

**Scentinel® A Gas Odorant**

Version 5.0

Revision Date 2025-09-02

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

Product Name : Scentinel® A Gas Odorant
Material : 1017907, 1017909, 1119674, 1119564, 1106807, 1098462,
1102596, 1086453, 1098407, 1086452, 1102264, 1072060,
1098463, 1103512, 1070006, 1024777, 1024776, 1024775,
1024774, 1029441, 1029442, 1029443, 1029444, 1029445
Company : Chevron Phillips Chemical Company LP
9500 Lakeside Blvd.
The Woodlands, TX 77381

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

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

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

Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)

Belgium: 070 245 245 (24 hours/day, 7 days/week)

Bulgaria: +359 2 9154 233

Croatia: +3851 2348 342 (24 hours/day, 7 days/week)

Cyprus: 1401

Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402

Denmark: Danish Poison Center (Giftlinjen): +45 8212 1212

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

Finland: 0800 147 111 09 471 977 (24 hours/day)

France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)

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

Greece: (0030) 2107793777 (24 hours/day, 7 days/week)

Hungary: +36-80-201-199 (24 hours/day, 7 days/week)

Iceland: 543 2222 (24 hours/day, 7 days/week)

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

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Italy: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico “Agostino Gemelli”, Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726; POISON CENTER ROME – Policlinico “Umberto I” Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera “Antonio Cardarelli” Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera “Papa Giovanni XXIII” Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;

Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371 67042473. (24 hours.)

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

Lithuania: +370 (85) 2362052

Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)

Malta: +356 2395 2000

The Netherlands: NVIC: +31 (0)88 755 8000

Norway: 22 59 13 00 (24 hours/day, 7 days/week)

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

Portugal: CIAV phone number: +351 800 250 250

Romania: +40213183606

Slovakia: +421 2 5477 4166

Slovenia: Phone number: 112

Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)

Sweden: 112 – ask for Poisons Information

Organization that prepared the SDS : 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

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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

: Flammable liquids, Category 1
 Acute toxicity, Category 4, Oral
 Acute toxicity, Category 3, Inhalation
 Serious eye damage, Category 1
 Skin sensitization, Sub-category 1B

Labeling

Symbol(s)

:



Signal Word

: Danger

Hazard Statements

: H224: Extremely flammable liquid and vapor.
 H302: Harmful if swallowed.
 H317: May cause an allergic skin reaction.
 H318: Causes serious eye damage.
 H331: Toxic if inhaled.

Precautionary Statements

: **Prevention:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 Keep container tightly closed.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P261 Avoid breathing mist or vapors.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON

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CENTER/ doctor.

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.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

P405 Store locked up.

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.

SECTION 3: Composition/information on ingredients

Synonyms : ETSH
Ethanethiol
Ethyl Mercaptan

Molecular formula : C₂H₆S

Component	CAS-No.	Weight %
Ethyl Mercaptan	75-08-1	99 - 100

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. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.

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,

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- 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. 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 : -48°C (-54°F)
Method: ASTM D 93
- Autoignition temperature : 295°C (563°F)
- Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.
- 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 a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. 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 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

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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. To avoid spills during handling keep bottle on a metal tray. 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 a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. 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.

SECTION 8: Exposure controls/personal protection**Ingredients with workplace control parameters**

US

Components	Basis	Value	Control parameters	Note
Ethyl Mercaptan	ACGIH	TWA	0.5 ppm,	
	OSHA Z-1	C	10 ppm, 25 mg/m3	
	OSHA Z-1-A	TWA	0.5 ppm, 1 mg/m3	

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Ethyl Mercaptan	75-08-1	Immediately Dangerous to Life or Health Concentration Value 500 parts per million	1995-03-01

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Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place 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 : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. Full-Face Supplied-Air Respirator. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, 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.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Remove and wash contaminated clothing before re-use. Skin should be washed after contact. Complete head face and neck protection. Rubber apron. Footwear protecting against chemicals.
- 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**

- Form : liquid
Physical state : liquid
Color : Colorless
Odor : Repulsive

Safety data

- Flash point : -48°C (-54°F)

