Section 1. Identification

1.1 Product identifier
Product name: OQ - PV Headspace Sample, Part Number 5182-9733
Part no.: 5182-9733
Validation date: 10/28/2021

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses: Reagents and Standards for Analytical Chemistry Laboratory Use
1 ml

1.3 Details of the supplier of the safety data sheet
Supplier/Manufacturer: Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number
In case of emergency: CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:
H225 - FLAMMABLE LIQUIDS - Category 2
H319 - EYE IRRITATION - Category 2A
H351 - CARCINOGENICITY - Category 2
H360 - TOXIC TO REPRODUCTION - Category 1B
H412 - AQUATIC HAZARD (LONG-TERM) - Category 3

2.2 GHS label elements
Hazard pictograms:

Signal word: Danger
Hazard statements:
H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements
Prevention:
P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 - Use explosion-proof electrical, ventilating or lighting equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
Section 2. Hazards identification

Response:
P233 - Keep container tightly closed.  
P273 - Avoid release to the environment.  

Response:
P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 - If eye irritation persists: Get medical advice or attention.  

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

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  

Supplemental label elements:
Avoid contact with skin and clothing. Wash thoroughly after handling.  

2.3 Other hazards
Hazards not otherwise classified:
Prolonged or repeated contact may dry skin and cause irritation.  

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ingredient name</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>Ethanol</td>
<td>≥90</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>≤0.3</td>
</tr>
<tr>
<td>Nitrobenzene</td>
<td>≤0.3</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.  

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.  

Occupational exposure limits, if available, are listed in Section 8.  

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact:
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.  

Inhalation:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.  

Skin contact:
Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.  

Ingestion:
Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.  

4.2 Most important symptoms/effects, acute and delayed

Date of issue: 10/28/2021
Section 4. First aid measures

Potential acute health effects

**Eye contact**: Causes serious eye irritation.

**Inhalation**: No known significant effects or critical hazards.

**Skin contact**: Defatting to the skin. May cause skin dryness and irritation.

**Ingestion**: No known significant effects or critical hazards.

Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:
- Pain or irritation
- Watering
- Redness

**Inhalation**: Adverse symptoms may include the following:
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Skin contact**: Adverse symptoms may include the following:
- Irritation
- Dryness
- Cracking
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

**Ingestion**: Adverse symptoms may include the following:
- Reduced fetal weight
- Increase in fetal deaths
- Skeletal malformations

4.3 Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

**Suitable extinguishing media**: Use dry chemical, CO₂, water spray (fog) or foam.

**Unsuitable extinguishing media**: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

**Specific hazards arising from the chemical**: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Date of issue: 10/28/2021
**Section 5. Fire-fighting measures**

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide

**5.3 Advice for firefighters**

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Section 6. Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up**: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Section 7. Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

Industrial applications, Professional applications.

Industrial sector specific solutions

Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Ethanol         | ACGIH TLV (United States, 1/2021).  
 |                  | STEL: 1000 ppm 15 minutes.  
 |                  | TWA: 1000 ppm 8 hours.  
 |                  | TWA: 1900 mg/m³ 8 hours.  
 |                  | NIOSH REL (United States, 10/2020).  
 |                  | TWA: 1000 ppm 10 hours.  
 |                  | TWA: 1900 mg/m³ 10 hours.  
 |                  | OSHA PEL (United States, 5/2018).  
 |                  | TWA: 1000 ppm 8 hours.  
 |                  | TWA: 1900 mg/m³ 8 hours.  
| 1,2-Dichlorobenzene | ACGIH TLV (United States, 1/2021).  
 |                  | TWA: 25 ppm 8 hours.  
 |                  | TWA: 150 mg/m³ 8 hours.  
 |                  | STEL: 50 ppm 15 minutes.  
 |                  | STEL: 301 mg/m³ 15 minutes.  
 |                  | CEIL: 50 ppm  
 |                  | CEIL: 300 mg/m³  
 |                  | NIOSH REL (United States, 10/2020).  
 |                  | CEIL: 50 ppm  
 |                  | CEIL: 300 mg/m³  
 |                  | OSHA PEL (United States, 5/2018).  
 |                  | CEIL: 50 ppm  
 |                  | CEIL: 300 mg/m³  
| nitrobenzene     | ACGIH TLV (United States, 1/2021).  
 |                  | Absorbed through skin.  
 |                  | TWA: 1 ppm 8 hours.  
 |                  | TWA: 5 mg/m³ 8 hours.  
 |                  | Absorbed through skin.  
 |                  | TWA: 1 ppm 8 hours.  
 |                  | TWA: 5 mg/m³ 8 hours.  
 |                  | NIOSH REL (United States, 10/2020).  
 |                  | Absorbed through skin.  
 |                  | TWA: 1 ppm 10 hours.  
 |                  | TWA: 5 mg/m³ 10 hours.  

