

# Safety Data Sheet

Canada

## Section 1. Identification

Product name

**Wash Buffer, 50 ml; part of '2D Fractionation Kit'**

Catalogue Number

80-6501-04



Product type

Liquid.

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

#### Identified uses

Use in laboratories

**Supplier** Cytiva  
Amersham Place  
Little Chalfont  
Buckinghamshire  
HP7 9NA United Kingdom  
+44 0800 515 313

**Importer** Cytiva Canada  
250 Howe Street, Suite 1400-C  
Vancouver, British Columbia, Canada, V6C 3S7  
1 800 463 5800

### In case of emergency

Canada

ChemTrec (US)

1-703-527-3887

## Section 2. Hazard identification

### Classification of the substance or mixture

FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (inhalation) - Category 2  
SKIN CORROSION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Fertility) - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### GHS label elements

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

Highly flammable liquid and vapor.  
Fatal if inhaled.  
Causes severe skin burns and eye damage.  
Suspected of damaging fertility or the unborn child.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements

#### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.



<b>Response</b>	Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
<b>Storage</b>	Store locked up.
<b>Disposal</b>	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 5% Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 79.9% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 79.9%  Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%

### Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	Mixture
<b>Other means of identification</b>	Not available.

#### CAS number/other identifiers

<b>CAS number</b>	Not applicable.		
<b>Ingredient name</b>	<b>% (w/w)</b>	<b>CAS number</b>	
Acetone	40 - 100	67-64-1	
Chloroform	<5	67-66-3	
Hydrochloric acid	<5	7647-01-0	
Isopropyl alcohol	<5	67-63-0	

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

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

### Section 4. First-aid measures

#### Description of necessary first aid measures

<b>Eye contact</b>	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
<b>Inhalation</b>	Get medical attention immediately. Call a poison center or physician. 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. 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.
<b>Skin contact</b>	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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.

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

##### Potential acute health effects

<b>Eye contact</b>	Causes serious eye damage.
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<b>Inhalation</b>	Fatal if inhaled.
<b>Skin contact</b>	Causes severe burns.
<b>Ingestion</b>	No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

<b>Eye contact</b>	Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Skin contact</b>	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
<b>Ingestion</b>	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

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

<b>Notes to physician</b>	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.
<b>Specific treatments</b>	No specific treatment.
<b>Protection of first-aiders</b>	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****Extinguishing media**

<b>Suitable extinguishing media</b>	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet.
<b>Specific hazards arising from the chemical</b>	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.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides
<b>Special protective actions for fire-fighters</b>	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.
<b>Special protective equipment for fire-fighters</b>	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

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	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.
<b>For emergency responders</b>	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".
<b>Environmental precautions</b>	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).

### Methods and materials for containment and cleaning up

<b>Small spill</b>	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.
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. 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.
<b>Advice on general occupational hygiene</b>	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.
<b>Conditions for safe storage, including any incompatibilities</b>	Do not store above the following temperature: -20°C (-4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
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Acetone	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  15 min OEL: 1800 mg/m<sup>3</sup> 15 minutes.  15 min OEL: 750 ppm 15 minutes.  8 hrs OEL: 1200 mg/m<sup>3</sup> 8 hours.  8 hrs OEL: 500 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b>  STEL: 500 ppm 15 minutes.  TWA: 250 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b>  STEL: 500 ppm 15 minutes.  TWA: 250 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  STEV: 2380 mg/m<sup>3</sup> 15 minutes.  STEV: 1000 ppm 15 minutes.  TWAEV: 1190 mg/m<sup>3</sup> 8 hours.  TWAEV: 500 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  STEL: 750 ppm 15 minutes.  TWA: 500 ppm 8 hours.</p>
Chloroform	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  8 hrs OEL: 49 mg/m<sup>3</sup> 8 hours.  8 hrs OEL: 10 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b>  TWA: 2 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b>  TWA: 10 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  TWAEV: 24.4 mg/m<sup>3</sup> 8 hours.  TWAEV: 5 ppm 8 hours.</p>
Hydrochloric acid	<p><b>CA Alberta Provincial (Canada, 4/2009). Skin sensitizer.</b>  C: 3 mg/m<sup>3</sup> 15 minutes.  C: 2 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b>  C: 2 ppm 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b>  C: 2 ppm</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  STEV: 7.5 mg/m<sup>3</sup> 15 minutes.  STEV: 5 ppm 15 minutes.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  CEIL: 2 ppm</p>
Isopropyl alcohol	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  15 min OEL: 984 mg/m<sup>3</sup> 15 minutes.  15 min OEL: 400 ppm 15 minutes.  8 hrs OEL: 492 mg/m<sup>3</sup> 8 hours.  8 hrs OEL: 200 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b>  STEL: 400 ppm 15 minutes.  TWA: 200 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b>  STEL: 400 ppm 15 minutes.  TWA: 200 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  STEV: 1230 mg/m<sup>3</sup> 15 minutes.  STEV: 500 ppm 15 minutes.  TWAEV: 983 mg/m<sup>3</sup> 8 hours.  TWAEV: 400 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  STEL: 400 ppm 15 minutes.  TWA: 200 ppm 8 hours.</p>

