

**Scentinel® P-T Gas Odorant**

Version 1.2

Revision Date 2016-05-19

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

Product Name : Scentinel® P-T Gas Odorant
Material : 1024679

EC-No.Registration number

Chemical name	CAS-No. EC-No. Index No.	Legal Entity Registration number
Isopropyl Mercaptan	75-33-2 200-861-4	Chevron Phillips Chemicals International NV Pre-Registered
n-Propyl Mercaptan	107-03-9 203-455-5	Chevron Phillips Chemicals International NV Pre-Registered

Company : Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Local : Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vincilaan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Technical Information: (832) 813-4862
Responsible Party: Product Safety Group
Email:sds@cpchem.com

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: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

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

Flammable liquids, Category 2	H225: Highly flammable liquid and vapor.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitization, Sub-category 1B	H317: May cause an allergic skin reaction.
Specific target organ systemic toxicity - single exposure, Category 3	H336: May cause drowsiness or dizziness.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.

Label elements**Labeling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal Word : Danger

Hazard Statements	H225	Highly flammable liquid and vapor.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
	H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements	Prevention:	
	P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
	P233	Keep container tightly closed.
	P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
	P273	Avoid release to the environment.
	Response:	
	P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
	P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

Hazardous ingredients which must be listed on the label:

- 107-03-9 n-Propyl Mercaptan

SECTION 3: Composition/information on ingredients

Synonyms : Propanethiol

Molecular formula : C₃H₈S**Mixtures****Hazardous ingredients**

Chemical name	CAS-No. EC-No. Index No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
Isopropyl Mercaptan	75-33-2 200-861-4	Flam. Liq. 2; H225 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	65 - 68
n-Propyl Mercaptan	107-03-9 203-455-5	Flam. Liq. 2; H225 Acute Tox. 4; H302 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	32 - 35

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

General advice : Move out of dangerous area. 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 : Consult a physician after significant exposure. 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 : 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. 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 : -34 °C (-29 °F)
estimated

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

- | | | |
|--|---|--|
| Suitable extinguishing media | : | Alcohol-resistant foam. Carbon dioxide (CO ₂). 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 an open flame or any other 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. |

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 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. |
| Advice on protection | : | Do not spray on an open flame or any other incandescent |

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

against fire and explosion

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

: 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**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

: In the case of vapor formation use a respirator with an approved filter. 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.

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: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

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

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Form : Liquid
Physical state : Liquid
Color : Clear
Odor : Repulsive

Safety data

Flash point : -34 °C (-29 °F)
estimated

Lower explosion limit : No data available

Upper explosion limit : No data available

Molecular formula : C₃H₈S

pH : Not applicable

Freezing point : No data available

Boiling point/boiling range : 52 °C (126 °F)

Vapor pressure : 8,80 PSI
at 37,8 °C (100,0 °F)

Relative density : 0,82
at 15,6 °C (60,1 °F)

Water solubility : Slightly soluble

Viscosity, dynamic : 0,369 cP
at 20 °C (68 °F)

Relative vapor density : 2,62
(Air = 1.0)

Evaporation rate : 1
estimated

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.

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

Possibility of hazardous reactions

Conditions to avoid : Heat, flames and sparks.

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

SECTION 11: Toxicological information**Scentinel® P-T Gas Odorant**

Acute oral toxicity : LD50 Oral: 2.167 mg/kg
Species: Rat
Method: Acute toxicity estimate

Scentinel® P-T Gas Odorant

Skin irritation : May irritate skin.

Scentinel® P-T Gas Odorant

Eye irritation : May irritate eyes.

Sensitization

Isopropyl Mercaptan : The product is a skin sensitizer, sub-category 1B.

n-Propyl Mercaptan : The product is a skin sensitizer, sub-category 1B.
Information given is based on data obtained from similar substances.