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Method: ASTM D 93

Lower explosion limit	: 2.8 %(V)
Upper explosion limit	: 18 %(V)
Oxidizing properties	: No
Autoignition temperature	: 295°C (563°F)
Molecular formula	: C ₂ H ₆ S
Molecular weight	: 62.14 g/mol
pH	: Not applicable
Pour point	: No data available
Initial boiling point and boiling range	: 35°C (95°F)
Vapor pressure	: 16.20 PSI at 37.8°C (100.0°F)
Relative density	: 0.84 at 15.6 °C (60.1 °F)
Water solubility	: negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Relative vapor density	: 2.1 (Air = 1.0)
Evaporation rate	: 1
Percent volatile	: > 99 %
Conductivity	: No data available

SECTION 10: Stability and reactivity

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions	

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Hazardous reactions	: Hazardous reactions: Hazardous polymerization does not occur. Hazardous reactions: Vapors may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
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 Mercaptan	: LD50: 682 mg/kg Species: Rat Sex: male Method: Fixed Dose Method
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Acute inhalation toxicity

Ethyl Mercaptan	: LC50: 11.23 mg/l Exposure time: 4 h Species: Rat Sex: male Test atmosphere: vapor LC50: 7.14 mg/l Exposure time: 4 h Species: Mouse Sex: male Test atmosphere: vapor
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Skin irritation

Ethyl Mercaptan	: slight irritation.
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**Scentinel® A Gas Odorant
Eye irritation**

: May cause irreversible eye damage.

**Scentinel® A Gas Odorant
Sensitization**

: Causes sensitization.

Repeated dose toxicity

Ethyl Mercaptan	: Species: Rat, Male and female Sex: Male and female Application Route: Inhalation Dose: 25, 100, 400 ppm Exposure time: 13 wks Number of exposures: 6 hr/d, 5 d/wk
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NOEL: 100 ppm
Lowest observable effect level: 400 ppm
Method: OECD Guideline 413
Information given is based on data obtained from similar substances.

Species: Rat, Male and female
Sex: Male and female
Application Route: Oral
Dose: 0, 10, 50, 200 mg/kg
Exposure time: 42-53 days
NOEL: 50 mg/kg
Method: OECD Guideline 422
Information given is based on data obtained from similar substances.

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 hr/d, 5 d/wk
NOEL: ≥ 196 ppm
Method: OECD Guideline 413
Information given is based on data obtained from similar substances.

Species: Rat, Male and female
Sex: Male and female
Application Route: Inhalation
Dose: 0.03, 0.26, 0.55 mg/L
Exposure time: 13 wks
Number of exposures: 6 hr/d, 5 d/wk
NOEL: 0.03 mg/l
Method: OECD Test Guideline 413
Information given is based on data obtained from similar substances.

Genotoxicity in vitro

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Ethyl Mercaptan

: Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: negative

Test Type: Mouse lymphoma assay
Method: OECD Guideline 476
Result: Ambiguous

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

Test Type: Micronucleus test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative

Genotoxicity in vivo

Ethyl Mercaptan

: Test Type: Micronucleus test
Species: Mouse
Method: Mutagenicity (micronucleus test)
Result: negative

Reproductive toxicity

Ethyl Mercaptan

: Species: Rat
Sex: male and female
Application Route: Oral diet
Dose: 0, 10, 50, 200 mg/kg
Exposure time: 42-53 days
Number of exposures: once daily
Method: OECD Guideline 422
NOAEL Parent: 200 mg/kg
NOAEL F1: 50 mg/kg
Information given is based on data obtained from similar substances.

Developmental Toxicity

Ethyl Mercaptan

: Species: Rat
Application Route: Inhalation
Dose: 0, 0.037, 0.28, or 0.56 mg/L
Number of exposures: 6 hrs/d
Test period: GD 6-19
Method: OECD Guideline 414
NOAEL Teratogenicity: > 0.56 mg/l
Information given is based on data obtained from similar substances.

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Species: Rat
 Application Route: Inhalation
 Dose: 0, 10, 100, 200 ppm
 Number of exposures: 6 hrs/d
 Test period: GD 6-19
 Method: OECD Guideline 414
 NOAEL Teratogenicity: > 200 ppm
 NOAEL Maternal: > 200 ppm
 Information given is based on data obtained from similar substances.