**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**

<b>Hygiene measures</b>	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.
<b>Eye/face protection</b>	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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
<b>Skin protection</b>	
<b>Hand protection</b>	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.
<b>Body protection</b>	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.
<b>Other skin protection</b>	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.
<b>Respiratory protection</b>	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

### Appearance

<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Fragrance-like.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Flash point</b>	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Lower and upper explosive (flammable) limits</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility</b>	Not available.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Flow time (ISO 2431)</b>	Not available.



## Section 10. Stability and reactivity

<b>Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	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.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Chloroform	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
Hydrochloric acid	LC50 Inhalation Gas.	Rat	3124 ppm	1 hours
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

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

Name	Category	Route of exposure	Target organs
Chloroform	Category 1	Not determined	Not determined

#### Aspiration hazard

Not available.

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

#### Potential acute health effects

<b>Eye contact</b>	Causes serious eye damage.
<b>Inhalation</b>	Fatal if inhaled.
<b>Skin contact</b>	Causes severe burns.
<b>Ingestion</b>	No known significant effects or critical hazards.



**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Eye contact</b>	Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Skin contact</b>	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
<b>Ingestion</b>	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

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

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

**Long term exposure**

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

**Potential chronic health effects**

Not available.

<b>General</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Carcinogenicity</b>	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	Suspected of damaging the unborn child.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	Suspected of damaging fertility.

**Numerical measures of toxicity****Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Wash Buffer, 50 ml; part of '2D Fractionation Kit'	6803.8	N/A	N/A	1.7	N/A
Acetone	5800	N/A	N/A	N/A	N/A
Chloroform	500	N/A	N/A	3	N/A
Hydrochloric acid	N/A	N/A	N/A	0.5	N/A
Isopropyl alcohol	5000	12800	N/A	N/A	N/A

**Section 12. Ecological information****Toxicity**

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Chloroform	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours





	Acute EC50 2.803 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute LC50 29000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 13.3 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Chronic NOEC 1.8 mg/l Fresh water	Daphnia - Daphnia magna	21 days
Hydrochloric acid	Acute LC50 240000 µg/l Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
Isopropyl alcohol	Acute LC50 282 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Chloroform	-	-	Not readily
Isopropyl alcohol	-	95%; 21 day(s)	-

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Acetone	-0.23	<10	low
Chloroform	1.97	690	high
Hydrochloric acid	0.25	-	low
Isopropyl alcohol	0.05	0.5	low

**Mobility in soil**






<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	Not available.
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**Other adverse effects** No known significant effects or critical hazards.

**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.

**Section 14. Transport information**

	TDG Classification	DOT Classification	ADR/RID	IMDG	IATA
<b>UN number</b>	UN1090	UN1090	UN1090	UN1090	UN1090
<b>UN proper shipping name</b>	Acetone solution	Acetone solution	Acetone solution	Acetone solution	Acetone solution
<b>Transport hazard class(es)</b>	3	3	3	3	3
					
<b>Packing group</b>	II	II	II	II	II
<b>Environmental hazards</b>	No.	No.	No.	No.	No.



<b>Additional information</b>	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).	<b>Reportable quantity</b> - 202.02 lbs / 91.717 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	-	-	-
<b>Special precautions for user</b>	<b>Transport within user's premises:</b> 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.				
<b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	Not available.				

## Section 15. Regulatory information

### Canadian lists

<b>Canadian NPRI</b>	The following components are listed: volatile organic compounds; chloroform; hydrochloric acid; isopropyl alcohol
<b>CEPA Toxic substances</b>	The following components are listed: Volatile organic compounds

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Canada</b>	All components are listed or exempted.
<b>Europe</b>	All components are listed or exempted.
<b>United States</b>	All components are listed or exempted.

## Section 16. Other information

### History

<b>Date of printing</b>	4/23/2020
<b>Date of issue/Date of revision</b>	9/24/2019
<b>Date of previous issue</b>	9/24/2019
<b>Version</b>	6
	sds_author@cytiva.com

### **Key to abbreviations**

ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available



**Procedure used to derive the classification**

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (inhalation) - Category 2	Calculation method
SKIN CORROSION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

**References**

Not available.



Indicates information that has changed from previously issued version.

**Notice to reader**

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