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

Product information

Product Name: Scentinel® TB Gas Odorant
Material: 1119678, 1086437, 1086436, 1103087, 1103086, 1103855, 1024798, 1024799
Use: Odorant
Company: Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

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

ODOR-FADE WARNING

A GAS LEAK CAN CAUSE A FIRE OR EXPLOSION RESULTING IN SERIOUS INJURY OR DEATH.

Be aware that the stenching chemical added to gas to make it detectable may not warn of a gas leak or the presence of propane or natural gas to all persons in every instance.

Instances where the odorant in an odorized gas may be undetectable include:

• Odor intensity may fade or be eliminated for a variety of chemical and physical causes, including the oxidation of rusting pipes, adsorption into or sticking onto the interior of pipes or appliances, or absorption into liquids.
• Contact with soil in underground leaks may de-odorize or remove odorant from the gas.
• Some people have a diminished ability, or inability to smell the stench. Factors that negatively affect a person’s sense of smell include age, gender, medical conditions, and alcohol/tobacco usage.
• The stench of odorized gas may not awaken sleeping persons.
• Other odors may mask or hide the stench.
• Exposure to the odor for even a short period of time, may cause nasal fatigue, where a person can no longer smell the stench.

Gas detectors listed by the Underwriters Laboratories (UL) can be used as an extra measure of safety for detecting gas leaks, especially under conditions where the odorant alone may not provide an adequate warning. Gas detectors emit a loud, shrill sound when gas is present and do not depend on sense of smell. Because the odor intensity can fade or people may have problems with their sense of smell, we recommend installing, per manufacturer’s instructions, one or more combustible gas detectors, in suitable locations to ensure adequate coverage to detect gas leaks.

Educate yourself, your employees, and your customers with the content of this warning and other important facts associated with the so-called “odor-fade phenomenon.”

SECTION 2: Hazards identification

Classification of the substance or mixture
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids, Category 2</td>
<td>Acute toxicity, Category 4, Inhalation</td>
<td>Acute toxicity, Category 4, Dermal</td>
</tr>
<tr>
<td>Skin irritation, Category 2</td>
<td>Eye irritation, Category 2A</td>
<td>Skin sensitization, Category 1</td>
</tr>
</tbody>
</table>

Labeling

Symbol(s):

<table>
<thead>
<tr>
<th>Signal Word</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td></td>
</tr>
</tbody>
</table>

Hazard Statements

<table>
<thead>
<tr>
<th>Hazard Statements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H225: Highly flammable liquid and vapor.</td>
<td></td>
</tr>
<tr>
<td>H312: Harmful in contact with skin.</td>
<td></td>
</tr>
<tr>
<td>H315: Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>H317: May cause an allergic skin reaction.</td>
<td></td>
</tr>
<tr>
<td>H319: Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>H332: Harmful if inhaled.</td>
<td></td>
</tr>
</tbody>
</table>

Precautionary Statements

<table>
<thead>
<tr>
<th>Precautionary Statements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention:</td>
<td></td>
</tr>
<tr>
<td>P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.</td>
<td></td>
</tr>
<tr>
<td>P233 Keep container tightly closed.</td>
<td></td>
</tr>
<tr>
<td>P240 Ground/bond container and receiving equipment.</td>
<td></td>
</tr>
<tr>
<td>P241 Use explosion-proof electrical/ventilating/lighting/equipment.</td>
<td></td>
</tr>
<tr>
<td>P242 Use only non-sparking tools.</td>
<td></td>
</tr>
<tr>
<td>P243 Take precautionary measures against static discharge.</td>
<td></td>
</tr>
<tr>
<td>P261 Avoid breathing dust/fume/gas/mist/vapors/spray.</td>
<td></td>
</tr>
</tbody>
</table>
**SAFETY DATA SHEET**

**Scentinel® TB Gas Odorant**

Version 2.0  
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P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

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

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

**Carcinogenicity:**

**IARC**  
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP**  
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**ACGIH**  
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**SECTION 3: Composition/information on ingredients**

