SAFETY DATA SHEET

Test Standard - DB-624 Capillary-Megabore, Part Number 200-0113

Section 1. Identification

1.1 Product identifier

Product name : Test Standard - DB-624 Capillary-Megabore, Part Number 200-0113
Part No. : 200-0113
Validation date : 4/29/2016

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

Material uses : Analytical chemistry.
A 1ml vial

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

H302 - ACUTE TOXICITY (oral) - Category 4
H315 - SKIN IRRITATION - Category 2
H319 - EYE IRRITATION - Category 2A
H350 - CARCINOGENICITY - Category 1A
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) (blood system and liver) - Category 2

2.2 GHS label elements

Hazard pictograms :

Signal word : Danger
Hazard statements : H302 - Harmful if swallowed.
H315 - Causes serious eye irritation.
H319 - Causes skin irritation.
H350 - May cause cancer.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H373 - May cause damage to organs through prolonged or repeated exposure. (blood
Section 2. Hazards identification

Precautionary statements

Prevention:

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P271 - Use only outdoors or in a well-ventilated area.
- P260 - Do not breathe vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.

Response:

- P314 - Get medical attention if you feel unwell.
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
- P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
- P332 + P313 - If skin irritation occurs: Get medical attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.

Storage:

- P405 - Store locked up.

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>Dichloromethane</td>
<td>≥90</td>
<td>75-09-2</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>≤0.3</td>
<td>127-18-4</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>≤0.3</td>
<td>78-87-5</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 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

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.

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Section 4. First aid measures

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: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. 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: 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.

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
- dizziness/fatigue
- dizziness/vertigo
- unconsciousness

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

Ingestion: No specific data.

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.

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Section 4. First aid measures

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 an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur and the container may burst.

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.

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.

Remark: When heated, flammable vapors will be evolved.

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. 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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Stop leak if without risk. Move containers from spill area. 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. 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 ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 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. 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.

7.3 Specific end use(s)

**Recommendations**: Industrial applications, Professional applications.

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

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| **Dichloromethane** | ACGIH TLV (United States, 3/2015).  
TWA: 50 ppm 8 hours.  
TWA: 174 mg/m³ 8 hours.  
STEL: 125 ppm 15 minutes.  
TWA: 25 ppm 8 hours.  
OSHA PEL Z2 (United States, 2/2013).  
STEL: 125 ppm 15 minutes.  
TWA: 25 ppm 8 hours. |
| **Tetrachloroethylene** | ACGIH TLV (United States, 3/2015).  
TWA: 25 ppm 8 hours.  
TWA: 170 mg/m³ 8 hours.  
STEL: 100 ppm 15 minutes.  
STEL: 685 mg/m³ 15 minutes.  
TWA: 25 ppm 8 hours.  
TWA: 170 mg/m³ 8 hours.  
OSHA PEL Z2 (United States, 2/2013).  
TWA: 100 ppm 8 hours.  
CEIL: 200 ppm  
AMP: 300 ppm 5 minutes. |
| **1,2-Dichloropropane** | ACGIH TLV (United States, 3/2015). Skin sensitizer. |

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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.

- **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.

  - **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.

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Date of issue: 04/29/2016
Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

- **Physical state**: Liquid.
- **Color**: Clear. Colorless.
- **Odor**: Irritating material
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point**: -95.1°C (-139.2°F)
- **Boiling point**: 39.8°C (103.6°F)
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not applicable.
- **Lower and upper explosive (flammable) limits**: Lower: 14% Upper: 22%
- **Vapor pressure**: 47.3 kPa (355 mm Hg) [room temperature]
- **Vapor density**: 2.93 [Air = 1]
- **Relative density**: Not available.
- **Solubility**: Very slightly soluble in the following materials: cold water and hot water.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.

Section 10. Stability and reactivity

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

10.2 Chemical stability: The product is stable.

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

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with 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**
Section 11. Toxicological information

<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>Dichloromethane</td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>76000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapor</td>
<td>Rat</td>
<td>18332 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>985 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2629 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>2000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>8750 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1900 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>Dichloromethane</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>162 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>162 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 810 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 Milliliters</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin: Repeated exposure may cause skin dryness or cracking.

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
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>Dichloromethane</td>
<td>+</td>
<td>2A</td>
<td>Reasonably anticipated to be a human carcinogen.</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>-</td>
<td>2A</td>
<td>Reasonably anticipated to be a human carcinogen.</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>Category 3</td>
<td>Not applicable.</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>Dichloromethane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>blood system and liver</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>kidneys and liver</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>Category 2</td>
<td>Not determined</td>
<td>kidneys and liver</td>
</tr>
</tbody>
</table>

Aspiration hazard
Not available.

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

Potential acute health effects

Eye contact: Causes serious eye irritation.
Inhalation: 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.

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
drowsiness/fatigue
dizziness/vertigo
unconsciousness

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

Ingestion: No specific data.

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

Short term exposure
Potential immediate effects: Not available.
Section 11. Toxicological information

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: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity
Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>998.6 mg/kg</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: carboxyhemoglobinemia, headache, dizziness/vertigo, drowsiness/fatigue, nausea or vomiting.

