# Scentinel® F-35 Gas Odorant

Version 2.3 Revision Date 2026-11-18

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

**Product information**

| | | |
|---|---|---|
| Product Name | : | Scentinel® F-35 Gas Odorant |
| Material | : | 1086514, 1098152, 1086548, 1024699, 1024698, 1024700, 1029446, 1105016, 1105017 |
| Use | : | Odorant |
| **Company** | : | Chevron Phillips Chemical Company LP<br>Specialty Chemicals<br>9500 Lakeside Blvd.<br>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)

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

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 2
Eye irritation, Category 2B
Skin sensitization, Category 1

**Labeling**

Symbol(s) :



Signal Word : Danger

Hazard Statements : H225: Highly flammable liquid and vapor.
H317: May cause an allergic skin reaction.
H320: Causes eye irritation.

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.
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:**
P303 + P361 + P353 IF ON SKIN (or hair): 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 + 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 + 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.

## SECTION 3: Composition/information on ingredients

Synonyms : Gas Odorant
Mercaptan Mixture

Molecular formula : Mixture

| Component | CAS-No. | Weight % |
|---|---|---|
| t-Butyl Mercaptan | 75-66-1 | 63 - 67 |
| Dimethyl Sulfide | 75-18-3 | 33 - 37 |
| Carbon disulfide | 75-15-0 | 0.1 - 0.5 |

## SECTION 4: First aid measures

General advice : Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

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 : 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. If symptoms persist, call a physician. Take victim immediately to hospital.

**Notes to physician**

Risks : May be harmful if swallowed and enters airways. May cause an allergic skin reaction. Causes eye irritation.
May cause an allergic skin reaction. Causes eye irritation.

| | | |
|---|---|---|
| Treatment | : | Treat symptomatically. |

## SECTION 5: Firefighting measures

| | | |
|---|---|---|
| Flash point | : | -18°C (0°F)<br>estimated |
| Autoignition temperature | : | No data available |
| 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 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). |

For additional details, see the Exposure Scenario in the Annex portion

## 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 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 : 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

### Ingredients with workplace control parameters

**Chevron Phillips Chemical Company LP**

| Components | Basis | Value | Control parameters | Note |
|---|---|---|---|---|
| t-Butyl Mercaptan | Manufacturer | TWA | 0.5 ppm, | |

**US**

| Components | Basis | Value | Control parameters | Note |
|---|---|---|---|---|
| Dimethyl Sulfide | ACGIH | TWA | 10 ppm, | |
| Carbon disulfide | ACGIH | TWA | 1 ppm, | A4, Skin, |
| | OSHA Z-2 | TWA | 20 ppm, | |
| | OSHA Z-2 | CEIL | 30 ppm, | |
| | OSHA Z-2 | Peak | 100 ppm, | |
| | OSHA Z-1-A | TWA | 4 ppm, 12 mg/m3 | X, |
| | OSHA Z-1-A | STEL | 12 ppm, 36 mg/m3 | X, |

A4 Not classifiable as a human carcinogen
Skin Danger of cutaneous absorption
X Skin notation

### Immediately Dangerous to Life or Health Concentrations (IDLH)

| Substance name | CAS-No. | Control parameters | Update |
|---|---|---|---|
| Carbon disulfide | 75-15-0 | Immediately Dangerous to Life or Health Concentration Value<br>500 parts per million | 1995-03-01 |

**Biological exposure indices**

**US**

| Substance name | CAS-No. | Control parameters | Sampling time | Update |
|---|---|---|---|---|
| Carbon disulfide | 75-15-0 | 2-Thiothiazolidine-4-carboxylix acid (TTCA): 0.5 mg/g creatinine Nonspecific (Urine) Background () | End of shift (As soon as possible after exposure ceases) | 2025-01-01 |

**Engineering measures**

Adequate ventilation to control airborned 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:. Air-Purifying Respirator for Organic Vapors. 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. 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:. Remove and wash contaminated clothing before re-use. Skin should be washed after contact. 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.

For additional details, see the Exposure Scenario in the Annex portion

## 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 | : | -18°C (0°F)<br>estimated |
| Lower explosion limit | : | No data available |
| Upper explosion limit | : | No data available |
| Oxidizing properties | : | no |
| Autoignition temperature | : | No data available |
| Molecular formula | : | Mixture |
| Molecular weight | : | Not applicable |
| pH | : | Not applicable |
| Freezing point | : | -45.6°C (-50.1°F) |
| Pour point | | No data available |
| Boiling point/boiling range | : | 42.2-93.3°C (108.0-199.9°F) |
| Vapor pressure | : | 9.40 PSI<br>at 38°C (100°F)<br>estimated |
| Relative density | : | 0.822<br>at 15.6 °C (60.1 °F) |
| Density | : | 819.6 g/l |
| Water solubility | : | negligible |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity, kinematic | : | No data available |
| Relative vapor density | : | 2<br>(Air = 1.0) |
| Evaporation rate | : | No data available |
| 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**

**Hazardous reactions** : Hazardous reactions: Hazardous polymerization does not occur., Vapors may form explosive mixture with air.

