

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 : 3/28/2018

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
1 ml 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

2.2 GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H350 - May cause cancer.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.

Precautionary statements

Section 2. Hazards identification

- 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.
 P261 - Avoid breathing vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash hands thoroughly after handling.
- Response** : 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

Ingredient name	%	CAS number
Dichloromethane	≥90	75-09-2
Tetrachloroethylene	≤0.3	127-18-4
Chlorobenzene	≤0.3	108-90-7
1,2-Dichloropropane	≤0.3	78-87-5
Pyridine	≤0.3	110-86-1

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.
- 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

Section 4. First aid measures

- 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
drowsiness/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.
- 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.

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 ingest. Avoid breathing vapor or mist. 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. 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 applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Dichloromethane	<p>ACGIH TLV (United States, 3/2017). TWA: 50 ppm 8 hours. TWA: 174 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). STEL: 125 ppm 15 minutes. TWA: 25 ppm 8 hours.</p> <p>OSHA PEL Z2 (United States, 2/2013). STEL: 125 ppm 15 minutes. TWA: 25 ppm 8 hours.</p>
Tetrachloroethylene	<p>ACGIH TLV (United States, 3/2017). TWA: 25 ppm 8 hours. TWA: 170 mg/m³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 685 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 25 ppm 8 hours. TWA: 170 mg/m³ 8 hours.</p> <p>OSHA PEL Z2 (United States, 2/2013). TWA: 100 ppm 8 hours. CEIL: 200 ppm AMP: 300 ppm 5 minutes.</p>
Chlorobenzene	<p>ACGIH TLV (United States, 3/2017).</p>

Section 8. Exposure controls/personal protection

<p>1,2-Dichloropropane</p>	<p>TWA: 10 ppm 8 hours. TWA: 46 mg/m³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 75 ppm 8 hours. TWA: 350 mg/m³ 8 hours. OSHA PEL (United States, 6/2016). TWA: 75 ppm 8 hours. TWA: 350 mg/m³ 8 hours. ACGIH TLV (United States, 3/2017). Skin sensitizer. TWA: 10 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 75 ppm 8 hours. TWA: 350 mg/m³ 8 hours. STEL: 110 ppm 15 minutes. STEL: 510 mg/m³ 15 minutes. OSHA PEL (United States, 6/2016). TWA: 75 ppm 8 hours. TWA: 350 mg/m³ 8 hours.</p>
<p>Pyridine</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 1 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 5 ppm 8 hours. TWA: 15 mg/m³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 5 ppm 10 hours. TWA: 15 mg/m³ 10 hours. OSHA PEL (United States, 6/2016). TWA: 5 ppm 8 hours. TWA: 15 mg/m³ 8 hours.</p>

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

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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

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

Product/ingredient name	Result	Species	Dose	Exposure
Dichloromethane	LC50 Inhalation Vapor	Rat	76000 mg/m ³	4 hours
	LD50 Oral	Rat	985 mg/kg	-
Tetrachloroethylene	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
	LD50 Oral	Rat	2629 mg/kg	-
Chlorobenzene	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
1,2-Dichloropropane	LC50 Inhalation Gas.	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	8750 mg/kg	-
	LD50 Oral	Rat	1900 mg/kg	-
Pyridine	LC50 Inhalation Gas.	Rat	4505 ppm	4 hours
	LC50 Inhalation Vapor	Rat	9010 ppm	1 hours
	LC50 Inhalation Vapor	Rat - Male	4505 ppm	4 hours
	LD50 Dermal	Rabbit	1.12 g/kg	-
	LD50 Oral	Rat	891 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Dichloromethane	Eyes - Moderate irritant	Rabbit	-	162 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
Tetrachloroethylene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	162 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 810 milligrams	-
1,2-Dichloropropane	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
Pyridine	Skin - Mild irritant	Rabbit	-	0.5 Milliliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary

Section 11. Toxicological information

Skin : Repeated exposure may cause skin dryness or cracking.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Dichloromethane	+	2A	Reasonably anticipated to be a human carcinogen.
Tetrachloroethylene	-	2A	Reasonably anticipated to be a human carcinogen.
1,2-Dichloropropane	-	1	-
Pyridine	-	2B	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Dichloromethane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Tetrachloroethylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Chlorobenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2-Dichloropropane	Category 2 Category 3	Not determined Not applicable.	kidneys and liver Respiratory tract irritation and Narcotic effects
Pyridine	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Tetrachloroethylene	Category 2	Not determined	kidneys, liver and nervous system
Chlorobenzene	Category 2	Not determined	kidneys and liver
Pyridine	Category 2	Not determined	kidneys and liver

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.

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- 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.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : 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

Route	ATE value
Oral	998.6 mg/kg

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

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	
Dichloromethane	Acute EC50 242 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	
	Acute EC50 0.98 mg/l Fresh water	Algae - Chlorella vulgaris	96 hours	
	Acute EC50 99000 µg/l Fresh water	Fish - Pimephales promelas	96 hours	
	Acute LC50 108500 µg/l Marine water	Crustaceans - Palaemonetes pugio - Juvenile (Fledgling, Hatchling, Weanling)	48 hours	
	Acute LC50 220000 µg/l Fresh water Chronic NOEC 56000 µg/l Fresh water	Daphnia - Daphnia magna Algae - Pseudokirchneriella subcapitata	48 hours 96 hours	
Tetrachloroethylene	Acute EC50 504 ppm Marine water Acute EC50 3.64 mg/l Fresh water	Algae - Skeletonema costatum Algae - Chlamydomonas reinhardtii - Exponential growth phase	96 hours 72 hours	
	Acute EC50 7.49 mg/l Fresh water Acute LC50 3.5 mg/l Marine water Acute LC50 4000 µg/l Fresh water	Daphnia - Daphnia magna - Instar Crustaceans - Elminius modestus Fish - Jordanella floridae - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 48 hours 96 hours	
	Chronic NOEC 0.01 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours	
	Chronic NOEC 0.4 mg/l Fresh water Chronic NOEC 500 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Larvae	21 days 32 days	
	Chlorobenzene	Acute EC50 19.6 mg/l Fresh water	Algae - Phaeodactylum tricornutum	72 hours
Acute EC50 12500 µg/l		Algae - Pseudokirchneriella subcapitata	96 hours	
Acute LC50 7900 µg/l Fresh water		Crustaceans - Ceriodaphnia dubia - Neonate	48 hours	
Acute LC50 8600 µg/l Fresh water		Daphnia - Daphnia magna - Neonate	48 hours	
1,2-Dichloropropane		Acute LC50 2370 µg/l Fresh water Chronic NOEC 2 mg/kg Fresh water Acute EC50 83000 µg/l Fresh water	Fish - Carassius auratus - Egg Fish - Carassius auratus Algae - Chlamydomonas reinhardtii	96 hours 30 days 4 days
	Acute EC50 168 ppm Fresh water	Algae - Scenedesmus subspicatus	72 hours	
	Acute LC50 53 mg/l Marine water Acute LC50 52000 µg/l Fresh water Acute LC50 61 mg/l Marine water Chronic NOEC 38000 µg/l Fresh water	Crustaceans - Elminius modestus Daphnia - Daphnia magna Fish - Pleuronectiformes Algae - Chlamydomonas reinhardtii	48 hours 48 hours 96 hours 4 days	
	Pyridine	Acute EC50 110000 µg/l Fresh water Acute LC50 182000 µg/l Fresh water Acute LC50 520000 µg/l Fresh water Acute LC50 26000 µg/l Fresh water	Algae - Selenastrum sp. Crustaceans - Gammarus pulex Daphnia - Daphnia pulex Fish - Cyprinus carpio	96 hours 48 hours 48 hours 96 hours