**Synonyms:**  
Scentinel® T-70 Gas Odorant

**Molecular formula:**  
Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrothiophene</td>
<td>110-01-0</td>
<td>70</td>
</tr>
<tr>
<td>t-Butyl Mercaptan</td>
<td>75-66-1</td>
<td>30</td>
</tr>
</tbody>
</table>

**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. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

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**SAFETY DATA SHEET**

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| If inhaled | Call a physician or poison control center immediately. Move to fresh air. If unconscious, place in recovery position and seek medical advice. |
| In case of skin contact | If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes. |
| In case of eye contact | Immediately flush eye(s) with plenty of water. 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. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Take victim immediately to hospital. |

**SECTION 5: Firefighting measures**

| Flash point | < -17.8 °C (< -0.0 °F) Method: Tagliabue Open Cup |
| Autoignition temperature | No data available |
| Suitable extinguishing media | Dry chemical. Carbon dioxide (CO2). Alcohol-resistant foam. |
| Unsuitable extinguishing media | High volume water jet. |
| Specific hazards during fire fighting | 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. |
| Fire and explosion protection | Do not spray on an open flame or any other incandescent material. Use only explosion-proof equipment. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition. |
| Hazardous decomposition products | Carbon oxides. Sulfur oxides. |

**SECTION 6: Accidental release measures**

| Personal precautions | Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate |

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personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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).

SECTION 7: Handling and storage

Handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Use only explosion-proof equipment. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers: Prevent unauthorized access. 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: Odorant

SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-Butyl Mercaptan</td>
<td>Manufacturer</td>
<td>TWA</td>
<td>0.5 ppm,</td>
<td></td>
</tr>
</tbody>
</table>

Engineering measures:
Adequate ventilation to control airborned concentrations below the exposure guidelines/limits.

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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: Air-Purifying Respirator for Organic Vapors. 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 according to the amount and concentration of the dangerous substance at the workplace. Wear as appropriate: Protective suit. Safety shoes.

**Hygiene measures**: Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

**SECTION 9: Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent</td>
</tr>
</tbody>
</table>

**Safety data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>&lt;-17.8 °C (&lt;-0.0 °F)</td>
</tr>
<tr>
<td>Method</td>
<td>Tagliabue Open Cup</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

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Oxidizing properties : no

Autoignition temperature : No data available

Thermal decomposition : No data available

Molecular formula : Mixture

Molecular weight : Not applicable

pH : Not applicable

Freezing point : No data available

Pour point : No data available

Boiling point/boiling range : 85 °C (185 °F)

Vapor pressure : 20.00 mbar

at 20 °C (68 °F)

3.60 PSI

at 50 °C (122 °F)

Relative density : 0.94

at 15.6 °C (60.1 °F)

Water solubility : Insoluble

Partition coefficient: n-octanol/water : No data available

Viscosity, kinematic : No data available

Relative vapor density : 3.04

(Air = 1.0)

Evaporation rate : No data available

Percent volatile : > 99 %

SECTION 10: Stability and reactivity

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: No data available.

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

**Scentinel® TB Gas Odorant**

**Acute oral toxicity**
- Acute toxicity estimate: 2,600 mg/kg
  - Method: Calculation method

**Acute toxicity estimate**: 2,263 mg/kg
  - Method: Calculation method

**Scentinel® TB Gas Odorant**

**Acute inhalation toxicity**
- Acute toxicity estimate: 15 mg/l
  - Test atmosphere: vapor
  - Method: Calculation method

**Acute toxicity estimate**: 32.29 mg/l
  - Exposure time: 4 h
  - Test atmosphere: vapor
  - Method: Calculation method

**Scentinel® TB Gas Odorant**

**Acute dermal toxicity**
- Acute toxicity estimate: 1,500 mg/kg
  - Method: Calculation method

**Skin irritation**
- May cause skin irritation and/or dermatitis.

**Eye irritation**
- May cause irreversible eye damage.

**Sensitization**
- Causes sensitization.

**Repeated dose toxicity**

**Tetrahydrothiophene**
- Species: Rat, Male and female
  - Sex: Male and female
  - Application Route: Inhalation
  - Dose: 0, 51, 236, 1442 ppm
## Exposure Time and Number of Exposures

