

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Westco ETU
Synonyms : Ethylene thiourea / 2-imidazoline-2-thiol

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Accelerator
Rubbers
Restrictions on use : No additional information available

1.3. Supplier

Western Reserve Chemical Corporation
4837 Darrow Road
Stow, OH 44224 - USA
T 330 650 2244 - F 330 650 2255
www.wrchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC 1 800 424 9300 USA

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.
Carcinogenicity, Category 1B H350 May cause cancer.
Reproductive toxicity, Category 1B H360 May damage fertility or the unborn child.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS) :



Signal word (GHS) : Danger
Hazard statements (GHS) : H302 - Harmful if swallowed.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
Precautionary statements (GHS) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P330 - Rinse mouth.
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 regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

| Name | Product identifier | % | GHS classification |
|--|---------------------|-----|---|
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol | (CAS-No.) 96-45-7 | 98 | Acute Tox. 4 (Oral), H302 Carc. 1B, H350 Repr. 1B, H360 |
| White mineral oil | (CAS-No.) 8042-47-5 | < 2 | Asp. Tox. 1, H304 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin thoroughly with mild soap and water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects : May damage fertility or the unborn child. May cause cancer.
- Symptoms/effects after inhalation : May cause shortness of breath, tightness of the chest, a sore throat and cough.
- Symptoms/effects after skin contact : May cause slight irritation.
- Symptoms/effects after eye contact : May cause slight irritation.
- Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Nausea. Vomiting. Headache.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Fire hazard : Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂). Nitrogen oxides. Sulphur oxides.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid creating or spreading dust. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Recover the product by vacuuming, shovelling or sweeping. Avoid generating dust.
Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe vapours. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe dust. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container. Keep container closed when not in use.
Incompatible products : Strong oxidizers.
Incompatible materials : Sources of ignition. Direct sunlight.
Prohibitions on mixed storage : Keep/Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| |
|---|
| Westco ETU |
| No additional information available |
| White mineral oil (8042-47-5) |
| No additional information available |
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) |
| No additional information available |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Avoid creating or spreading dust. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.
Environmental exposure controls : Prevent leakage or spillage. Prevent contaminated water run-off.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Dust impervious gloves. Nitrile rubber. Minimum glove thickness is 0.11 mm. Breakthrough time is > 480 minutes.

Eye protection:

Safety glasses with side shields. In case of dust production: protective goggles

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Dust mask. Approved organic vapour respirator

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid

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| | |
|--|---|
| Appearance | : Translucent. Crystalline solid. Powder. |
| Colour | : white |
| Odour | : odourless slight aromatic |
| Odour threshold | : No data available |
| pH | : No data available |
| Melting point | : 203 – 204 °C |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : 252 °C |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : 0.00000202 mm Hg @ 25 °C |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.4 g/cm ³ @ 20 °C |
| Solubility | : Water: 8 g/l @ 20 °C |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive limits | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|-------------------------|
| Acute toxicity (oral) | : Harmful if swallowed. |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| | |
|--------------------------------------|---------------------------|
| ATE (oral) | 1869.388 mg/kg bodyweight |
| White mineral oil (8042-47-5) | |
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| LC50 inhalation rat (mg/l) | > 5 mg/l/4h |

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| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) | |
|---|-----------------------|
| LD50 oral rat | 1832 mg/kg |
| LD50 dermal rat | > 2000 mg/kg |
| ATE (oral) | 1832 mg/kg bodyweight |

| | |
|-----------------------------------|---------------------|
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : May cause cancer. |

| White mineral oil (8042-47-5) | |
|---|--|
| NOAEL (chronic, oral, animal/male, 2 years) | > 1200 mg/kg bodyweight No carcinogenic potential observed. |
| Additional information | Chronic dermal: mouse: Lack of significant effects. Chronic inhalation to various animal species at 5 and 100 mg/m ³ doses: no adverse effects. |

| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) | |
|---|---|
| IARC group | 3 - Not classifiable |
| National Toxicology Program (NTP) Status | Reasonably anticipated to be Human Carcinogen |