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Dichloromethane	OECD 301D Ready Biodegradability - Closed Bottle Test	68 % - 28 days	-	-
Tetrachloroethylene	- 301C Ready Biodegradability - Modified MITI Test (I)	11 % - 28 days 11 % - 28 days	100 mg/l -	- -
Chlorobenzene	301B Ready Biodegradability - CO ₂ Evolution Test	17 % - 20 days	-	-
1,2-Dichloropropane	- 301D Ready Biodegradability - Closed Bottle Test	15 % - 28 days 0 % - 28 days	- -	Activated sludge -

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Dichloromethane	-	-	Not readily
Tetrachloroethylene	-	-	Not readily
Chlorobenzene	-	-	Not readily
1,2-Dichloropropane	-	-	Not readily
Pyridine	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Dichloromethane	1.25	22.91	low
Tetrachloroethylene	2.53	49	low
Chlorobenzene	2.46	4.3 to 40	low
1,2-Dichloropropane	1.99 to 2.28	1.2 to 3.2	low
Pyridine	0.64	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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

Section 13. Disposal considerations

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.

[United States - RCRA Toxic hazardous waste "U" List](#)

Ingredient	CAS #	Status	Reference number
Methylene chloride; Methane, dichloro-	75-09-2	Listed	U080

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 Annex II of MARPOL and the IBC Code : 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 4(a) final test rules:** nonane
TSCA 8(a) PAIR: nonane; Chlorobenzene; 1,2-Dichloropropane; Heptane
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
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

Section 15. Regulatory information

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 : ACUTE TOXICITY (oral) - Category 4
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 1A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Composition/information on ingredients

Name	%	Classification
Dichloromethane	≥90	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Tetrachloroethylene	≤0.3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - 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) (kidneys, liver, nervous system) - Category 2 HNOC - Defatting irritant
Chlorobenzene	≤0.3	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - 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) (kidneys, liver) - Category 2
1,2-Dichloropropane	≤0.3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (kidneys, liver) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
Pyridine	≤0.3	FLAMMABLE LIQUIDS - Category 2

Section 15. Regulatory information

ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Dichloromethane	75-09-2	≥90
	Tetrachloroethylene	127-18-4	≤0.3
Supplier notification	Dichloromethane	75-09-2	≥90
	Tetrachloroethylene	127-18-4	≤0.3

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: METHYLENE CHLORIDE; DICHLOROMETHANE
- New York** : The following components are listed: Dichloromethane; Methylene chloride; Tetrachloroethylene; Ethylene, tetrachloro-; Chlorobenzene; Benzene, chloro-; Dichloropropane; Pyridine
- New Jersey** : The following components are listed: METHYLENE CHLORIDE; DICHLOROMETHANE; TETRACHLOROETHYLENE; ETHENE, TETRACHLORO-; CHLOROBENZENE; BENZENE, CHLORO-; 1,2-DICHLOROPROPANE; PROPANE, 1,2-DICHLORO-; PYRIDINE
- Pennsylvania** : The following components are listed: METHANE, DICHLORO-; ETHENE, TETRACHLORO-; BENZENE, CHLORO-; PROPANE, 1,2-DICHLORO-; PYRIDINE

California Prop. 65

WARNING: This product can expose you to chemicals including Dichloromethane, Tetrachloroethylene, 1, 2-Dichloropropane, Pyridine, which are known to the State of California to cause cancer, and Methanol, 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.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Dichloromethane	Yes.	-
Tetrachloroethylene	Yes.	-
1,2-Dichloropropane	Yes.	-
Methanol	-	Yes.
Pyridine	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Other information

[History](#)

Date of issue	: 03/28/2018
Date of previous issue	: 04/29/2016
Version	: 7

[Procedure used to derive the classification](#)

Classification	Justification
<input checked="" type="checkbox"/> ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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