Section 1. Identification

1.1 Product identifier
Product name : Test Standard, Specs DB-1/DB-5 (Capillary), Part Number 200-0310
Part no. : 200-0310
Validation date : 9/29/2021

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

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

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

Section 2. Hazards identification

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

Classification of the substance or mixture
H225 FLAMMABLE LIQUIDS - Category 2
H302 ACUTE TOXICITY (oral) - Category 4
H331 ACUTE TOXICITY (inhalation) - Category 3
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H350 CARCINOGENICITY - Category 1B
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

2.2 GHS label elements
Hazard pictograms : 

Signal word : Danger
Section 2. Hazards identification

Hazard statements:
H225 - Highly flammable liquid and vapor.
H302 - Harmful if swallowed.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H331 - Toxic if inhaled.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H350 - May cause cancer.
H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys, liver)

Precautionary statements

Prevention:
P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 - Use explosion-proof electrical, ventilating or lighting equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.

Response:
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
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.

2.3 Other hazards

Hazards not otherwise classified: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichloroethane</td>
<td>≥90</td>
<td>107-06-2</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.

Date of issue: 09/29/2021
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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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

Ingestion: 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 serious eye irritation.

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

Skin contact: Causes skin irritation.

Ingestion: Harmful if swallowed. 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

Skin contact: Adverse symptoms may include the following:
- irritation
- redness

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

Date of issue: 09/29/2021
Section 4. First aid measures

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

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

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

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides

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. Do not breathe 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".

Date of issue: 09/29/2021
Section 6. Accidental release measures

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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

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

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

- Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. 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. 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

Date of issue: 09/29/2021
### Section 8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichloroethane</td>
<td>ACGIH TLV (United States, 1/2021). TWA: 10 ppm 8 hours. TWA: 40 mg/m³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hours. TWA: 4 mg/m³ 8 hours. STEL: 2 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes. OSHA PEL Z2 (United States, 2/2013). TWA: 50 ppm 8 hours. CEIL: 100 ppm AMP: 200 ppm 5 minutes. NIOSH REL (United States, 10/2020). TWA: 1 ppm 10 hours. TWA: 4 mg/m³ 10 hours. STEL: 2 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes.</td>
</tr>
</tbody>
</table>

### 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.
Section 8. Exposure controls/personal protection

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**: Clear.
- **Odor**: Chloroform.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point/freezing point**: -35.5°C (-31.9°F)
- **Boiling point, initial boiling point, and boiling range**: 83°C (181.4°F)
- **Flash point**: Closed cup: 13°C (55.4°F)
- **Evaporation rate**: Not available.
- **Flammability**: Not applicable.
- **Lower and upper explosion limit/flammbility limit**: Lower: 6.2% Upper: 16%
- **Partition coefficient: n-octanol/water**

### Flash point

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>°C</th>
<th>°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentadecane</td>
<td>200</td>
<td>392</td>
</tr>
<tr>
<td>Tridecane</td>
<td>202</td>
<td>395.6</td>
</tr>
</tbody>
</table>

### Decomposition temperature

Not available.

### Viscosity

Not available.

### Particle characteristics

- **Median particle size**: Not applicable.

### Chemical state

- **State**: Liquid.
- **Color**: Clear.
- **Odor**: Chloroform.
- **Odor threshold**: Not available.
- **pH**: Not available.
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</tr>
<tr>
<td>Tridecane</td>
<td>202</td>
<td>395.6</td>
</tr>
</tbody>
</table>

### Decomposition temperature

Not available.

### Viscosity

Not available.

### Particle characteristics

- **Median particle size**: Not applicable.

Section 10. Stability and reactivity

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

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Section 10. Stability and reactivity

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

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

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-Dichloroethane</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>1000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>500 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>1,2-Dichloroethane</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>63 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>625 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin: Repeated exposure may cause skin dryness or cracking.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary: Not available.

Carcinogenicity

Conclusion/Summary: Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
</table>
| 1,2-Dichloroethane      | -    | 2B   | Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary: Not available.

Teratogenicity

Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Date of issue: 09/29/2021
Section 11. Toxicological information

Table: Aspiration hazard

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichloroethane</td>
<td>Category 2</td>
<td>-</td>
<td>kidneys, liver</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure

Inhalation

- Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Ingestion

- Causes skin irritation.
- Causes serious eye irritation.
- Causes skin irritation.
- Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Skin contact

- Irritation
- Redness
- Irritation
- Redness

Eye contact

- Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing
  - Nausea or vomiting
  - Headache
  - Drowsiness/fatigue
  - Dizziness/vertigo
  - Unconsciousness
  - Irritation
  - Redness

Inhalation

- Adverse symptoms may include the following:
  - Respiratory tract irritation
  - Coughing
  - Nausea or vomiting
  - Headache
  - Drowsiness/fatigue
  - Dizziness/vertigo
  - Unconsciousness

Skin contact

- Adverse symptoms may include the following:
  - Irritation
  - Redness

Ingestion

- Adverse symptoms may include the following:
  - Nausea or vomiting

Symptoms related to the physical, chemical and toxicological characteristics

Potential acute health effects

- Reduces sensitivity to cold and the resistance of the body.

