# Nose Guard® Masking Agent

Version 2.2 Revision Date 2024-12-03

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

**Product information**

| | | |
|---|---|---|
| Product Name | : | Nose Guard® Masking Agent |
| Material | : | 1021684, 1021679, 1021683, 1031148, 1021682, 1029152, 1021681, 1021680 |
| Use | : | Chemical intermediate |
| **Company** | : | Chevron Phillips Chemical Company LP<br>Specialty Chemicals<br>10001 Six Pines Drive<br>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
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

| | | |
|---|---|---|
| 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**

: Flammable liquids, Category 2
Skin irritation, Category 2
Eye irritation, Category 2A
Skin sensitization, Category 1
Specific target organ toxicity - single exposure, Category 3, Central nervous system
Aspiration hazard, Category 1

**Labeling**

Symbol(s) :

Signal Word : Danger

Hazard Statements : H225: Highly flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
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/ eye protection/ face protection.
**Response:**
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh

air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.
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 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 : Not Established

Molecular formula : Mixture

| Component | CAS-No. | Weight % |
|---|---|---|
| D-Limonene | 5989-27-5 | 60 |
| Isopropanol | 67-63-0 | 40 |
| Vanillin | 121-33-5 | 0 - 1 |

## 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 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. 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 | : | 14.4°C (57.9°F)<br>Method: Tag closed cup |
| 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 | : | Hydrocarbons. Carbon 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).

## 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 : Chemical intermediate

## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

**US**

| Components | Basis | Value | Control parameters | Note |
|---|---|---|---|---|
| D-Limonene | US WEEL | TWA | 30 ppm, | |
| Isopropanol | ACGIH | TWA | 200 ppm, | A4, |
| | ACGIH | STEL | 400 ppm, | A4, |
| | OSHA Z-1 | TWA | 400 ppm, 980 mg/m3 | |
| | OSHA Z-1-A | TWA | 400 ppm, 980 mg/m3 | |
| | OSHA Z-1-A | STEL | 500 ppm, 1,225 mg/m3 | |
| Vanillin | US WEEL | TWA | 10 mg/m3 | |

A4 Not classifiable as a human carcinogen

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

| Substance name | CAS-No. | Control parameters | Update |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Isopropanol | 67-63-0 | Immediately Dangerous to Life or Health Concentration Value<br>2000 parts per million | 1995-03-01 |

**Biological exposure indices**

**US**

| Substance name | CAS-No. | Control parameters | Sampling time | Update |
|---|---|---|---|---|
| Isopropanol | 67-63-0 | Acetone: 40 mg/l Nonspecific (Urine) Background () | End of shift at end of workweek | 2007-01-01 |

**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.

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

**Appearance**

| | | |
|---|---|---|
| Physical state | : | liquid |
| Color | : | Colorless |
| Odor | : | Sweet |

**Safety data**

| | | |
|---|---|---|
| Flash point | : | 14.4°C (57.9°F)<br>Method: Tag closed cup |
| Lower explosion limit | : | 2 %(V) |
| Upper explosion limit | : | 12 %(V) |
| Autoignition temperature | : | No data available |
| Molecular formula | : | Mixture |
| Molecular weight | : | Not applicable |
| pH | : | Not applicable |
| Pour point | : | No data available |
| Boiling point/boiling range | : | 82°C (180°F) |
| Vapor pressure | : | 1.70 PSI<br>at 38°C (100°F) |
| Relative density | : | 0.8236<br>at 16 °C (61 °F) |
| Water solubility | : | partly soluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity, kinematic | : | No data available |
| Relative vapor density | : | 3.6<br>(Air = 1.0) |
| Evaporation rate | : | 1 |
| Percent volatile | : | > 99 % |

## 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.

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** : Hydrocarbons
Carbon oxides

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

## SECTION 11: Toxicological information

**Nose Guard® Masking Agent**
**Acute oral toxicity** : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

**Nose Guard® Masking Agent**
**Acute inhalation toxicity** : No data available

**Nose Guard® Masking Agent**
**Acute dermal toxicity** : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

**Nose Guard® Masking Agent**
**Skin irritation** : May cause skin irritation and/or dermatitis.

**Nose Guard® Masking Agent**
**Eye irritation** : May cause irreversible eye damage.

**Nose Guard® Masking Agent**
**Sensitization** : Causes sensitization.
Information refers to the main ingredient.
Causes sensitization.

