

# 1,2-Dichloropropane

sc-237677

Material Safety Data Sheet



The Power is Question

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

1,2-Dichloropropane

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY:

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C3-H6-Cl2, CH3-CHClCH2-Cl, "propane, 1, 2-dichloro-", "alpha, beta-dichloropropane", "ENT 15, 406", NCI-C55141, "propylene chloride", "alpha, beta-propylene chloride", "RCRA Waste No. U083"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	3		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Harmful by inhalation and if swallowed.  
Highly flammable.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
- Limited evidence exists that the substance may cause irreversible but non-lethal mutagenic effects following a single exposure.
- A fatality occurred when an adult male consumed 50 ml. of 1,2-dichloropropane. Clinical signs included shock, delirium, and cardiovascular collapse. Autopsy confirmed acute centrilobular and mediolobular hepatic necrosis. Several cases of acute poisoning have been reported due to accidental or intentional (suicide) over-exposure to 1,2-dichloropropane. Effects have been mainly on the central nervous system, liver, and kidneys. Haemolytic anaemia and disseminated intravascular coagulation have also been reported. In one case, delirium progressed to irreversible shock, cardiac failure, and death.

##### EYE

- Although the liquid is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

##### SKIN

- The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives.
- Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
- Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
- Two cases of allergic dermatitis have been reported for workers exposed to commercial preparations containing 7%-13 % 1,2-dichloropropane.

A human skin permeability constant has been calculated as  $1 \times 10^{-2}$  cm/hr and based on the fat/air partition coefficient (499) the permeability coefficient for 1,2-dichloropropane was estimated at 2.06 cm/hour.

- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

- Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
- The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of vapors, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
- Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
- Inhalation hazard is increased at higher temperatures.
- Dichloroprenes at concentrations exceeding 1500 ppm may cause lachrymation, dizziness, gasping, refusal to breathe, coughing, substernal pain, bronchospasm, extreme respiratory distress, coma and delayed injury to liver, kidney and heart. Effects may continue for years after exposure and include malaise, headache, chest and abdominal discomfort and irritability.
- Acute intoxication by halogenated aliphatic hydrocarbons appears to take place over two stages. Signs of a reversible narcosis are evident in the first stage and in the second stage signs of injury to organs may become evident, a single organ alone is (almost) never involved.
- Depression of the central nervous system is the most outstanding effect of most halogenated aliphatic hydrocarbons. Inebriation and excitation, passing into narcosis, is a typical reaction. In severe acute exposures there is always a danger of death from respiratory failure or cardiac arrest due to a tendency to make the heart more susceptible to catecholamines (adrenalin).

#### CHRONIC HEALTH EFFECTS

- Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Exposure to the material may result in a possible risk of irreversible effects. The material may produce mutagenic effects in man. This concern is raised, generally, on the basis of appropriate studies with similar materials using mammalian somatic cells in vivo. Such findings are often supported by positive results from in vitro mutagenicity studies.

Repeated or prolonged exposure to 1,2-dichloropropane may cause kidney or liver damage. Laboratory experiments have indicated the substance may be mutagenic. Maternally toxic doses may effect the foetus. Doses, sufficiently high to produce death in some animals, produced testicular effects.

Studies did not indicate any teratogenic activity of 1,2-dichloropropane at oral dose levels up to 125 mg/kg body weight in the rat and 150 mg/kg body weight in the rabbit. However, at these dose levels, 1,2-dichloropropane was maternally toxic and foetotoxic, as evidenced by central nervous system associated clinical signs, decreased maternal body weight gain, and delayed ossification of bones in the fetuses. The NOELs are 30 and 50 mg/kg body weight per day for the rat and rabbit, respectively. 1,2-Dichloropropane was mutagenic in bacteria in most studies with, and without, metabolic activation, but very high dose levels were used of up to 10 mg/plate. In Chinese hamster ovary cells, 1,2-dichloropropane caused chromosomal aberrations and sister chromatid exchange; in Chinese hamster V79 cells, it increased the sister chromatid exchange. In an in vitro system with human lymphocytes, the tritiated thymidine uptake and cell viability in cultures grown with, and

without, rat liver metabolizing system, were similar to those in control cultures. The results of a sex-linked recessive lethal test in *Drosophila melanogaster* were negative. A dominant lethal test in rats, dosed for 14 weeks via drinking-water containing 1,2-dichloropropane, followed by 2 weeks of mating, was negative. In a carcinogenicity study on mice administered 125 or 250 mg 1,2-dichloropropane/kg body weight by gavage, a dose-related increase in the incidence of liver adenomas was observed. The incidence of liver adenomas in treated groups was higher than that in the concurrent control group, but was within the historical control range. In rats administered dose levels of 125 and 250 mg/kg body weight (females) and 62 and 125 mg/kg body weight (males), by gavage, for 5 days per week over 113 weeks, a slight increase in the incidence of mammary gland adenocarcinomas exceeding the historical range was observed in high-dose females.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
1,2-dichloropropane	78-87-5	>98

### Section 4 - FIRST AID MEASURES

#### SWALLOWED

· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise: · Avoid giving milk or oils. · Avoid giving alcohol.

#### EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

#### SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

#### INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

#### NOTES TO PHYSICIAN

- for 1,3-dichloropropene:
  - Remove ingested material by gastric aspiration and lavage. Use water as the lavage fluid.
  - Demulcents such as alumina gels, but no fats or oils.
  - Opiates, and atropine for the control of pain and intestinal spasm.
  - Aminophylline (theophylline-ethylenediamine) intravenously slowly to correct bronchospasm.
  - Oxygen and other measures for the management of adult respiratory distress syndrome.
  - Digitalis and/or lidocaine in the event of cardiac disturbances.
  - Wash extensively any contaminated areas of skin with soap and water. Discard contaminated clothing.
  - A therapeutic trial with BAL or N-acetylcysteine might be useful if instituted promptly after the exposure.
  - Repeated function tests are desirable to detect and evaluate possible liver and kidney injury.

GOSSELIN, SMITH & HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

Gosselin suggests management of poisoning is analogous to that instituted in exposure to "dichloropropenes"

When C14-labelled material was introduced by stomach tube into rats, 90% of the label appeared in the urine, faeces, and expired air within 24 hours.

### Section 5 - FIRE FIGHTING MEASURES

Vapor Pressure (mmHg):	39.903 @ 20C
Upper Explosive Limit (%):	14.5
Specific Gravity (water=1):	1.156
Lower Explosive Limit (%):	3.4

#### EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.

#### FIRE FIGHTING

- Alert Emergency Responders and tell them location and nature of hazard.
- May be violently or explosively reactive.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 1000 metres in all directions.

#### GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Liquid and vapor are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidizers.

Combustion products include: carbon dioxide (CO<sub>2</sub>), hydrogen chloride, phosgene, other pyrolysis products typical of burning organic material.

#### FIRE INCOMPATIBILITY

- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

## PERSONAL PROTECTION

Glasses:

Safety Glasses.

Chemical goggles.

Gloves:

1.PVA 2.VITON 3.TEFLON

Respirator:

Type A Filter of sufficient capacity

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

### RECOMMENDED STORAGE METHODS

- DO NOT use aluminum or galvanized containers.

Packing as supplied by manufacturer. Plastic containers may only be used if approved for flammable liquid.

<p>.

- For low viscosity materials (i): Drums and jerricans must be of the non-removable head type. (ii): Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C).

### STORAGE REQUIREMENTS

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	1,2-dichloropropane (1,2-DICHLOROPROPANE)	0.05							
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)	1,2-dichloropropane (1,2-DICHLOROPROPANE)	0.007							
US - Minnesota Permissible Exposure Limits (PELs)	1,2-dichloropropane (Propylene dichloride)	75	350	110	510				
Canada - Alberta Occupational Exposure Limits	1,2-dichloropropane (1,2-Dichloropropane (Propylene dichloride))	10	46						

Canada - British Columbia Occupational Exposure Limits	1,2-dichloropropane (Propylene dichloride Revised 2006)	75		110		S
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	360	110	510	
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350			
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350	110	510	
US - Idaho - Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350			
US - California Permissible Exposure Limits for Chemical Contaminants	1,2-dichloropropane (Propylene dichloride; 1,2-dichloropropane)	75	350	110	510	
US ACGIH Threshold Limit Values (TLV)	1,2-dichloropropane (Propylene dichloride)	10				TLV Basis: upper respiratory tract irritation; body weight effects
US - Hawaii Air Contaminant Limits	1,2-dichloropropane (Propylene dichloride)	75	350	110	510	
US - Alaska Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350	110	510	
US - Michigan Exposure Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350	110	510	
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	1,2-dichloropropane (Propylene dichloride)	75		110		
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	1,2-dichloropropane (1,2-Dichloropropane, see Propylene dichloride)	75	350	115	525	
US - Washington Permissible exposure limits of air	1,2-dichloropropane (1, 2-Dichloropropane (Propylene dichloride))	75		110		

contaminants					
US - Oregon Permissible Exposure Limits (Z-1)	1,2-dichloropropane (Propylene dichloride)	75	350		
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	1,2-dichloropropane (Propylene dichloride)	75	350		
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	1,2-dichloropropane (1,2-Dichloropropane)	75	347	110	508
US OSHA Permissible Exposure Levels (PELs) - Table Z1	1,2-dichloropropane (Propylene dichloride)	75	350		
Canada - Prince Edward Island Occupational Exposure Limits	1,2-dichloropropane (Propylene dichloride)	10			TLV Basis: upper respiratory tract irritation; body weight effects
Canada - Northwest Territories Occupational Exposure Limits (English)	1,2-dichloropropane (Propylene dichloride (1,2-Dichloropropane))	75	345	115	510
Canada - Northwest Territories Occupational Exposure Limits (English)	1,2-dichloropropane (1,2-Dichloropropane (Propylene dichloride))	75	345	110	510
Canada - Nova Scotia Occupational Exposure Limits	1,2-dichloropropane (Propylene dichloride)	10			TLV Basis: upper respiratory tract irritation; body weight effects
US TSCA New Chemical Exposure Limits (NCEL)	1,2-dichloropropane (Halogenated alkanes (P84-106/107))	1.0			