Potential chronic health effects

- Increased risk of chronic respiratory tract irritation.
- Increased risk of chronic drowsiness or dizziness.

Potential chronic health effects

- General
  - May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity
  - May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity
  - No known significant effects or critical hazards.

Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation.
Section 11. Toxicological information

Reproductive toxicity : No known significant effects or critical hazards.

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>Test Standard, Specs DB-1/DB-5 (Capillary), Part Number 200-0310 1,2-Dichloroethane</td>
<td>500.8</td>
<td>2804.5</td>
<td>1001.6</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>1,2-Dichloroethane</td>
<td>500</td>
<td>2800</td>
<td>1000</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>1,2-Dichloroethane</td>
<td>Acute EC50 189 ppm Fresh water</td>
<td>Algae - Desmodesmus subspicatus</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 155 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Instar Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 110 ppm Marine water</td>
<td></td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 66 ppm Fresh water</td>
<td>Fish - Micropterus salmoides - Fingerling</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 29000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas - Larvae</td>
<td>32 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>1,2-Dichloroethane</td>
<td>-</td>
<td>-</td>
<td>Inherent</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Dichloroethane</td>
<td>1.45</td>
<td>2</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (Koc) : Not available.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Date of issue : 09/29/2021
Section 13. Disposal considerations

**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.

**United States - RCRA Toxic hazardous waste "U" List**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Status</th>
<th>Reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene dichloride; Ethane, 1,2-dichloro-</td>
<td>107-06-2</td>
<td>Listed</td>
<td>U077</td>
</tr>
</tbody>
</table>

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) PAIR: 1,2-Dichloroethane
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- Clean Water Act (CWA) 307: 1,2-Dichloroethane; 4-Chlorophenol; Acenaphthylene
- Clean Water Act (CWA) 311: 1,2-Dichloroethane

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)**

- Listed

**Date of issue**: 09/29/2021
Section 15. Regulatory information

Clean Air Act Section 602
Class I Substances : Not listed
Clean Air Act Section 602
Class II Substances : Not listed
DEA List I Chemicals
(Precursor Chemicals) : Not listed
DEA List II Chemicals
(Essential Chemicals) : Not listed

SARA 302/304
Composition/information on ingredients
No products were found.

SARA 304 RQ : Not applicable.
SARA 311/312
Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 3
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
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 - Defatting irritant

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
</table>
| 1,2-Dichloroethane    | ≥90| FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 3
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
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 - Defatting irritant |

SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting requirements</td>
<td>1,2-Dichloroethane</td>
<td>107-06-2</td>
</tr>
<tr>
<td>Supplier notification</td>
<td>1,2-Dichloroethane</td>
<td>107-06-2</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: 1,2-DICHLOROETHANE; 1,2-ETHYLIDENE DICHLORIDE; ETHYLENE DICHLORIDE
New York : The following components are listed: Ethylene dichloride; 1,2-Dichloroethane
New Jersey : The following components are listed: 1,2-DICHLOROETHANE; GLYCOL DICHLORIDE; ETHYLENE DICHLORIDE; ETHANE, 1,2-DICHLORO-

Date of issue : 09/29/2021
Section 15. Regulatory information

Pennsylvania: The following components are listed: ETHANE, 1,2-DICHLORO-

California Prop. 65

⚠️ WARNING: This product can expose you to chemicals including Ethylene dichloride and Carbon-black extracts, which are known to the State of California to cause cancer. 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>Ethylene dichloride</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>Carbon-black extracts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene dichloride (ISO); Borer-Sol;</td>
<td>Pesticide</td>
</tr>
<tr>
<td>1,2-Dichloroethane; 1,2-Bichloroethane;</td>
<td>Listed</td>
</tr>
<tr>
<td>EDC</td>
<td></td>
</tr>
</tbody>
</table>

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia: Not determined.
Canada: At least one component is not listed in DSL but all such components are listed in NDSL.
China: Not determined.
Europe: All components are listed or exempted.
Japan: Japan inventory (CSCL): All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
New Zealand: 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: At least one component is inactive.
Viet Nam: Not determined.

Section 16. Other information

Procedure used to derive the classification

Date of issue: 09/29/2021
# 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>ACUTE TOXICITY (oral) - Category 4</td>
<td>Calculation method</td>
</tr>
<tr>
<td>ACUTE TOXICITY (inhalation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 1B</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>
</tbody>
</table>

## History

<table>
<thead>
<tr>
<th>Date of issue</th>
<th>09/29/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of previous issue</td>
<td>03/30/2021</td>
</tr>
<tr>
<td>Version</td>
<td>7.1</td>
</tr>
</tbody>
</table>

**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**

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