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

**Materials to avoid** : 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® F-35 Gas Odorant**

**Acute oral toxicity** : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute toxicity estimate: 3,657 mg/kg
Method: Calculation method

**Acute inhalation toxicity**

t-Butyl Mercaptan : LC50: 98.3 mg/l
Exposure time: 4 h
Species: Rat
Sex: male and female
Test atmosphere: vapor
Method: OECD Test Guideline 403

LC50: 81.9 mg/l
Exposure time: 4 h
Species: Rat
Sex: male
Test atmosphere: vapor
Method: OECD Test Guideline 403

LC50: 60.9 mg/l
Exposure time: 4 h
Species: Mouse
Sex: male
Test atmosphere: vapor
Method: OECD Test Guideline 403

Dimethyl Sulfide LC50: 102 mg/l

Exposure time: 4 h
Species: Rat
Sex: male and female
Test atmosphere: vapor
Method: OECD Test Guideline 403

Carbon disulfide

LC50: 1250 ppm
Exposure time: 4 h

**Scentinel® F-35 Gas Odorant**
**Acute dermal toxicity** : Acute toxicity estimate: 2,525 mg/kg
Method: Calculation method

**Scentinel® F-35 Gas Odorant**
**Skin irritation** : May cause skin irritation and/or dermatitis.

**Scentinel® F-35 Gas Odorant**
**Eye irritation** : Vapors may cause irritation to the eyes, respiratory system and the skin.

**Scentinel® F-35 Gas Odorant**
**Sensitization** : Causes sensitization.

**Repeated dose toxicity**

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

Species: Rat, Male and female
Sex: Male and female
Application Route: Inhalation
Dose: 25.1, 99.6, 403.4 ppm
Exposure time: 13 wks
Number of exposures: 6 hrs/d, 5 d/wk
NOEL: 99.6 ppm
Lowest observable effect level: 403.4 ppm
Method: OECD Guideline 413
Target Organs: Liver, Kidney, Blood, Upper respiratory tract
Information given is based on data obtained from similar substances.

Dimethyl Sulfide

Species: Rat, Male and female
Sex: Male and female

Application Route: Oral diet
Dose: 0, 2.5, 25, 250 mg/kg bw/day
Exposure time: 14 wk
Number of exposures: daily
NOEL: 250 mg/kg
Method: OECD Test Guideline 408
No adverse effects expected

**Genotoxicity in vitro**

t-Butyl Mercaptan : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

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

Dimethyl Sulfide Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Mouse lymphoma assay
Metabolic activation: with and without metabolic activation
Method: OECD Guideline 476
Result: negative

**Genotoxicity in vivo**

t-Butyl Mercaptan : Test Type: Mouse micronucleus assay
Species: Mouse
Dose: 1250, 2500, 5000 mg/kg
Method: OECD Test Guideline 474
Result: negative

Dimethyl Sulfide Test Type: In vivo micronucleus test
Species: Mouse
Cell type: Bone marrow
Route of Application: Oral
Dose: 1250, 2500, 5000 mg/kg
Method: OECD Test Guideline 474
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**

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

Dimethyl Sulfide Species: Rat
Application Route: oral gavage
Dose: 100, 500, 1000 mg/kg
Exposure time: GD 6 - 19
Number of exposures: daily
Test period: 20 d
Method: OECD Guideline 414
NOAEL Teratogenicity: 1,000 mg/kg
NOAEL Maternal: 1,000 mg/kg

**Aspiration toxicity**

t-Butyl Mercaptan : May be harmful if swallowed and enters airways.
Dimethyl Sulfide May be harmful if swallowed and enters airways.

**CMR effects**

t-Butyl Mercaptan : Carcinogenicity: Not available
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show mutagenic effects
Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Dimethyl Sulfide Carcinogenicity: Not available
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., In vivo tests did not show

mutagenic effects
Reproductive toxicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Carbon disulfide — Reproductive toxicity: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

**Scentinel® F-35 Gas Odorant**
**Further information** : Solvents may degrease the skin.

## SECTION 12: Ecological information

**Toxicity to fish**

t-Butyl Mercaptan : LC50: 34 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
semi-static test Method: OECD Test Guideline 203

Dimethyl Sulfide — LC50: 213 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates**

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

Dimethyl Sulfide — EC50: 29 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
static test Method: OECD Test Guideline 202

**Toxicity to algae**

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

Dimethyl Sulfide — IC50: > 113.7 mg/l
Exposure time: 72 h
Species: Selenastrum capricornutum (algae)
Method: OECD Test Guideline 201

Biodegradability

t-Butyl Mercaptan : aerobic
Result: Not readily biodegradable.
6 %

Testing period: 63 d
Method: OECD Test Guideline 301

Dimethyl Sulfide : aerobic
Result: Readily biodegradable.
77 %
Method: OECD Test Guideline 301

Bioaccumulation

t-Butyl Mercaptan : Bioconcentration factor (BCF): 12
Method: QSAR modeled data
This material is not expected to bioaccumulate.

