Section 1. Identification

Product identifier : Hydrocarbon mix, Part Number G3440-85013
Part no. : G3440-85013

Relevant identified uses of the substance or mixture and uses advised against

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
3 x 2 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

H225  FLAMMABLE LIQUIDS - Category 2
H315  SKIN CORROSION/IRRITATION - Category 2
H319  SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
H361  REPRODUCTIVE TOXICITY - Category 2
H335  SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
H336  SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
H373  SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
H304  ASPIRATION HAZARD - Category 1
H400  SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
H410  LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 30%

GHS label elements

Hazard pictograms : 

Signal word : DANGER

Hazard statements : H225 - Highly flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS))
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

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Version : 6.1
Section 2. Hazard(s) identification

**Prevention**
- P281 - Use personal protective equipment as required.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 - Avoid release to the environment.

**Response**
- P391 - Collect spillage.

**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**
- **Additional warning phrases**
  : Not applicable.

**Other hazards which do not result in classification**
: None known.

Section 3. Composition and ingredient information

**Substance/mixture**
: Mixture

**CAS number/other identifiers**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>≥10 - ≤30</td>
<td>110-54-3</td>
</tr>
<tr>
<td>nonane</td>
<td>≥10 - ≤30</td>
<td>111-84-2</td>
</tr>
<tr>
<td>dodecane</td>
<td>≥10 - ≤30</td>
<td>112-40-3</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>≥10 - ≤30</td>
<td>142-82-5</td>
</tr>
<tr>
<td>Octane</td>
<td>≥10 - ≤30</td>
<td>111-65-9</td>
</tr>
</tbody>
</table>

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

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

Section 4. First aid measures

**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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**
: Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

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Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

### Potential acute health effects

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

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact**: Causes skin irritation.

**Ingestion**: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Over-exposure signs/symptoms

**Eye contact**: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

**Inhalation**: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing
- nausea or vomiting
- headache
- drowsiness/fatigue
- dizziness/vertigo
- unconsciousness
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

**Skin contact**: Adverse symptoms may include the following:
- irritation
- redness
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

**Ingestion**: Adverse symptoms may include the following:
- nausea or vomiting
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

### 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.

See toxicological information (Section 11)

**Section 5. Firefighting measures**

### Extinguishing media

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

**Unsuitable extinguishing media**: Do not use water jet.
Section 5. Firefighting measures

Specific hazards arising from the chemical: 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. This material is very toxic 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 thermal decomposition products: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide

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.

Hazchem code: 3YE

Section 6. Accidental release measures

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".

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. Collect spillage.

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.

Section 7. Handling and storage

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 breathe vapour or mist. Do not swallow. 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.
Section 7. Handling and storage

**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.

**Conditions for safe storage, including any incompatibilities**

Store between the following temperatures: 18 to 25°C (64.4 to 77°F). 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 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.

Section 8. Exposure controls and personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| n-Hexane        | **Safe Work Australia (Australia, 12/2019).**  
TWA: 72 mg/m³ 8 hours.  
TWA: 20 ppm 8 hours. |
| nonane          | **Safe Work Australia (Australia, 12/2019).**  
TWA: 1050 mg/m³ 8 hours.  
TWA: 200 ppm 8 hours. |
| n-Heptane       | **Safe Work Australia (Australia, 12/2019).**  
STEL: 2050 mg/m³ 15 minutes.  
STEL: 500 ppm 15 minutes.  
TWA: 1640 mg/m³ 8 hours.  
TWA: 400 ppm 8 hours. |
| Octane          | **Safe Work Australia (Australia, 12/2019).**  
STEL: 1750 mg/m³ 15 minutes.  
STEL: 375 ppm 15 minutes.  
TWA: 1400 mg/m³ 8 hours.  
TWA: 300 ppm 8 hours. |

**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.

**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.
Section 8. Exposure controls and personal protection

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. 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.

Colour: Not available.

Odour: Not available.

Odour threshold: Not available.

pH: Not available.

Melting point/freezing point: Not available.

Boiling point, initial boiling point, and boiling range: Not available.

Flash point: Closed cup: -18 to 23°C (-0.4 to 73.4°F)

Evaporation rate: Not available.

Flammability: Not applicable.

Lower and upper explosion limit/flammability limit: Not available.

Vapour pressure

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Vapour Pressure at 20°C</th>
<th>Vapour Pressure at 50°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm Hg</td>
<td>kPa</td>
</tr>
<tr>
<td>Hexane</td>
<td>127.51</td>
<td>17</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>34.5</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Relative vapour density: Not available.

Relative density: Not available.

Solubility: Insoluble in the following materials: cold water and hot water.

Miscible with water: No.
Section 9. Physical and chemical properties and safety characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingredient name</td>
</tr>
<tr>
<td>dodecane</td>
<td>200</td>
</tr>
<tr>
<td>undecane</td>
<td>202</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Particle characteristics Median particle size</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

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

Chemical stability: The product is stable.

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

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.

