

# Mixgran<sup>®</sup> ETU

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer: Shandong Yanggu Huatai Chemical Co., LTD No.217, Qinghexi Road Yanggu County, Shandong, China 252300	Emergency Contact: Chemtrec:1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Mixgran <sup>®</sup> ETU 75, Mixgran <sup>®</sup> ETU 80	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: Rubber Compounding.
Issued By: Sovereign Chemical Company  According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: July 24, 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**

3.2 Mixtures

Chemical Name	CAS No	EC No	Weight %	Classification
ethylene thiourea	96-45-7	202-506-9	75-80%	Acute Tox. 4 (H302) Repr. 1B (H360)
Ethylene propylene terpolymer	N/A	N/A	N/A	N/A

The remaining unspecified ingredients are impurities and are not hazardous.

**4. FIRST AID MEASURES**

4.1 Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

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 and 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.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

Irritant to skin and mucous membranes.

Irritant to eyes.

Hazards

May damage fertility or the unborn child.

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.

Contains reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight  $\leq$  700).

May produce an allergic reaction.

## 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing agents: CO<sub>2</sub>, 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 fully protective suit.

Additional information: No further relevant information available.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

### 6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

### 6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose contaminated material as waste according to Section 13.

Send for recovery or disposal in suitable receptacles.

### 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

Prevent formation of dust.

Open and handle receptacle with care.

Any unavoidable deposit of dust must be regularly removed.

Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.

Use only in well ventilated areas.

Information about fire and explosion protection: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles

Avoid storage near extreme heat, ignition sources or open flame.

Protect from humidity and water.

Information about storage in one common storage facility

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions: Store in cool, dry conditions in well-sealed receptacles.

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/m<sup>3</sup>

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

General population:

Inhalation, Systemic effects - Long-term: 0.01 mg/m<sup>3</sup>

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: Granulate Color: White	Change in Condition Melting Point/Melting Range: Not determined Boiling Point/Boiling Range: Undetermined
Odor: Characteristic.	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: Not applicable	Flash point: Not applicable
Density at 20 °C: 1.27 g/cm <sup>3</sup>	Flammability (solid, gaseous): Not determined.
Relative density: Not determined	Ignition temperature: Not determined
Vapor Density: Not applicable	Decomposition temperature: Not determined
Evaporation rate Not applicable	Self-igniting: Product is not self-igniting.
Solubility in / Miscibility with water at 20 °C: Soluble.	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
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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 together with household garbage. Do not allow product to reach sewage system.





IARC (International Agency for Research on Cancer)	96-45-7 ethylene thiourea. 3
TLV (Threshold Limit Value established by ACGIH)	None of the ingredients are listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)	96-45-7 ethylene thiourea
Canada	
Canadian Domestic Substances List (DSL)	All ingredients are listed.
Canadian Ingredient Disclosure list (limit 0.1%)	96-45-7 ethylene thiourea
Canadian Ingredient Disclosure list (limit 1%)	None of the ingredients are 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.