Dimethyl Sulfide : No bioaccumulation is to be expected (log Pow <= 4).

Mobility

t-Butyl Mercaptan : Method: Calculation, Mackay Level III Fugacity Model
The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

Dimethyl Sulfide : Method: Calculation, Mackay Level III Fugacity Model
The product will be dispersed amongst the various environmental compartments (soil/ water/ air).

Results of PBT assessment
t-Butyl Mercaptan : Non-classified PBT substance, Non-classified vPvB substance

Dimethyl Sulfide : 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.

Dimethyl Sulfide : Harmful to aquatic life.

Long-term (chronic) aquatic hazard
t-Butyl Mercaptan : Toxic to aquatic life with long lasting effects.

Dimethyl Sulfide : This material is not expected to be harmful to aquatic organisms.

## 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. |

For additional details, see the Exposure Scenario in the Annex portion

## 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., (TERTIARY BUTYL MERCAPTAN, DIMETHYL SULFIDE), 3, II

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TERTIARY BUTYL MERCAPTAN, DIMETHYL SULFIDE), 3, II, (-18 °C c.c.), MARINE POLLUTANT, (TERTIARY BUTYL MERCAPTAN)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TERTIARY BUTYL MERCAPTAN, DIMETHYL SULFIDE), 3, II

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TERTIARY BUTYL MERCAPTAN, DIMETHYL SULFIDE), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (TERTIARY BUTYL MERCAPTAN)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
33,UN3336,MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TERTIARY BUTYL

MERCAPTAN, DIMETHYL SULFIDE), 3, II, ENVIRONMENTALLY HAZARDOUS, (TERTIARY BUTYL MERCAPTAN)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN3336, MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S., (TERTIARY BUTYL MERCAPTAN, DIMETHYL SULFIDE), 3, II, ENVIRONMENTALLY HAZARDOUS, (TERTIARY BUTYL 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)
Respiratory or skin sensitization
Serious eye damage or eye irritation

**EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO – KNOW**

CERCLA Reportable Quantity : Listed substances in the product are at low enough levels to not be expected to exceed the RQ

Carbon disulfide

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

SARA 304 Reportable Quantity : Listed substances in the product are at low enough levels to not be expected to exceed the RQ

| | |
|---|---|
| Carbon disulfide 75-15-0 | 100 lbs |
| Methyl Mercaptan 74-93-1 | 100 lbs |

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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

: Dimethyl Sulfide - 75-18-3

**US State Regulations**

Pennsylvania Right To Know

: t-Butyl Mercaptan - 75-66-1
Dimethyl Sulfide - 75-18-3
Carbon disulfide - 75-15-0
Methyl Mercaptan - 74-93-1
Dimethyl Disulfide - 624-92-0
Toluene - 108-88-3
Benzene - 71-43-2

California Prop. 65 Components : WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/food.

| | |
|---|---|
| Benzene | 71-43-2 |

WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

| | |
|---|---|
| Carbon disulfide | 75-15-0 |
| Toluene | 108-88-3 |
| Benzene | 71-43-2 |

**Notification status**

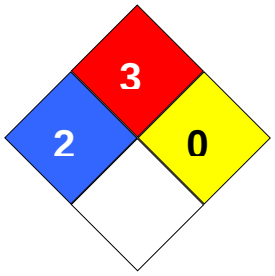
| | | |
|---|---|---|
| Europe EU REACH | : | This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH). |
| Switzerland CH INV | : | On the inventory, or in compliance with the inventory |
| United States of America (USA) US TSCA | : | All substances listed as active on the TSCA inventory |
| Canada CA. DSL | : | All components of this product are on the Canadian DSL |
| Australia AU AIIC | : | On the inventory, or in compliance with the inventory |
| New Zealand NZ NZIoC | : | Not in compliance with the inventory |
| Japan JP ENCS | : | On the inventory, or in compliance with the inventory |
| Japan JP ISHL | : | On the inventory, or in compliance with the inventory |
| Korea KR 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.

| | | |
|---|---|---|
| Philippines PH PICCS | : | On the inventory, or in compliance with the inventory |
| China CN IECSC | : | On the inventory, or in compliance with the inventory |
| Taiwan TW TCSI | : | On the inventory, or in compliance with the inventory |

## SECTION 16: Other information

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




**Revision Date** : 2026-11-18
**Date of last issue** : 2021-06-21

Print Date : 2026-11-19

**Further information**

Legacy SDS Number : 34290

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% |
| 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 |