SAFETY DATA SHEET
OQ - PV Headspace Sample, Part Number 5182-9733

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

1.1 Product identifier
Product name: OQ - PV Headspace Sample, Part Number 5182-9733
Part no.: 5182-9733

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
Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000
e-mail address of person responsible for this SDS: pdl-msds_author@agilent.com

1.4 Emergency telephone number
Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Product definition: Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
H225 FLAMMABLE LIQUIDS
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements
Hazard pictograms: 

Signal word: Danger
Hazard statements: H225 - Highly flammable liquid and vapour.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements
Prevention: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.

Response: Not applicable.
SECTION 2: Hazards identification

Storage: Not applicable.
Disposal: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not applicable.
- Special packaging requirements
  - Tactile warning of danger: Not applicable.

2.3 Other hazards

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures: Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>EC: 202-425-9 CAS: 95-50-1 Index: 602-034-00-7</td>
<td>≤0.3</td>
<td>Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Nitrobenzene</td>
<td>EC: 202-716-0 CAS: 98-95-3 Index: 609-003-00-7</td>
<td>&lt;0.3</td>
<td>Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Carc. 2, H351 Rep. 1B, H360F STOT RE 1, H372 (blood) Aquatic Chronic 3, H412</td>
<td>[1][2]</td>
</tr>
</tbody>
</table>

See Section 16 for the full text of the H statements declared above.

Date of issue/Date of revision: 03/07/2020 Date of previous issue: 21/05/2018 Version: 4

Type
SECTION 3: Composition/information on ingredients

1. Substance classified with a health or environmental hazard
2. Substance with a workplace exposure limit
3. Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
4. Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
5. Substance of equivalent concern
6. Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of 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 if irritation occurs.

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 adverse health effects persist or are severe. 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: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 if adverse health effects persist or are severe. 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.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

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

Specific treatments: No specific treatment.
SECTION 5: Firefighting 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

Hazards from the substance or mixture: Highly flammable liquid and vapour. 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 vapour/gas is heavier than air and will spread along the ground. Vapours 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.

Hazardous combustion products: Decomposition products may include the following materials: carbon dioxide, carbon monoxide.

5.3 Advice for firefighters

Special precautions 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 firefighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised 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 spilt 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 material 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.

6.4 Reference to other sections: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
SECTION 7: Handling and storage

7.1 Precautions for safe handling

**Protective measures**
- Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.

7.2 Conditions for safe storage, including any incompatibilities

**Storage**
- 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. Eliminate all ignition sources. Separate from oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Danger criteria**

<table>
<thead>
<tr>
<th>Category</th>
<th>Notification and MAPP threshold</th>
<th>Safety report threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5c</td>
<td>5000 tonne</td>
<td>50000 tonne</td>
</tr>
</tbody>
</table>

7.3 Specific end use(s)

**Recommendations**
- Industrial applications, Professional applications.

**Industrial sector specific solutions**
- Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
</table>
| Ethanol                 | EH40/2005 WELs (United Kingdom (UK), 8/2018).  
TWA: 1000 ppm 8 hours.  
TWA: 1920 mg/m³ 8 hours. |
| 1,2-Dichlorobenzene     | EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.  
STEL: 306 mg/m³ 15 minutes.  
STEL: 50 ppm 15 minutes.  
TWA: 25 ppm 8 hours.  
TWA: 153 mg/m³ 8 hours. |
| nitrobenzene            | EH40/2005 WELs (United Kingdom (UK), 8/2018). Absorbed through skin.  
TWA: 1 mg/m³ 8 hours.  
TWA: 0.2 ppm 8 hours. |
SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Dichlorobenzene</td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>3 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>10 mg/m³</td>
<td>Workers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>10 mg/m³</td>
<td>Workers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>15 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>20 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>100 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td>Nitrobenzene</td>
<td>DNEL</td>
<td>Long term Oral</td>
<td>0.014 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>0.021 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>0.07 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
</tbody>
</table>

PNECs
No PNECs available

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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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: safety glasses with side-shields.
SECTION 8: Exposure controls/personal 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. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
- Physical state: Liquid. [Clear.]
- Colour: Colourless.
- Odour: Ethereal./Vinous.
- Odour threshold: Not available.
- pH: Not available.

Melting point/freezing point: -117°C

Initial boiling point and boiling range: 78.3°C

Flash point: Open cup: 12.7°C

Evaporation rate: >4 (butyl acetate = 1)

Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits
- Lower: 3.3%
- Upper: 19%

Vapour pressure: 5.7 kPa [room temperature]

Vapour density: 1.7 [Air = 1]

Relative density: Not available.

Solubility(ies): Soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water: Not available.

Auto-ignition temperature: 422°C

Decomposition temperature: Not available.

Viscosity: Not available.

Explosive properties: Not available.

Oxidising properties: Not available.
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 pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.

10.5 Incompatible materials
Reactive or incompatible with the following materials: oxidising 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.