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

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

Section 11. Toxicological information

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>n-Hexane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>169.2 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>48000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>15840 mg/kg</td>
<td>4 hours</td>
</tr>
<tr>
<td>nonane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>17000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>3200 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>dodecane</td>
<td>LD50 Dermal</td>
<td>Rabbit - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat - Male, Female</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>103 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Octane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>48000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>118 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>25260 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Date of issue/Date of revision: 25/10/2021
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Version: 6.1
Section 11. Toxicological information

<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>n-Hexane</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td>nonane</td>
<td>Skin - Moderate irritant</td>
<td>Rat</td>
<td>-</td>
<td>96 hours 300 mL</td>
<td>-</td>
</tr>
<tr>
<td>dodecane</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>96 hours 300 mL</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24 hours 0.05 mL</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**

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

**Sensitisation**

Not available.

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Teratogenicity**

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>n-Hexane</td>
<td>Category 3</td>
<td></td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>nonane</td>
<td>Category 3</td>
<td></td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>dodecane</td>
<td>Category 3</td>
<td></td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>Category 3</td>
<td></td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Octane</td>
<td>Category 3</td>
<td></td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>Category 2</td>
<td></td>
<td>- central nervous system (CNS)</td>
</tr>
<tr>
<td>nonane</td>
<td>Category 2</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

**Aspiration hazard**

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbon mix, Part Number G3440-85013</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>nonane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>dodecane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Octane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

**Information on likely routes of exposure**

Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

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

**Inhalation**: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Section 11. Toxicological information

Skin contact : Causes skin irritation.
Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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:
respiratory tract irritation
coughing
nausea or vomiting
headache
dizziness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
aquea or vomiting
reduced foetal weight
increase in foetal deaths
skeletal malformations

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 : May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates
Section 11. Toxicological information

<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>Hydrocarbon mix, Part Number G3440-85013</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>51</td>
<td>N/A</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>15640</td>
<td>N/A</td>
<td>N/A</td>
<td>169.2</td>
<td>N/A</td>
</tr>
<tr>
<td>nonane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>17</td>
<td>N/A</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>103</td>
<td>N/A</td>
</tr>
<tr>
<td>Octane</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>118</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>Acute LC50 2500 μg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>Acute LC50 375000 μg/l Fresh water</td>
<td>Fish - Oreochromis mossambicus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.17 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
</tbody>
</table>

Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>nonane</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>dodecane</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Octane</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

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>n-Hexane</td>
<td>4</td>
<td>501.187</td>
<td>high</td>
</tr>
<tr>
<td>nonane</td>
<td>5.65</td>
<td>105</td>
<td>low</td>
</tr>
<tr>
<td>dodecane</td>
<td>6.98</td>
<td>239.88</td>
<td>low</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>4.66</td>
<td>552</td>
<td>high</td>
</tr>
<tr>
<td>Octane</td>
<td>5.18</td>
<td>198.7</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K<sub>oc</sub>) | Not available |

Other adverse effects

| | No known significant effects or critical hazards |

Section 13. Disposal considerations

Disposal methods

| | 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. 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. Vapour from product |

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Section 13. Disposal considerations

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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN3295</td>
<td>UN3295</td>
<td>UN3295</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>HYDROCARBONS, LIQUID, N.O.S.</td>
<td>HYDROCARBONS, LIQUID, N.O.S.</td>
<td>Hydrocarbons, liquid, n.o.s.</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Yes. The environmentally hazardous substance mark is not required.</td>
<td>Yes.</td>
<td>Yes. The environmentally hazardous substance mark is not required.</td>
</tr>
</tbody>
</table>

Additional information

Remarks: Excepted Quantity

ADG : Hazchem code 3YE

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules : F-E, S-D

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.


Special provisions : A3, A324

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

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

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Section 15. Regulatory information

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**: All components are listed or exempted.
- **China**: All components are listed or exempted.
- **Europe**: All components are listed or exempted.
- **Japan**: All components are listed or exempted.
  - [Japan inventory (CSCL)](https://example.com/cscl): All components are listed or exempted.
  - [Japan inventory (ISHL)](https://example.com/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**: All components are listed or exempted.
- **Turkey**: Not determined.
- **United States**: All components are active or exempted.
- **Viet Nam**: All components are listed or exempted.

Section 16. Any other relevant information

**History**

- **Date of issue/Date of revision**: 25/10/2021
- **Date of previous issue**: 23/02/2021
- **Version**: 6.1
- **Key to abbreviations**:
  - ADG = Australian Dangerous Goods
  - ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
  - 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
  - N/A = Not available
  - SUSMP = Standard Uniform Schedule of Medicine and Poisons
  - UN = United Nations

**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>SKIN CORROSION/IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>REPRODUCTIVE TOXICITY - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

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Section 16. Any other relevant information

<table>
<thead>
<tr>
<th>EXPOSURE - Category 2</th>
<th>Expert judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPIRATION HAZARD - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1</td>
<td></td>
</tr>
</tbody>
</table>

References : Not available.

Green triangle indicates information that has changed from previously issued version.

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