| | |
|------------------------|---|
| Reproductive toxicity | : May damage fertility or the unborn child. |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |

| White mineral oil (8042-47-5) | |
|--|-------------------------------|
| NOAEL (subacute, oral, animal/male, 28 days) | > 1500 mg/kg bodyweight (dog) |

| | |
|-------------------------------------|--|
| Aspiration hazard | : Not classified |
| Viscosity, kinematic | : No data available |
| Likely routes of exposure | : Inhalation. Skin and eye contact. |
| Symptoms/effects | : May damage fertility or the unborn child. May cause cancer. |
| Symptoms/effects after inhalation | : May cause shortness of breath, tightness of the chest, a sore throat and cough. |
| Symptoms/effects after skin contact | : May cause slight irritation. |
| Symptoms/effects after eye contact | : May cause slight irritation. |
| Symptoms/effects after ingestion | : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Nausea. Vomiting. Headache. |

SECTION 12: Ecological information

12.1. Toxicity

| White mineral oil (8042-47-5) | |
|--------------------------------------|--------------------------------------|
| LC50 fish 1 | 3841 mg/l <i>Oncorhynchus mykiss</i> |

| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) | |
|---|-----------------------------|
| LC50 fish 1 | 7500 mg/l |
| EC50 crustacea | 26.4 mg/l |
| NOEC (acute) | ≤ |
| NOEC chronic crustacea | 3.2 mg/l reproduction study |
| NOEC chronic algae | > 100 mg/l |

12.2. Persistence and degradability

| Westco ETU | |
|-------------------------------|-----------------|
| Persistence and degradability | Not established |

| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) | |
|---|----------------------------|
| Persistence and degradability | Not readily biodegradable. |
| Biodegradation | 0 % 28 days |

12.3. Bioaccumulative potential

| Westco ETU | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

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12.4. Mobility in soil

| Westco ETU | |
|----------------|------------------|
| Ecology - soil | Not established. |

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|---|-----------------|-----|
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol | CAS-No. 96-45-7 | 98% |
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) | | |
| CERCLA RQ | 10 lb | |

15.2. International regulations

CANADA

| |
|---|
| White mineral oil (8042-47-5) |
| Listed on the Canadian DSL (Domestic Substances List) inventory. |
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) |
| Listed on the Canadian DSL (Domestic Substances List) inventory. |

National regulations

| |
|--|
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol (96-45-7) |
| Listed as carcinogen on NTP (National Toxicology Program) |
| Listed on the Inventory of Existing Chemical Substances Produced or Imported in China (IECSC). |
| Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory |
| Listed on the AICS (Australian Inventory of Chemical Substances) |
| Listed on NZIoC (New Zealand Inventory of Chemicals) |
| Listed on KECI (Korean Existing Chemicals Inventory) |

15.3. US State regulations

 **WARNING:** This product can expose you to ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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| Component | State or local regulations |
|---|---|
| ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol(96-45-7) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Maine - Air Pollutants - Hazardous Air Pollutants; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances; U.S. - Pennsylvania - RTK (Right to Know) List |

SECTION 16: Other information

Data sources : TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>. European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>. ACGIH (American Conference of Government Industrial Hygienists). Manufacturer Information. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. NFPA 400-2013 Hazardous Materials Code.

Other information : None.

Full text of H-statements:

| | |
|------|---|
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H350 | May cause cancer. |
| H360 | May damage fertility or the unborn child. |

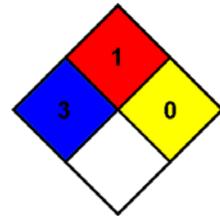
Abbreviations and acronyms:

| | |
|--|---|
| | CAS (Chemical Abstracts Service) number |
| | EC50: Environmental Concentration associated with a response by 50% of the test population. |
| | GHS: Globally Harmonized System (of Classification and Labeling of Chemicals). |
| | LD50: Lethal Dose for 50% of the test population |
| | STEL: Short Term Exposure Limits |
| | TSCA: Toxic Substances Control Act |
| | TWA: Time Weighted Average |

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : X
X - Special handling directions

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.