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>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>1,2-Dichlorobenzene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;10 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>556 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>760 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>2100 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>349 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

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 (vapours) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OQ - PV Headspace Sample, Part Number 5182-9733</td>
<td>39447.7</td>
<td>299802.8</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>500</td>
<td>760</td>
<td>N/A</td>
<td>N/A</td>
<td>1104.5</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>100</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>8.15</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>1,2-Dichlorobenzene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 minutes</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 mg</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichlorobenzene</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td>nitrobenzene</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Skin Sensitiser

Conclusion/Summary
Not available.
SECTION 11: Toxicological information

Mutagenicity
Conclusion/Summary: Not available.

Carcinogenicity
Conclusion/Summary: Not available.

Reproductive toxicity
Conclusion/Summary: Not available.

Teratogenicity
Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient 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)

<table>
<thead>
<tr>
<th>Product/ingredient 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>-</td>
<td>blood</td>
</tr>
</tbody>
</table>

Aspiration hazard
Not available.

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

Potential acute health effects

Inhalation: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Eye contact: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No specific data.
Ingestion: No specific data.
Skin contact: No specific data.
Eye contact: No specific data.

Delayed and immediate effects as well as 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: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
SECTION 11: Toxicological information

Fertility effects: No known significant effects or critical hazards.

Other information: Adverse symptoms may include the following: liver abnormalities.

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>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 2200 μg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 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 - Gibeolion 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></td>
<td>Chronic NOEC 3200 μg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 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>301F Ready Biodegradability - Manometric Respirometry Test</td>
<td>&gt;90 % - Readily - 20 days</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<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<sub>OC</sub>): Not available.

Mobility: Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects: No known significant effects or critical hazards.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Product**

Methods of disposal: The generation of waste should be avoided or minimised 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.

**Hazardous waste**

Methods of disposal: The classification of the product may meet the criteria for a hazardous waste.

**Packaging**

Special precautions: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>UN1170</td>
<td>UN1170</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>ETHANOL SOLUTION</td>
<td>ETHANOL SOLUTION</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

**Additional information**

**Remarks:** De minimis quantities

**ADR/RID**

Hazard identification number: 33
Limited quantity: 1 L
Special provisions: 144, 601
Tunnel code (D/E)

**IMDG**

Emergency schedules: F-E, S-D
Special provisions: 144

**IATA**

Special provisions: A3, A58, A180

**14.6 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.
SECTION 14: Transport information

14.7 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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV
None of the components are listed.

Substances of very high concern

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Intrinsic property</th>
<th>Status</th>
<th>Reference number</th>
<th>Date of revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrobenzene</td>
<td>Toxic to reproduction</td>
<td>Candidate</td>
<td>ED/79/2015</td>
<td>12/17/2015</td>
</tr>
</tbody>
</table>

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>EC number</th>
<th>CAS number</th>
<th>Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrobenzene</td>
<td>202-716-0</td>
<td>98-95-3</td>
<td>30</td>
</tr>
</tbody>
</table>

Label: Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)
Not listed.

Prior Informed Consent (PIC) (649/2012/EU)
Not listed.

Seveso Directive
This product is controlled under the Seveso Directive.

Danger criteria

Category
P5c

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.
OQ - PV Headspace Sample, Part Number 5182-9733

SECTION 15: Regulatory information

15.2 Chemical safety assessment

- **Canada**: All components are listed or exempted.
- **China**: Not determined.
- **Europe**: All components are listed or exempted.
- **Japan**: Japan inventory (ENCS): 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**: Not determined.
- **Thailand**: Not determined.
- **Turkey**: Not determined.
- **United States**: All components are active or exempted.
- **Viet Nam**: All components are listed or exempted.

This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

**Full text of abbreviated H statements**

- **H225**: High flammable liquid and vapour.
- **H301**: Toxic if swallowed.
- **H302**: Harmful if swallowed.
- **H311**: Toxic in contact with skin.
- **H315**: Causes skin irritation.
- **H319**: Causes serious eye irritation.
- **H331**: Toxic if inhaled.
- **H335**: May cause respiratory irritation.
- **H351**: Suspected of causing cancer.
- **H360F**: May damage fertility.
- **H372**: Causes damage to organs through prolonged or repeated exposure.
- **H400**: Very toxic to aquatic life.
- **H410**: Very toxic to aquatic life with long lasting effects.
- **H412**: Harmful to aquatic life with long lasting effects.

**Full text of classifications [CLP/GHS]**

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**Date of issue/Date of revision**: 03/07/2020  
**Date of previous issue**: 21/05/2018  
**Version**: 4
## SECTION 16: Other information

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3</td>
<td>ACUTE TOXICITY - Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>ACUTE TOXICITY - Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3</td>
</tr>
<tr>
<td>Carc. 2</td>
<td>CARCINOGENICITY - Category 2</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 2</td>
<td>FLAMMABLE LIQUIDS - Category 2</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>REPRODUCTIVE TOXICITY - Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3</td>
</tr>
</tbody>
</table>

**Notice to reader**

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