Aspiration toxicity

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

Scentinel® P-T Gas Odorant

Further information : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

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

Isopropyl Mercaptan : LC50: 34 mg/l
Exposure time: 96 h
semi-static test Analytical monitoring: yes
Method: OECD Test Guideline 203
Information given is based on data obtained from similar substances.

n-Propyl Mercaptan : LC50: 1,3 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)
Analytical monitoring: yes
Test substance: yes
Method: OECD Test Guideline 203
Toxic to aquatic organisms.

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

Toxicity to daphnia and other aquatic invertebrates

Isopropyl Mercaptan : EC50: 0,25 - 0,5 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 static test Test substance: yes
 Method: OECD Test Guideline 202

n-Propyl Mercaptan EC50: 0,07 mg/l
 Exposure time: 48 h
 Species: Daphnia magna (Water flea)
 Analytical monitoring: yes
 Test substance: yes
 Method: OECD Test Guideline 202
 Very toxic to aquatic organisms.

Toxicity to algae

Isopropyl Mercaptan : ErC50: 21,9 mg/l
 Exposure time: 72 h
 Species: Pseudokirchneriella subcapitata (green algae)
 static test Method: OECD Test Guideline 201

M-Factor
 propane-2-thiol : 1
 propane-1-thiol : 10

Biodegradability

Isopropyl Mercaptan : aerobic
 Result: Not readily biodegradable.
 0 %
 Testing period: 28 Days
 Test substance: yes
 Method: OECD Test Guideline 301D

n-Propyl Mercaptan : aerobic
 Result: Not readily biodegradable.
 17 %
 Testing period: 28 Days
 Method: OECD Test Guideline 301

Ecotoxicology Assessment

Acute aquatic toxicity
 Isopropyl Mercaptan : Very toxic to aquatic life.

n-Propyl Mercaptan : Very toxic to aquatic life.

Chronic aquatic toxicity
 Isopropyl Mercaptan : Very toxic to aquatic life with long lasting effects.

n-Propyl Mercaptan : Very toxic to aquatic life with long lasting effects.

Results of PBT assessment

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

Isopropyl 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., 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.

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)

UN2402, PROPANETHIOLS, 3, II

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

UN2402, PROPANETHIOLS, 3, II, (-34 °C), MARINE POLLUTANT, (N-PROPYL MERCAPTAN, ISOPROPYL MERCAPTAN)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

UN2402, PROPANETHIOLS, 3, II

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

UN2402, PROPANETHIOLS, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (N-PROPYL MERCAPTAN, ISOPROPYL MERCAPTAN)

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

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

UN2402, PROPANETHIOLS, 3, II, ENVIRONMENTALLY HAZARDOUS, (N-PROPYL MERCAPTAN, ISOPROPYL MERCAPTAN)

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

UN2402, PROPANETHIOLS, 3, II, ENVIRONMENTALLY HAZARDOUS, (N-PROPYL MERCAPTAN, ISOPROPYL MERCAPTAN)

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

SECTION 15: Regulatory information

National legislation

Major Accident Hazard : 96/82/EC Update: 2003

Legislation Highly flammable

7b

Quantity 1: 5.000 t

Quantity 2: 50.000 t

: 96/82/EC Update: 2003

Dangerous for the environment

9a

Quantity 1: 100 t

Quantity 2: 200 t

Water contaminating class (Germany) : WGK 3 highly water endangering

Notification status

Europe REACH : On the inventory, or in compliance with the inventory

United States of America TSCA : On TSCA Inventory

Canada DSL : All components of this product are on the Canadian DSL

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

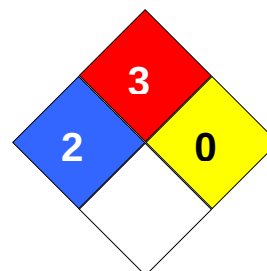
Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

SECTION 16: Other information

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

**Further information**

Legacy SDS Number : 398540

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

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	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	TWA	Time Weighted Average

Scentinel® P-T Gas Odorant

Version 1.2

Revision Date 2016-05-19

	Substances in China		
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%		

Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.