**Exposure time:** 13 wk  
**Number of exposures:** 6 h/d, 5 d/wk

**NOEL:** 51 ppm  
**Method:** OECD Guideline 413

**Target Organs:** Upper respiratory tract

### t-Butyl Mercaptan

**Species:** Rat, Male and female  
**Sex:** Male and female  
**Application Route:** Inhalation  
**Dose:** 9, 97, 196 ppm  
**Exposure time:** 13 wks  
**Number of exposures:** 6 hrs/d, 5 d/wk

**NOEL:** > 196 ppm

**Species:** Rat, Male and female  
**Sex:** Male and female  
**Application Route:** Oral gavage  
**Dose:** 10, 50, 200 mg/kg bw/day  
**Exposure time:** 42-53 days  
**Number of exposures:** Daily

**NOEL:** 50 mg/kg bw/day

**Lowest observable effect level:** 200 mg/kg bw/day  
**Method:** OECD Guideline 422

### Genotoxicity in vitro

**Tetrahydrothiophene**

**Test Type:** Ames test  
**Method:** Mutagenicity (Escherichia coli - reverse mutation assay)  
**Result:** negative

**Test Type:** Cytogenetic assay  
**Result:** negative

**Test Type:** HGPRT assay  
**Result:** negative

**Test Type:** Sister Chromatid Exchange Assay  
**Method:** OECD Guideline 473  
**Result:** negative

**Test Type:** Unscheduled DNA synthesis assay  
**Result:** negative

**t-Butyl Mercaptan**

**Test Type:** Mouse lymphoma assay  
**Metabolic activation:** with and without metabolic activation

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**SDS Number:** 100000014177  
**Revision Date:** 2018-12-04
Result: negative

Test Type: Sister Chromatid Exchange Assay
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo

**t-Butyl Mercaptan**

: Test Type: Mouse micronucleus assay
Species: Mouse
Dose: 1250, 2500, 5000 mg/kg
Method: Mutagenicity (micronucleus test)
Result: negative

Reproductive toxicity

**t-Butyl Mercaptan**

: Species: Rat
Sex: male and female
Application Route: oral gavage
Dose: 10, 50, 200 mg/kg bw/day
Number of exposures: Daily
Test period: 42 - 53 days
Method: OECD Guideline 422
NOAEL Parent: 200 mg/kg bw/day
NOAEL F1: 50 mg/kg bw/day
No adverse effects expected

Developmental Toxicity

**Tetrahydrothiophene**

: Species: Rat
Application Route: Inhalation
Dose: 234, 782, 1910 ppm
Method: OECD Guideline 414
NOAEL Teratogenicity: 1910 ppm
NOAEL Maternal: 234 ppm
No adverse effects expected

**t-Butyl Mercaptan**

Species: Mouse
Application Route: Inhalation
Dose: 11, 99, 195 ppm
Exposure time: GD 6-16
Number of exposures: 6 hrs/d
NOAEL Teratogenicity: > = 195 ppm
NOAEL Maternal: > = 195 ppm
Species: Rat  
Application Route: Inhalation  
Dose: 11, 99, 195 ppm  
Exposure time: GD6-19  
Number of exposures: 6 hrs/d  
NOAEL Teratogenicity: > =195 ppm  
NOAEL Maternal: > = 195 ppm

Species: Rat  
Application Route: oral gavage  
Dose: 10, 50, 200 mg/kg bw/day  
Exposure time: 42-53 days  
Number of exposures: Daily  
NOAEL Teratogenicity: 50 mg/kg bw /day  
NOAEL Maternal: 200 mg/kg bw /day

**Scintinel® TB Gas Odorant**

**Aspiration toxicity**: May be harmful if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

**CMR effects**

**Tetrahydrothiophene**: Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Teratogenicity: Animal testing did not show any effects on fetal development. Reproductive toxicity: Animal testing did not show any effects on fertility.

