Specialized treatment (see related measures on this label).
P330	Rinse mouth.
P333 + P317	If skin irritation or rash occurs: Seek medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements
none

3. Composition/information on ingredients

Synonyms

Thiourea

CAS-No.: 62-56-6

M: 76.12 g/mol

Molecular formula: CH₄N₂S

4. First aid measures

If inhaled

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

In case of skin contact

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

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. Fire-fighting measures

Suitable extinguishing media

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

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions

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.

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.

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.

7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire

protection.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Handle and store under inert gas.

8. Exposure controls and personal protection

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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

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.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: Crystalline

Colour: White

Odour: not available

pH value: not available

Melting point: 171~184 °C

Boiling point: not available

Ignition temperature: not available

Flash point: not available

Autoignition temperature: not available

Explosion limits

lower: not available

upper: not available

Density : 1.405 g/cm³

Bulk density: not available

Solubility in

water (20 °C) : soluble in water

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents, Strong acids, Strong bases

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - 1.750 mg/kg

LC50 Inhalation - Rat - 4 h - > 170 mg/m3

LD50 Dermal - Rabbit - > 2.800 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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

12. Ecological information

Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - 10,000 mg/l - 96,0 h

Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 5,6 - 18,0 mg/l - 48 h

other aquatic

invertebrates

Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - 6,8 mg/l - 96 h

Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 31 d

Result: < 1 % - Not readily biodegradable.

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. Transport information

ADR/RID

UN-Number: 3077 Class: 9 Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thiourea)

IMDG

UN-Number: 3077 Class: 9 Packing group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thiourea)

Marine pollutant: yes

IATA

UN-Number: 3077 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Thiourea)

15. Regulatory information

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

16. Other information

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.