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## Section 8. Exposure controls/personal protection

**OSHA PEL (United States, 5/2018).** Absorbed through skin.
- TWA: 1 ppm 8 hours.
- TWA: 5 mg/m³ 8 hours.

### 8.2 Exposure controls

**Appropriate engineering controls**: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

#### Skin protection

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

- **Physical state**: Liquid. [Clear.]
- **Color**: Colorless.
- **Odor**: Ethereal/Vinous.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: -117°C (-178.6°F)
- **Boiling point, initial boiling point, and boiling range**: 78.3°C (172.9°F)
- **Flash point**: Open cup: 12.7°C (54.9°F)
- **Evaporation rate**: >4 (butyl acetate = 1)
- **Flammability**: Not applicable.
- **Lower and upper explosion limit/flammability limit**: Lower: 3.3%  
Upper: 19%
- **Vapor pressure**: 5.7 kPa (43 mm Hg)
- **Relative vapor density**: 1.7 [Air = 1]
- **Relative density**: Not available.
- **Solubility**: Soluble in the following materials: cold water and hot water.
- **Miscible with water**: Yes.
- **Partition coefficient: n-octanol/water**: Not applicable.
- **Auto-ignition temperature**: 422°C (791.6°F)
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
- **Median particle size**: Not applicable.

Section 10. Stability and reactivity

**10.1 Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability**: The product is stable.

**10.3 Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid**: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

**10.5 Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials  
Reactive or incompatible with the following materials: acids and alkalis.

**10.6 Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Date of issue: 10/28/2021
## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>124700 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>7 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>8150 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;10 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>556 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>760 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>2100 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>349 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours</td>
<td>500 mg</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.066666667 minutes</td>
<td>100 mg</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 µL</td>
<td>0.5 minutes</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 mg</td>
<td>24 hours 500 mg</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**

**Skin**: Repeated exposure may cause skin dryness or cracking.

#### Sensitization

Not available.

#### Mutagenicity

**Conclusion/Summary**: Not available.

#### Carcinogenicity

**Conclusion/Summary**: Not available.

#### Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
</tbody>
</table>

Reasonably anticipated to be a human carcinogen.

#### Reproductive toxicity

**Conclusion/Summary**: Not available.

#### Teratogenicity

**Conclusion/Summary**: Not available.

#### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**

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Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrobenzene</td>
<td>Category 1</td>
<td>Inhalation</td>
<td>Blood system</td>
</tr>
</tbody>
</table>

Aspiration hazard
Not available.

Information on the likely routes of exposure
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact
- Causes serious eye irritation.

Inhalation
- No known significant effects or critical hazards.

Skin contact
- Defatting to the skin. May cause skin dryness and irritation.

Ingestion
- No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact
- Adverse symptoms may include the following:
  - Pain or irritation
  - Watering
  - Redness

Inhalation
- Adverse symptoms may include the following:
  - Reduced fetal weight
  - Increase in fetal deaths
  - Skeletal malformations

Skin contact
- Adverse symptoms may include the following:
  - Irritation
  - Dryness
  - Cracking
  - Reduced fetal weight
  - Increase in fetal deaths
  - Skeletal malformations

Ingestion
- Adverse symptoms may include the following:
  - Reduced fetal weight
  - Increase in fetal deaths
  - Skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects
- Not available.

Potential delayed effects
- Not available.

Long term exposure

Potential immediate effects
- Not available.

Potential delayed effects
- Not available.

Potential chronic health effects

General
- Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity
- Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity
- No known significant effects or critical hazards.

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Section 11. Toxicological information

Reproductive toxicity: May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>124.7</td>
<td>N/A</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>7000</td>
<td>500</td>
<td>760</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>500</td>
<td>349</td>
<td>2.8</td>
<td>11</td>
<td>8.15</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: liver abnormalities Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>Acute EC50 3306 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1074 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5680 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 11000000 µg/l Marine water</td>
<td>Fish - Alburnus alburnus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 4.995 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 100 µl/L Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>Acute EC50 12.8 mg/l Fresh water</td>
<td>Algae - Phaeodactylum tricornutum</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.74 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4.52 ppm Marine water</td>
<td>Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.4 mg/l Fresh water</td>
<td>Fish - Gibelion catla</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 630 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 9.95 ppm Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 9.65 ppm Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 5.86 ppm Marine water</td>
<td>Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7.2 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 43 mg/l Fresh water</td>
<td>Fish - Lepomis macrochirus - Young of the year</td>
<td>96 hours</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>Chronic NOEC 9200 µg/l Fresh water</td>
<td>Algae - Chlorella pyrenoidosa</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 2600 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitrobenzene</td>
<td>OECD 301F Ready Biodegradability - Manometric Respirometry Test</td>
<td>50 to 60 % - Readily - 28 days</td>
<td>100 mg/l</td>
<td>-</td>
</tr>
</tbody>
</table>