**Repeated dose toxicity**

Isopropanol : Species: Rat, male and female
Sex: male and female
Application Route: Inhalation
Dose: 100, 500, 1500, 5000 ppm
Exposure time: 13 wk
Number of exposures: 6 h/d, 5 d/wk
Method: OECD Test Guideline 413
Target Organs: Liver, Central nervous system, Blood

Species: Mouse, male and female
Sex: male and female
Application Route: Inhalation
Dose: 100, 500, 1500, 5000 ppm
Exposure time: 13 wk
Number of exposures: 6 h/d, 5 d/wk
Method: OECD Test Guideline 413
Target Organs: Blood

Vanillin

Species: Rat, male and female
Sex: male and female
Application Route: Oral diet
Dose: 20,000, 50,000 ppm
Exposure time: 1 yr
NOEL: 50000 ppm

**Genotoxicity in vitro**

Isopropanol : Test Type: Ames test
Concentration: 100, 333, 1000, 3333, 10000 ug
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Sister Chromatid Exchange Assay
Concentration: 0.5, 1, 2, 3, 4, 5 mg/mL
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Vanillin

Test Type: Ames test
Result: negative

Test Type: E. Coli bacterial reverse mutation assay
Result: negative

Test Type: Bacterial DNA repair test
Result: negative

Test Type: Mammalian cell gene mutation assay
Result: negative

Test Type: Sister Chromatid Exchange Assay
Result: positive

Test Type: Cytogenetic assay
Result: positive

**Genotoxicity in vivo**

Isopropanol : Test Type: Mouse micronucleus assay
Species: Mouse
Cell type: Bone marrow
Route of Application: Intraperitoneal injection
Exposure time: 24, 48, 72 hr
Dose: 350, 1173, 2500, 3500 mg/kg bw
Method: OECD Test Guideline 474
Result: negative

| | |
|---|---|
| Vanillin | Test Type: Micronucleus test<br>Method: Mutagenicity (micronucleus test)<br>Result: negative |

**Carcinogenicity**

| | | |
|---|---|---|
| Vanillin | : | Species: Rat<br>Dose: 0, 250, 500, 1000 mg/kg<br>Exposure time: 2 yrs<br>Number of exposures: daily<br>Remarks: No evidence of carcinogenicity |

**Reproductive toxicity**

| | | |
|---|---|---|
| Isopropanol | : | Species: Rat<br>Application Route: oral gavage<br>Dose: 0. 100, 500, 1000 mg/kg<br>Number of exposures: daily<br>Test period: 10 wks premating<br>NOAEL Parent: 500 mg/kg<br>NOAEL F1: 500 mg/kg<br>NOAEL F2: 500 mg/kg |
| Vanillin | | This information is not available. |

**Developmental Toxicity**

| | | |
|---|---|---|
| Isopropanol | : | Species: Rat<br>Application Route: Inhalation<br>Dose: 0. 400, 800, 1200 mg/kg<br>Number of exposures: daily<br>Test period: GD 6-15<br>NOAEL Teratogenicity: 400 mg/kg<br>NOAEL Maternal: 400 mg/kg |
| Vanillin | | This information is not available. |

**Nose Guard® Masking Agent**
**Aspiration toxicity** : May be fatal if swallowed and enters airways.

**Nose Guard® Masking Agent**
**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

**Ecotoxicity effects**
**Toxicity to fish**

| | | |
|---|---|---|
| D-Limonene | : | LC50: 688 µg/l<br>Exposure time: 96 h<br>Species: Pimephales promelas (fathead minnow)<br>flow-through test Method: OECD Test Guideline 203 |

| | |
|---|---|
| Isopropanol | LC50: 9,640 mg/l<br>Exposure time: 96 h<br>Species: Pimephales promelas (fathead minnow) |
| Vanillin | LC50: 123 mg/l<br>Exposure time: 96 h<br>Species: Pimephales promelas (fathead minnow)<br>flow-through test Method: OECD Test Guideline 203 |

**Toxicity to daphnia and other aquatic invertebrates**

| | | |
|---|---|---|
| D-Limonene | : | EC50: 307 µg/l<br>Exposure time: 48 h<br>Species: Daphnia magna (Water flea)<br>semi-static test Method: OECD Test Guideline 202 |
| Isopropanol | | > 10,000 mg/l<br>Exposure time: 24 h<br>Species: Daphnia magna (Water flea) |
| Vanillin | | EC50: 36.79 mg/l<br>Exposure time: 48 h<br>Species: Daphnia magna (Water flea)<br>static test Method: OECD Test Guideline 202 |