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>Dichloromethane</td>
<td>Acute EC50 242 mg/l Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 1682000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 329 ppm Marine water</td>
<td>Crustaceans - Americamysis bahia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 193000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 56000 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Acute EC50 504 ppm Marine water</td>
<td>Algae - Skeletonema costatum</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 3.64 mg/l Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 8500 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Instar</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 3.5 mg/l Marine water</td>
<td>Crustaceans - Elminius modestus</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4000 µg/l Fresh water</td>
<td>Fish - Jordanella floridus - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic EC10 1.77 mg/l Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC &gt;0.4 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 500 µg/l Fresh water</td>
<td>Fish - Pimephales promelas - Larvae</td>
<td>32 days</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>Acute EC50 83000 µg/l Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii</td>
<td>4 days</td>
</tr>
</tbody>
</table>

Date of issue: 04/29/2016
Section 12. Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Acute LC50 53 mg/l Marine water</th>
<th>Acute LC50 64.1 mg/l Fresh water</th>
<th>Acute LC50 61 mg/l Marine water</th>
<th>Chronic NOEC 38000 µg/l Fresh water</th>
<th>Crustaceans - Elminius modestus</th>
<th>Daphnia - Daphnia magna - Neonate</th>
<th>Fish - Pleuronectiformes</th>
<th>Algae - Chlamydomonas reinhardtii</th>
<th>48 hours</th>
<th>48 hours</th>
<th>96 hours</th>
<th>4 days</th>
</tr>
</thead>
</table>

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>-</td>
<td>11 % - 28 days</td>
<td>100 mg/l</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>-</td>
<td>-</td>
<td>Not 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>Dichloromethane</td>
<td>1.25</td>
<td>22.91</td>
<td>low</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>2.53</td>
<td>49</td>
<td>low</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>1.99 to 2.28</td>
<td>1.2 to 3.2</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

RCRA classification : F002, U080

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>Methylene chloride; Methane, dichloro-</td>
<td>75-09-2</td>
<td>Listed</td>
<td>U080</td>
</tr>
</tbody>
</table>

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Section 13. Disposal considerations

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

Regulatory information

Additional information : Remarks
De minimis quantities

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 4(a) final test rules: nonane
                      : TSCA 8(a) PAIR: nonane; Chlorobenzene; 1,2-Dichloropropane; Heptane
                      : United States inventory (TSCA 8b): All components are listed or exempted.
                      : Clean Water Act (CWA) 307: Dichloromethane; Tetrachloroethylene; Chlorobenzene; 1, 2-Dichloropropane
                      : Clean Water Act (CWA) 311: Chlorobenzene; 1,2-Dichloropropane

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

Clean Air Act Section 602 Class I Substances : Not listed
Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed
DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
               : Delayed (chronic) health hazard

Composition/information on ingredients

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## Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>≥90 ≤0.3</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td></td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>≤0.3</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

### SARA 313

<table>
<thead>
<tr>
<th>Form R - Reporting requirements</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>≥90</td>
</tr>
<tr>
<td>No</td>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>≤0.3</td>
</tr>
</tbody>
</table>

### State regulations

- **Massachusetts**: The following components are listed: METHYLENE CHLORIDE<br>- **New York**: The following components are listed: Dichloromethane; Methylene chloride; Tetrachloroethylene; Ethylene, tetrachloro-; Dichloropropane<br>- **New Jersey**: The following components are listed: METHYLENE CHLORIDE; DICHLOROMETHANE; TETRACHLOROETHYLENE; ETHENE, TETRACHLORO-; 1,2-DICHLOROPROPANE; PROPANE, 1,2-DICHLORO-
- **Pennsylvania**: The following components are listed: METHANE, DICHLORO-; ETHENE, TETRACHLORO-; PROPANE, 1,2-DICHLORO-

### California Prop. 65

**WARNING**: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Cancer</th>
<th>Reproductive</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dichloromethane</td>
<td>Yes.</td>
<td>No.</td>
<td>200 µg/day (inhalation)</td>
<td>No.</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>1,2-Dichloropropane</td>
<td>Yes.</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td>Pyridine</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Methanol</td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

### Canada inventory

- All components are listed or exempted.

### International regulations

- **Australia inventory (AICS)**: All components are listed or exempted.<br>- **China inventory (IECSC)**: All components are listed or exempted.<br>- **Japan inventory (ENCS)**: All components are listed or exempted.<br>- **Japan inventory (ISHL)**: All components are listed or exempted.<br>- **Korea inventory**: All components are listed or exempted.<br>- **Malaysia Inventory (EHS Register)**: All components are listed or exempted.<br>- **New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.<br>- **Philippines inventory (PICCS)**: All components are listed or exempted.<br>- **Taiwan Chemical Substances Inventory (TCSI)**: All components are listed or exempted.

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Section 15. Regulatory information

**Turkey inventory**: Not determined.

- Chemical Weapons Convention List Schedule I Chemicals: Not listed
- Chemical Weapons Convention List Schedule II Chemicals: Not listed
- Chemical Weapons Convention List Schedule III Chemicals: Not listed

Section 16. Other information

**History**

- Date of issue: 04/29/2016
- Date of previous issue: 05/30/2014
- Version: 6

> Indicates information that has changed from previously issued version.

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