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

### Product information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Ethylthioethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>1024590, 1024803, 1024802, 1027450</td>
</tr>
</tbody>
</table>

**Use**: Chemical intermediate

**Company**: Chevron Phillips Chemical Company LP

**Specialty Chemicals**

10001 Six Pines Drive

The Woodlands, TX 77380

**Local**: Chevron Phillips Chemicals (Shanghai) Corporation

Room 1810-1812, Shanghai Mart,

2299 Yan An Road (W),

Shanghai, PRC 200336

**Emergency telephone:**

**Health**: 866.442.9628 (North America) 1.832.813.4984 (International)

**Transport**: CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

Mexico CHEMTREC 01-800-681-9531 (24 hours)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Argentina: +(54)-1159839431

**Responsible Department**: Product Safety and Toxicology Group

**E-mail address**: SDS@CPChem.com

**Website**: www.CPChem.com

## SECTION 2: Hazards identification

**Classification of the substance or mixture**

REGULATION (EC) No 1272/2008

**Emergency Overview**
Danger

Physical state: Liquid  Color: Colorless  Odor: Pungent

Hazards: Combustible liquid. May be harmful if swallowed. Causes serious eye damage. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Classification

- Flammable liquids, Category 4
- Acute toxicity, Category 5, Oral
- Serious eye damage/eye irritation, Category 1
- Short-term (acute) aquatic hazard, Category 3
- Long-term (chronic) aquatic hazard, Category 3

Labeling

Symbol(s):

Signal Word: Danger

Hazard Statements:
- H227: Combustible liquid.
- H303: May be harmful if swallowed.
- H318: Causes serious eye damage.
- H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:
- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/ eye protection/ face protection.

Response:
- P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- P312: Call a POISON CENTER/doctor if you feel unwell.
- P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
- P403 + P235: Store in a well-ventilated place. Keep cool.

Disposal:
- P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms: 2-Ethylthioethanol
ETE

Molecular formula: C4H10OS
Ethylthioethanol

SECTION 4: First aid measures

General advice: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.

If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point: 78 °C (172 °F)
Method: Tag closed cup

Autoignition temperature: No data available

Suitable extinguishing media: Carbon dioxide (CO2).

Unsuitable extinguishing media: High volume water jet.

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Ethylthioethanol

SECTION 6: Accidental release measures

Personal precautions: Use personal protective equipment.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers: No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Use: Chemical intermediate

SECTION 8: Exposure controls/personal protection

Engineering measures
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Personal protective equipment**

**Respiratory protection**: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Full-Face Supplied-Air Respirator. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection**: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

**Eye protection**: Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

**Skin and body protection**: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. Wear as appropriate: Complete head, face and neck protection. Rubber apron. Footwear protecting against chemicals.

**Hygiene measures**: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**

- Physical state: Liquid
- Color: Colorless
- Odor: Pungent

**Safety data**

- Flash point: 78 °C (172 °F)
  Method: Tag closed cup

- Lower explosion limit: No data available
## Ethylthioethanol

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tr>
<td>Oxidizing properties</td>
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<td>Autoignition temperature</td>
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<td>Molecular formula</td>
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<td>Molecular weight</td>
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</tr>
<tr>
<td>pH</td>
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<td>Pour point</td>
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<td>Boiling point/boiling range</td>
<td>183.5 °C (362.3 °F)</td>
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<td>Vapor pressure</td>
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<td>Relative density</td>
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<tr>
<td>Density</td>
<td>1.018 g/cm3</td>
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<tr>
<td>Water solubility</td>
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<td>Partition coefficient: n-octanol/water</td>
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<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
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<tr>
<td>Relative vapor density</td>
<td>No data available</td>
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<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>&gt; 99 %</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

**Reactivity**: No decomposition if stored and applied as directed.

**Chemical stability**: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

**Hazardous reactions**: Hazardous reactions: Hazardous polymerization does not occur.
Further information: No decomposition if stored and applied as directed.

Hazardous reactions: Vapors may form explosive mixture with air.

**Conditions to avoid**: Heat, flames and sparks.

**Materials to avoid**: Oxidizing agents.

**Thermal decomposition**: No data available

**Hazardous decomposition products**: Carbon oxides, Sulfur oxides

**Other data**: No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

#### Acute oral toxicity

**Ethyl Thioethanol**: 
LD50: > 2,000 mg/kg  
Species: Rat  
Sex: female  
Method: OECD Test Guideline 423

#### Skin irritation

**Ethyl Thioethanol**: No skin irritation

#### Eye irritation

**Ethyl Thioethanol**: Risk of serious damage to eyes.

#### Sensitization

**Ethyl Thioethanol**: Did not cause sensitization on laboratory animals.

#### CMR effects

**Ethyl Thioethanol**: Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**Ethylthioethanol**: No data available.

### SECTION 12: Ecological information

#### Toxicity to daphnia and other aquatic invertebrates

**Ethyl Thioethanol**: EC50: 29.6 mg/l
Exposure time: 24 h
Species: Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202

Toxicity to algae
Ethyl Thioethanol : > 100 mg/l
Exposure time: 72 h
Species: Desmodesmus subspicatus (green algae)
Method: OECD Test Guideline 201

Biodegradability
Ethyl Thioethanol : aerobic
Result: Not readily biodegradable.
8 %
Testing period: 28 Days

Additional ecological information
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
Ethyl Thioethanol : Harmful to aquatic life.

Long-term (chronic) aquatic hazard
Ethyl Thioethanol : Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product
The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging
Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to
shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
NA1993, COMBUSTIBLE LIQUID, N.O.S., (ETHYL THIOETHANOL), III

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN3334, AVIATION REGULATED LIQUID, N.O.S., (ETHYL THIOETHANOL), 9, III

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information**

<table>
<thead>
<tr>
<th>Notification status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe REACH</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>Switzerland CH INV</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>United States of America (USA) TSCA</td>
<td>On or in compliance with the active portion of the TSCA inventory</td>
</tr>
<tr>
<td>Canada NDSL</td>
<td>This product contains one or several components listed in the Canadian NDSL.</td>
</tr>
<tr>
<td>Australia AICS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>New Zealand NZIoC</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>Japan ENCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
</tbody>
</table>
Korea KECI: A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines PICCS: On the inventory, or in compliance with the inventory
China IECSC: Not in compliance with the inventory
Taiwan TCSI: On the inventory, or in compliance with the inventory

SECTION 16: Other information

Further information
Legacy SDS Number: 44020

Local emergency contact number: 0532-83889090

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
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<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
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<td>CAS</td>
<td>Chemical Abstract Service</td>
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<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
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<td>EC50</td>
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<td>Philippines Inventory of Commercial Chemical Substances</td>
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<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
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<td>PRNT</td>
<td>Presumed Not Toxic</td>
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<td>Globally Harmonized System</td>
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<td>Resource Conservation Recovery Act</td>
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<td>Short-term Exposure Limit</td>
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<td>IC50</td>
<td>Inhibition Concentration 50%</td>
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<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
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<td>Threshold Limit Value</td>
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SDS Number: 100000014120
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<th></th>
<th>Substances in China</th>
<th>TSCA</th>
<th>Toxic Substance Control Act</th>
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<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
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<td>KECI</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
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<td>Workplace Hazardous Materials Information System</td>
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