Date of issue: 10/28/2021
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Nitrobenzene</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Log(P_{ow})</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>-0.35</td>
<td>0.5</td>
<td>low</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>3.38</td>
<td>150 to 230</td>
<td>low</td>
</tr>
<tr>
<td>Nitrobenzene</td>
<td>1.86</td>
<td>3.1 to 4.8</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (\(K_{OC}\)) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / : Not regulated.

IATA

Additional information

Remarks: De minimis quantities
Section 14. Transport information

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations:
- TSCA 8(a) PAIR: 1,2-Dichlorobenzene
  - TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- Clean Water Act (CWA) 307: 1,2-Dichlorobenzene; nitrobenzene
- Clean Water Act (CWA) 311: 1,2-Dichlorobenzene; nitrobenzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs):
- Listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304

Composition/information on ingredients:

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ (lbs)</th>
<th>SARA 304 RQ (lbs)</th>
<th>SARA 304 RQ (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitrobenzene</td>
<td>≤0.3</td>
<td>Yes.</td>
<td>10000</td>
<td>1000</td>
<td>999.5</td>
</tr>
</tbody>
</table>

SARA 304 RQ: 394477.3 lbs / 179092.7 kg

SARA 311/312

Classification:
- FLAMMABLE LIQUIDS - Category 2
- EYE IRRITATION - Category 2A
- CARCINOGENICITY - Category 2A
- TOXIC TO REPRODUCTION - Category 1B
- HNOC - Defatting irritant

Composition/information on ingredients:

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| Ethanol       | ≥90  | FLAMMABLE LIQUIDS - Category 2
|               |      | EYE IRRITATION - Category 2A
|               |      | HNOC - Defatting irritant
| nitrobenzene  | ≤0.3 | FLAMMABLE LIQUIDS - Category 4
|               |      | ACUTE TOXICITY (oral) - Category 4
|               |      | ACUTE TOXICITY (dermal) - Category 3
|               |      | ACUTE TOXICITY (inhalation) - Category 3
|               |      | EYE IRRITATION - Category 2B
|               |      | CARCINOGENICITY - Category 2
|               |      | TOXIC TO REPRODUCTION - Category 1B
|               |      | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

SARA 313

Date of issue: 10/28/2021
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Form R - Reporting requirements</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier notification</td>
<td>nitrobenzene</td>
<td>98-95-3</td>
<td>≤0.3</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

- **Massachusetts**: The following components are listed: ETHYL ALCOHOL; ETHANOL; DENATURED ALCOHOL
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: ETHYL ALCOHOL; METHYLCARBINOL; ETHANOL; ALCOHOL; NITROBENZENE; OIL of MIRBANE; NITROBENZOL; BENZENE, NITRO-
- **Pennsylvania**: The following components are listed: ETHANOL; DENATURED ALCOHOL

**California Prop. 65**

⚠️ WARNING: This product can expose you to Nitrobenzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrobenzene</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**International regulations**

- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
  Not listed.

- **Montreal Protocol**
  Not listed.

- **Stockholm Convention on Persistent Organic Pollutants**
  Not listed.

- **Rotterdam Convention on Prior Informed Consent (PIC)**
  Not listed.

- **UNECE Aarhus Protocol on POPs and Heavy Metals**
  Not listed.

**Inventory list**

- **Australia**: All components are listed or exempted.
- **Canada**: At least one component is not listed in DSL but all such components are listed in NDSL.
- **China**: Not determined.
- **Europe**: All components are listed or exempted.
- **Japan**: Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
- **New Zealand**: All components are listed or exempted.
- **Philippines**: All components are listed or exempted.
- **Republic of Korea**: All components are listed or exempted.
- **Taiwan**: All components are listed or exempted.
- **Thailand**: Not determined.

**Date of issue**: 10/28/2021
Section 15. Regulatory information

Turkey : Not determined.
United States : All components are active or exempted.
Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUIDS - Category 2</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION - Category 1B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

Date of issue : 10/28/2021
Date of previous issue : 07/03/2020
Version : 9

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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