Section 1. Identification

1.1 Product identifier

Product name: Pesticide Locking Standard, Part Number 5190-1441
Part no.: 5190-1441
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
3 x 1 ml ampoule

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
- H315 - SKIN IRRITATION - Category 2
- H320 - EYE IRRITATION - Category 2B
- H361 - TOXIC TO REPRODUCTION - 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
- H411 - AQUATIC HAZARD (LONG-TERM) - Category 2

2.2 GHS label elements

Hazard pictograms: 

Signal word: Danger

Hazard statements: 
- H225 - Highly flammable liquid and vapor.
- H304 - May be fatal if swallowed and enters airways.
- H315 + H320 - Causes skin and 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. (nervous system)
Section 2. Hazards identification

Precautionary statements

Prevention:
- 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.
- P273 - Avoid release to the environment.

Response:
- P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
  Do NOT induce vomiting.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- 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 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 - Keep cool.

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

Hazards not otherwise classified: None known.

2.3 Other hazards

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>≥90</td>
<td>110-54-3</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>≤0.0022</td>
<td>5598-13-0</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>≤0.0022</td>
<td>62-73-7</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 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.

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

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

4.2 Most important symptoms/effects, acute and delayed

**Potential acute health effects**

- **Eye contact**: Causes 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
  - vertigo
  - unconsciousness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations

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

- **Ingestion**: Adverse symptoms may include the following:
  - nausea or vomiting
  - 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.

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Section 4. First aid measures

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. This material is 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

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. Collect spillage.

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.

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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 breathe vapor 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.

**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
- 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>
<tbody>
<tr>
<td>n-Hexane</td>
<td>ACGIH TLV (United States, 1/2021). Absorbed through skin. TWA: 50 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 180 mg/m³ 8 hours. NIOSH REL (United States, 10/2020). TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. None. ACGIH TLV (United States, 1/2021). Absorbed through skin. Skin sensitizer. TWA: 0.1 mg/m³ 8 hours. Form: Inhalable fraction and vapor</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>None.</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>None.</td>
</tr>
</tbody>
</table>

Date of issue: 10/28/2021
Section 8. Exposure controls/personal protection

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.
- **Color**: Colorless.
- **Odor**: Gasoline
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: -95°C (-139°F)
- **Boiling point, initial boiling point, and boiling range**: 69°C (156.2°F)
- **Flash point**: Closed cup: -22°C (-7.6°F)
- **Evaporation rate**: Not available.
- **Flammability**: Not applicable.
- **Lower and upper explosion limit/flammbility limit**: Not available.
- **Vapor pressure**: 12.9 kPa (97 mm Hg)
- **Relative vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility**: Insoluble in the following materials: cold water and hot water.
- **Miscible with water**: No.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not applicable.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.
- **Particle characteristics**: Median particle size: Not applicable.

**Ingredient name**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>225</td>
<td>437</td>
<td></td>
</tr>
</tbody>
</table>

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.
- **10.5 Incompatible materials**: Reactive or incompatible with the following materials: oxidizing materials
- **10.6 Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## 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>n-Hexane</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>169.2 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</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>-</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3713 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>1828 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>15 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>107 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>0.75 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>17 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>n-Hexane</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours</td>
<td>500 mg</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Sensitization

Not available.

**Conclusion/Summary**

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

#### 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>Dichlorvos (ISO)</td>
<td>-</td>
<td>2B</td>
<td>-</td>
</tr>
</tbody>
</table>

#### 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>n-Hexane</td>
<td>Category 3</td>
<td>-</td>
<td>Respiratory tract irritation 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>inhalation</td>
<td>nervous system</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>Category 2</td>
<td>-</td>
<td>nervous system</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>Category 2</td>
<td>-</td>
<td>nervous system</td>
</tr>
</tbody>
</table>

#### Aspiration hazard

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Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticide Locking Standard, Part Number 5190-1441</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure:

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects:

- **Eye contact**: Causes 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.

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 fetal weight
  - increase in fetal deaths
  - skeletal malformations
- **Skin contact**: Adverse symptoms may include the following:
  - irritation
  - redness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- **Ingestion**: Adverse symptoms may include the following:
  - nausea or vomiting
  - 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**: May cause damage to organs through prolonged or repeated exposure.

