

Sovchem[®] ETU

| 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION | |
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| Manufacturer: Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333 | Emergency Contact Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA) |
| Trade Name(s): Sovchem [®] ETU Oiled Powder | Chemical Name: Ethylene thiourea |
| Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available. | Application of the substance/the preparation: Chemicals for synthesis. |
| Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS | Date of Issue: April 15, 2023 |

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
 Information in accordance with US 29 CFR 1910.1200 (Hazcom 2012) and Regulation (EC) No 1272/2008

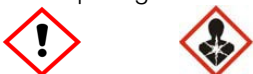
Acute toxicity – Oral, Category 4 - H302
 Reproductive Toxicity, Category 1B - H360



2.2 Label elements

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS07

GHS08

Signal word: Danger

Hazard-determining components of labeling: ethylene thiourea

Hazard statements

H360 - May damage fertility or the unborn child. (USA)

H302 - Harmful if swallowed.

Precautionary statements

P201 - Obtain special instructions before use

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

P301 + P313 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 P308 + P313 - IF exposed or concerned: Get medical advice/attention
 P405 - Store locked up
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.
 Additional information: Restricted to professional users.

2.3 Other hazards
 Results of PBT and vPvB assessment
 PBT: Not applicable.
 vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical Name | CAS No | EC No | Weight % | Classification |
|-------------------|---------|-----------|----------|--|
| ethylene thiourea | 96-45-7 | 202-506-9 | ≥97% | Acute Tox. 4 (H302) Repr. 1B (H360) |

The remaining unspecified ingredients are impurities and are not hazardous.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact

Immediately wash with water, soap, and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders

Dizziness

Hazards: No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat skin and mucous membrane with antihistamine and corticoid preparations.

If necessary, oxygen respiration treatment.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents: CO₂, powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment

Wear self-contained respiratory protective device.

Wear a fully protective suit.

Additional information: Cool endangered receptacles with water fog or haze.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

Isolate area and prevent access.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Do not flush with water or aqueous cleansing agents.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Open and handle receptacle with care.

Prevent formation of dust.

Use only in well-ventilated areas.

Information about fire and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flames.
Use only receptacles specifically permitted for this substance/product.
Information about storage in one common storage facility
Store away from foodstuffs.
Do not store together with oxidizing and acidic materials.
Store away from reducing agents.
Further information about storage conditions
Store in cool, dry conditions in well-sealed receptacles.
Protect from humidity and water.
Store receptacle in a well-ventilated area.

7.3 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace
96-45-7 ethylene thiourea

Derived No Effect Level (DNEL)

Workers:

Inhalation, Systemic effects - Long-term: 0.07 mg/m³

Dermal, Systemic effects - Long-term: 1.7 mg/kg bw/day

General population:

Inhalation, Systemic effects - Long-term: 0.01 mg/m³

Dermal, Systemic effects - Long-term: 0.85 mg/kg bw/day

Oral, Systemic effects - Long-term: 0.009 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Fresh Water 0.32 mg/L

Sea Water 0.032 mg/L

Intermittent releases 0.264 mg/L

Freshwater sediment 1.57 mg/kg sediment dw

Sea sediment 0.157 mg/kg sediment dw

Soil 0.126mg/kg soil dw

Impact on Sewage Treatment 10 mg/L

Secondary poisoning 1.13 mg/kg food Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Pregnant women should strictly avoid inhalation or skin contact.

Do not inhale dust / smoke / mist.

Keep away from foodstuffs, beverages, and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.
Avoid contact with the eyes and skin.

Respiratory protection



Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

Protection of hands

The glove material must be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

- Neoprene gloves
- Nitrile rubber, NBR

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact breakthrough time must be found out by the manufacturer of the protective gloves and must be observed.

Eye protection



Safety glasses

Body protection: Impervious protective clothing

Limitation and supervision of exposure to the environment: No further relevant information available.

Risk management measures

- See Section 7 for additional information.
- No further relevant information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

| | |
|---|---|
| Appearance Form: Powder Color: White | Change in Condition Melting Point/Melting Range: 199 °C Boiling Point/Boiling Range: 347 °C |
| Odor: Odorless | Octanol/Water Partition Coefficient: Not determined |
| Odor threshold: Not determined | Solvent Content: Organic solvents: Not determined |
| pH: Not applicable | Solids content: Not determined |
| Vapor Pressure: 0.00027Pa (25°C) | Flash point: Not applicable |
| Density at 20 °C: 1.45 g/cm ³ | Flammability (solid, gaseous): Product is not flammable |
| Relative density: 0.4512(20 °C) | Ignition temperature: Not determined |
| Vapor Density: Not applicable | Decomposition temperature: ca.240°C (101.3 kPa) |
| Evaporation rate Not applicable | Self-igniting: Not determined |
| Solubility in / Miscibility with water at 20 °C: 27.4g/L at 20 °C in water | Danger of explosion: Product does not present an explosion hazard |
| Viscosity Dynamic: Not applicable Kinematic: Not applicable | Explosion limits Lower: Not determined. Upper: Not determined |

9.2 Other information No further relevant information available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Stable under recommended storage and handling conditions (see section 7).