Aspiration toxicity

Ethyl Mercaptan : May be harmful if swallowed and enters airways.

CMR effects

Ethyl Mercaptan : Carcinogenicity: Not available
 Mutagenicity: Not mutagenic in Ames Test.
 Teratogenicity: Animal testing did not show any effects on fetal development.
 Reproductive toxicity: Animal testing did not show any effects on fertility.

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Further information**

: Solvents may degrease the skin. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

SECTION 12: Ecological information**Toxicity to fish**

Ethyl Mercaptan : 2.4 mg/l
 Exposure time: 96 h
 Species: Oncorhynchus mykiss (rainbow trout)
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Ethyl Mercaptan : EC50: < 0.1 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Method: OECD Test Guideline 202

Toxicity to algae

Ethyl Mercaptan : EC50: 3 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (green algae)
 Method: OECD Test Guideline 201

M-Factor

ethanethiol : M-Factor (Acute Aquat. Tox.) 10
 M-Factor (Chron. Aquat. Tox.) 10

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Biodegradability

Ethyl Mercaptan : aerobic
Result: Not readily biodegradable.
0 %
Testing period: 29 d
Method: OECD Test Guideline 301F

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

Mobility

Ethyl Mercaptan : The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

Results of PBT assessment

Ethyl Mercaptan : Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information : Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment**Short-term (acute) aquatic hazard**

Ethyl Mercaptan : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard

Ethyl Mercaptan : Very 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.

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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)

UN2363, ETHYL MERCAPTAN, 3, I, MARINE POLLUTANT, (ETHYL MERCAPTAN)

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN2363, ETHYL MERCAPTAN, 3, I, (-48 °C c.c.), MARINE POLLUTANT, (ETHYL MERCAPTAN)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN2363, ETHYL MERCAPTAN, 3, I

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

UN2363, ETHYL MERCAPTAN, 3, I, (D/E), ENVIRONMENTALLY HAZARDOUS, (ETHYL MERCAPTAN)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))

33, UN2363, ETHYL MERCAPTAN, 3, I, ENVIRONMENTALLY HAZARDOUS, (ETHYL MERCAPTAN)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

UN2363, ETHYL MERCAPTAN, 3, I, ENVIRONMENTALLY HAZARDOUS, (ETHYL MERCAPTAN)

Maritime transport in bulk according to IMO instruments

SECTION 15: Regulatory information**National legislation**

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

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CERCLA Reportable Quantity : This material does not contain any components with a CERCLA RQ.

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : This material does not contain any components with a section 302 EHS TPQ.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

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 Potential : 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).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

: Ethyl Mercaptan - 75-08-1

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

Pennsylvania Right To Know

: Ethyl Mercaptan - 75-08-1

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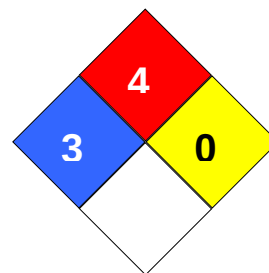
California Prop. 65 Components : This product, as shipped, does not contain any carcinogens or reproductive toxins presently known by the State of California to cause cancer or reproductive toxicity at a level of exposure subject to the requirements of California Proposition 65.

Notification status

Europe REACH	:	This product is in full compliance according to REACH regulation 1907/2006/EC.
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America (USA) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AIC	:	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
Japan ISHL	:	On the inventory, or in compliance with the inventory
Korea KECI	:	All substances in this product were registered, notified to be registered, or exempted from registration by CPChem through an Only Representative according to K-REACH regulations. Importation of this product is permitted if the Korean Importer of Record was included on CPChem's notifications or if the Importer of Record themselves notified the substances.
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory
Taiwan TCSI	:	On the inventory, or in compliance with the inventory
Other TECI	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 3
Fire Hazard: 4
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 25580

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

Scentinel® A Gas Odorant

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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

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AIIC	Australian Inventory of Industrial Chemicals	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%	ATE	Acute toxicity estimate