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Section 11. Toxicological information

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

<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>n-Hexane</td>
<td>15840</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>1828</td>
<td>3713</td>
<td>N/A</td>
<td>169.2</td>
<td>N/A</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>17</td>
<td>0.75</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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>n-Hexane</td>
<td>Acute LC50 2500 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.000028 ppm Marine water</td>
<td>Crustaceans - Penaeus duorarum - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1.11 ppb Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 12.6 ppb Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.066 ppb Fresh water</td>
<td>Daphnia - Daphnia pulex</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 398000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.13 µg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia dubia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2.5 µg/l Fresh water</td>
<td>Fish - Mystus vittatus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 6.66 µg/l Marine water</td>
<td>Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.109 to 0.266 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>Acute EC50 0.000028 ppm Marine water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.11 ppb Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 12.6 ppb Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.066 ppb Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 398000 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.13 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2.5 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 6.66 µg/l Marine water</td>
<td>Crustaceans - Ceriodaphnia dubia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.109 to 0.266 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 5.2 ppb</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>Acute EC50 0.000028 ppm Marine water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1.11 ppb Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 12.6 ppb Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.066 ppb Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 398000 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.13 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
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</tr>
<tr>
<td></td>
<td>Acute LC50 2.5 µg/l Fresh water</td>
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</tr>
<tr>
<td></td>
<td>Chronic NOEC 6.66 µg/l Marine water</td>
<td>Crustaceans - Ceriodaphnia dubia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 0.109 to 0.266 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 5.2 ppb</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>21 days</td>
</tr>
</tbody>
</table>

12.2 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>
</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>n-Hexane</td>
<td>4</td>
<td>501.187</td>
<td>high</td>
</tr>
<tr>
<td>Chlorpyrifos-methyl</td>
<td>4.31</td>
<td>-</td>
<td>high</td>
</tr>
<tr>
<td>Dichlorvos (ISO)</td>
<td>1.43</td>
<td>0.5</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

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Section 12. Ecological information

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 / IATA: Not regulated.

Additional information

Remarks: De minimis quantities

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) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 311: Dichlorvos (ISO)

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

Clean Air Act Section 602 Class I Substances: Not listed

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**Section 15. Regulatory information**

**Clean Air Act Section 602** : Not listed

**Class II Substances**

**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 (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichlorvos (ISO)</td>
<td>≤0.0022</td>
<td>Yes</td>
<td>1000</td>
<td>84.8</td>
</tr>
</tbody>
</table>

**SARA 304 RQ** : 1000000 lbs / 454000 kg

**SARA 311/312**

**Classification** : FLAMMABLE LIQUIDS - Category 2  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2B  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

**Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| n-Hexane  | ≥90     | FLAMMABLE LIQUIDS - Category 2  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2B  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
HNOC - Static-accumulating flammable liquid |

**SARA 313**

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting</td>
<td>n-Hexane</td>
<td>110-54-3</td>
</tr>
<tr>
<td>requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier notification</td>
<td>n-Hexane</td>
<td>110-54-3</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: HEXANE; N-HEXANE

**New York** : The following components are listed: Hexane

**New Jersey** : The following components are listed: n-HEXANE; HEXANE

**Pennsylvania** : The following components are listed: HEXANE

**California Prop. 65**

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Section 15. Regulatory information

⚠️ WARNING: This product can expose you to chemicals including DDVP and Mirex, which are known to the State of California to cause cancer, and n-hexane, which is known to the State of California to cause 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>n-hexane</td>
<td>-</td>
<td>Yes.</td>
</tr>
<tr>
<td>DDVP</td>
<td>Yes.</td>
<td>-</td>
</tr>
<tr>
<td>Mirex</td>
<td>Yes.</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**: Not determined.
- **Canada**: Not determined.
- **China**: Not determined.
- **Europe**: All components are listed or exempted.
- **New Zealand**: Not determined.
- **Philippines**: Not determined.
- **Republic of Korea**: Not determined.
- **Taiwan**: All components are listed or exempted.
- **Thailand**: Not determined.
- **Turkey**: Not determined.
- **United States**: Not determined.
- **Viet Nam**: Not determined.

Section 16. Other information

Procedure used to derive the classification

**Date of issue:** 10/28/2021
Section 16. Other information

<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 IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2B</td>
<td>Calculation method</td>
</tr>
<tr>
<td>TOXIC TO REPRODUCTION - 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 EXPOSURE) - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ASPIRATION HAZARD - Category 1</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History

| Date of issue | 10/28/2021 |
| Date of previous issue | 09/16/2020 |
| Version | 6 |

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
- N/A = Not available
- UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.