**t-Butyl Mercaptan**: Carcinogenicity: Not available  
Mutagenicity: Did not show mutagenic effects in animal experiments.  
Teratogenicity: Did not show teratogenic effects in animal experiments.  
Reproductive toxicity: No toxicity to reproduction

**Scintinel® TB Gas Odorant**

**Further information**: Solvents may degrease the skin.

**SECTION 12: Ecological information**

**Toxicity to fish**

**Tetrahydrothiophene**:  
LC50: > 24 mg/l  
Exposure time: 96 h  
Species: Danio rerio (Zebra Fish)  
Method: OECD Test Guideline 203

**t-Butyl Mercaptan**:  
LC50: 34 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
semi-static test Method: OECD Test Guideline 203
### Toxicity to daphnia and other aquatic invertebrates

**Tetrahydrothiophene**
- EC50: 24 mg/l
- Exposure time: 48 h
- Species: *Daphnia magna* (Water flea)
- Method: OECD Test Guideline 202

**t-Butyl Mercaptan**
- EC50: 6.7 mg/l
- Exposure time: 48 h
- Species: *Daphnia magna* (Water flea)
- Method: OECD Test Guideline 202

### Toxicity to algae

**Tetrahydrothiophene**
- EC50: > 153.2 mg/l
- Exposure time: 72 h
- Species: *Pseudokirchneriella subcapitata* (green algae)
- Method: OECD Test Guideline 201

**t-Butyl Mercaptan**
- EC50: 24 mg/l
- Exposure time: 72 h
- Species: *Pseudokirchneriella subcapitata* (green algae)
- Method: OECD Test Guideline 201

### Toxicity to bacteria

**Tetrahydrothiophene**
- EC50: 1,530 mg/l
- Exposure time: 3 h
- Respiration inhibition
- Method: OECD Test Guideline 209

**Biodegradability**
- This material is not expected to be readily biodegradable.

### Elimination information (persistence and degradability)

**Bioaccumulation**
- **Tetrahydrothiophene**: Bioaccumulation is unlikely.
- **t-Butyl Mercaptan**: Bioconcentration factor (BCF): 12
  - Bioaccumulation is unlikely.

**Mobility**
- **Tetrahydrothiophene**: The product will be dispersed amongst the various environmental compartments (soil/ water/ air).
- **t-Butyl Mercaptan**: The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

**Results of PBT assessment**
- **Tetrahydrothiophene**: Non-classified PBT substance, Non-classified vPvB substance
- **t-Butyl Mercaptan**: Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
t-Butyl Mercaptan: Toxic to aquatic life.

Long-term (chronic) aquatic hazard
Tetrahydrothiophene: Harmful to aquatic life with long lasting effects.
t-Butyl Mercaptan: Toxic 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)
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TETRAHYDROTHIOPHENE, TERTIARY BUTYL MERCAPTAN), 3, II

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TETRAHYDROTHIOPHENE, TERTIARY BUTYL MERCAPTAN), 3, II, (< -17.8 °C), MARINE POLLUTANT, (TERTIARY BUTYL MERCAPTAN)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Acute toxicity (any route of exposure)

SARA 302 Threshold Planning Quantity : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
Clean Air Act

Ozone-Depletion: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

US State Regulations

Pennsylvania Right To Know: t-Butyl Mercaptan - 75-66-1
New Jersey Right To Know: Tetrahydrothiophene - 110-01-0
t-Butyl Mercaptan - 75-66-1
California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

Europe REACH: On the inventory, or in compliance with the inventory
United States of America (USA) TSCA: On the inventory, or in compliance with the inventory
Canada DSL: On the inventory, or in compliance with the inventory
Australia AICS: On the inventory, or in compliance with the inventory
New Zealand NZIoC: On the inventory, or in compliance with the inventory
Japan ENCS: On the inventory, or in compliance with the inventory
Korea KECI: On the inventory, or in compliance with the inventory
Philippines PICCS: On the inventory, or in compliance with the inventory
China IECSC: On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification: Health Hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0
Further information

Legacy SDS Number : E027

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.

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<th>Key or legend to abbreviations and acronyms used in the safety data sheet</th>
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