**Toxicity to algae**

| | | |
|---|---|---|
| D-Limonene | : | ErC50: 320 µg/l<br>Exposure time: 72 h<br>Species: Pseudokirchneriella subcapitata (green algae)<br>static test Method: OECD Test Guideline 201<br><br>EC10: 140 µg/l<br>Exposure time: 48 h<br>Species: Pseudokirchneriella subcapitata (green algae)<br>static test Method: OECD Test Guideline 201 |
| Isopropanol | | EC50: > 1,000 mg/l<br>Exposure time: 72 h<br>Species: Desmodesmus subspicatus (green algae) |
| Vanillin | | ErC50: 120 mg/l<br>Exposure time: 72 h<br>Species: Pseudokirchneriella subcapitata (green algae)<br>Growth inhibition Method: OECD Test Guideline 201 |

**M-Factor**

| | | | |
|---|---|---|---|
| (R)-p-mentha-1,8-diene | : | M-Factor (Acute Aquat. Tox.) | 1 |
| | | M-Factor (Chron. Aquat. Tox.) | 1 |

**Toxicity to fish (Chronic toxicity)**

| | | |
|---|---|---|
| D-Limonene | : | EC10: 0.32 mg/l<br>Exposure time: 8 d<br>Species: Pimephales promelas (fathead minnow) |

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

| | | |
|---|---|---|
| D-Limonene | : | EC10: 153 µg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>semi-static test<br>Method: OECD Test Guideline 211 |

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

**Further information on ecology**

Biochemical Oxygen Demand (BOD)

| | | |
|---|---|---|
| Vanillin | : | 1.26 mg/g |

Chemical Oxygen Demand (COD)

| | | |
|---|---|---|
| Vanillin | : | 1.76 mg/g |

Elimination information (persistence and degradability)

| | | |
|---|---|---|
| Bioaccumulation | : | No data available |
| Mobility | : | No data available |

Results of PBT assessment

| | | |
|---|---|---|
| Vanillin | : | 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., Harmful to aquatic life with long lasting effects. |

**Ecotoxicology Assessment**

| | | |
|---|---|---|
| Short-term (acute) aquatic hazard | : | Very toxic to aquatic life. |
| Long-term (chronic) aquatic hazard | : | Harmful to aquatic life with long lasting effects. |

## SECTION 13: Disposal considerations

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

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

| | | |
|---|---|---|
| Product | : | The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. |
| Contaminated packaging | : | Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum. |

## SECTION 14: Transport information

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

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

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
UN1993, FLAMMABLE LIQUIDS, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II, (14.4 °C c.c.), MARINE POLLUTANT, (D-LIMONENE)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (D-LIMONENE)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
33,UN1993,FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II, ENVIRONMENTALLY HAZARDOUS, (D-LIMONENE)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN1993, FLAMMABLE LIQUID, N.O.S., (ISOPROPANOL, D-LIMONENE), 3, II, ENVIRONMENTALLY HAZARDOUS, (D-LIMONENE)

**Maritime transport in bulk according to IMO instruments**

## SECTION 15: Regulatory information

**National legislation**

| | | |
|---|---|---|
| **SARA 311/312 Hazards** | : | Flammable (gases, aerosols, liquids, or solids)<br>Respiratory or skin sensitization<br>Skin corrosion or irritation<br>Serious eye damage or eye irritation<br>Specific target organ toxicity (single or repeated exposure) |
| 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 | : | The following components are subject to reporting levels established by SARA Title III, Section 313: |
| | : | Isopropanol - 67-63-0 |

**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):

: Isopropanol - 67-63-0

**US State Regulations**

Pennsylvania Right To Know : D-Limonene - 5989-27-5
Isopropanol - 67-63-0

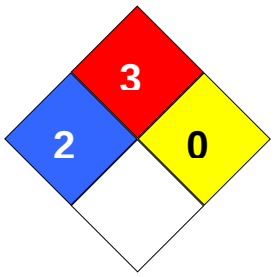
California Prop. 65 Components : This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**Notification status**

| | | |
|---|---|---|
| Europe REACH | : | Not in compliance with the inventory |
| Switzerland CH INV | : | Not 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 AIIC | : | On the inventory, or in compliance with the inventory |
| New Zealand NZIoC | : | Not in compliance with the inventory |
| Japan ENCS | : | On the inventory, or in compliance with the inventory |
| Korea KECI | : | Not in compliance with the inventory |
| Philippines PICCS | : | On the inventory, or in compliance with the inventory |
| Taiwan TCSI | : | 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 : 35230

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 |