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing. Hazardous polymerization does not occur.

10.4. Conditions to avoid

Strong heating. Heat, flames, and sparks. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products

Carbon oxides, sulfur oxides, nitrogen oxides, ammonia, hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

1,3-Ethylene thiourea (CAS #: 96-45-7)

LD50 oral rat 940 mg/kg

LC50 dermal rat > 2000 mg/kg

Skin corrosion/irritation

Non-irritating to the skin, rabbit.

Serious eye damage/eye irritation

No eye irritation, rabbit.

Sensitization

Not sensitizing, mouse.

Germ cell mutagenicity

Not classified

Carcinogenicity

1,3-Ethylene thiourea (CAS #: 96-45-7)

IARC group 3 - Not classifiable

Reproductive toxicity

May damage the unborn child.

STOT - single exposure

The substance can be absorbed into the body by inhalation and through the skin.

STOT - repeated exposure

The substance may have effects on the thyroid and liver, resulting in impaired functions. Animal tests show that this

substance possibly causes malformations in human babies.

Aspiration hazard

Not classified.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

1,3-Ethylene thiourea (CAS #: 96-45-7)

LC50 96h - Fish 7500 mg/l *Poecilia reticulata*

EC50 48h - Crustacea 21.6 – 32.2 mg/l *Daphnia magna* [Static]

EC50 72h - Algae > 100 mg/l *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*)

NOEC (chronic) - Crustacea 3.2 mg/l *Daphnia magna* Duration

12.2 Persistence and degradability

Degradation: 0 % after 28 days.

Result: other: not readily biodegradable.

Method: OECD Test Guideline 301F.

12.3 Bioaccumulative potential

Log Kow = -0.67.

Tests indicate the potential for bio-accumulate in aquatic organisms is low.

12.4 Mobility in soil

Log Koc = 1.11

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues, and containers in compliance with all relevant local, state, and federal laws and regulations regarding treatment, storage, and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary, together with cleansing agents.

14. TRANSPORTATION INFORMATION

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|---|--------------------------|
| 14.1 UN-Number DOT, ADR, IMDG, IATA | Not regulated |
| 14.2 UN proper shipping name DOT, ADR, IMDG, IATA | Not regulated |
| 14.3 Transport hazard class(es) DOT, ADR, IMDG, IATA | Not regulated |
| 14.4 Packing group DOT, ADR, IMDG, IATA | Not regulated |
| 14.5 Environmental hazards DOT, ADR, IMDG, IATA | Non-marine pollutant |
| 14.6 Special precautions for user | No information available |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15. REGULATORY INFORMATION

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

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|--|----------------------------|
| SARA Section 355 (extremely hazardous substances) | Substance is not listed. |
| SARA Section 313 (Specific toxic chemical listings) | 96-45-7 ethylene thiourea |
| TSCA (Toxic Substances Control Act) | Substance is listed. |
| Proposition 65 (California) | |
| Chemicals known to cause cancer | 96-45-7 ethylene thiourea |
| Chemicals known to cause reproductive toxicity for females | Substance is not listed. |
| Chemicals known to cause reproductive toxicity for males | Substance is not listed. |
| Chemicals known to cause developmental toxicity | 96-45-7 ethylene thiourea |
| Carcinogenic Categories | |
| EPA (Environmental Protection Agency) | Substance is not listed. |
| IARC (International Agency for Research on Cancer) | 96-45-7 ethylene thiourea. |

| | |
|--|---------------------------|
| TLV (Threshold Limit Value established by ACGIH) | Substance is not listed. |
| NIOSH-Ca (National Institute for Occupational Safety and Health) | 96-45-7 ethylene thiourea |
| OSHA-Ca (Occupational Safety & Health Administration) | Substance is not listed. |
| Canada | |
| Canadian Domestic Substances List (DSL) | Substance is listed. |
| Canadian Ingredient Disclosure list (limit 0.1%) | 96-45-7 ethylene thiourea |
| Canadian Ingredient Disclosure list (limit 1%) | Substance is not listed. |

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.