ENDOELTABLE

## PERSONAL PROTECTION



## RESPIRATOR

Type A Filter of sufficient capacity

Consult your EHS staff for recommendations

## EYE

- Safety glasses with side shields
- Chemical goggles.

## HANDS/FEET

- Wear chemical protective gloves, eg. PVC.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- Neoprene gloves.

## OTHER

- Overalls.
- PVC Apron.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

## ENGINEERING CONTROLS

- For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Sinks in water.

State	Liquid	Molecular Weight	112.99
Melting Range (°F)	-148	Viscosity	Not Available
Boiling Range (°F)	203- 204.8	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	39.992	pH (1% solution)	Not applicable
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	1034.996	Vapor Pressure (mmHg)	39.903 @ 20C
Upper Explosive Limit (%)	14.5	Specific Gravity (water=1)	1.156
Lower Explosive Limit (%)	3.4	Relative Vapor Density (air=1)	3.89
Volatile Component (%vol)	100	Evaporation Rate	Not available
1,2-DICHLOROPROPANE			
log Kow (Prager 1995):			2.28
log Kow (Sangster 1997):			2.02

### APPEARANCE

Clear, colourless, mobile liquid with chloroform-like odour; does not mix well with water (0.027 g/100 g, 20 C). Miscible in organic solvents. Despite the low flash point does not readily catch fire; fire-point is 38 deg C.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

- Segregate from:
  - powdered metals such as aluminium, zinc and
  - alkali metals such as sodium, potassium and lithium.
- May attack, soften or dissolve rubber, many plastics, paints and coatings.
- Avoid strong acids, bases.
- Avoid magnesium, aluminium and their alloys, brass and steel.
- Avoid reaction with oxidizing agents.

#### Dichloropropane

- reacts violently with strong oxidisers
- can decompose in strong acids or acid fumes with formation of hydrogen chloride vapours
- attacks some plastics, coatings and rubber
- flow or agitation may generate electrostatic charges due to low conductivity
- 1,1-dichloropropane (CAS 78-99-9)/ 1,2-dichloropropane (CAS RN: 78-87-5)
- reacts with aluminium and other light metals, forming explosive azide compounds
- 1,3-dichloropropane (CAS RN: 142-28-9)
- may cause pitting attack and stress corrosion to austenitic stainless steels.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

### 1,2-DICHLOROPROPANE

#### TOXICITY AND IRRITATION

##### 1,2-DICHLOROPROPANE:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 1947 mg/kg	Eye (rabbit): 500 mg - Mild
Oral (rat) LD50: 2204 mg/kg *	
Inhalation (rat) LC50: 14000 mg/m <sup>3</sup> /8h	
Oral (mouse) LD50: 860 mg/kg	
Inhalation (mouse) LC50: 480 ppm/10h*	
Dermal (rabbit) LD50: 8750 mg/kg	
Oral (guinea) pig: LD50 2000 mg/kg	

- The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

#### The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

\* Dow Chemical

#### CARCINOGEN

1,2-DICHLOROPROPANE	US Environmental Defense Scorecard Recognized Carcinogens	Reference(s)	P65
1,2-DICHLOROPROPANE	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65

## Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

#### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
1,2-dichloropropane	HIGH	HIGH	LOW	HIGH

#### GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles

Name / EHS TRN A1a A1b A1 A2 B1 B2 C1 C2 C3 D1 D2 D3 E1 E2 E3 Cas No / RTECS No \_\_\_\_\_  
 \_\_\_\_\_ 1, 2- 606 9 2 1 1 NR 2 1 1 0 2 2 2 SD 2 Dichlorop ropane / CAS:78- 87- 5 / TX9625000

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships)  
 NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation,



B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acutemammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation& corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury, N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard. (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)

## Section 13 - DISPOSAL CONSIDERATIONS

### US EPA Waste Number & Descriptions

A. General Product Information

Ignitability characteristic: use EPA hazardous waste number D001 (waste code I)

B. Component Waste Numbers

When 1,2-dichloropropane is present as a solid waste as a discarded commercial chemical product, off-specification species, as a container residue, or a spill residue, use EPA waste number U083 (waste code T).

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

! Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

## Section 14 - TRANSPORTATION INFORMATION

DOT:

Symbols: None Hazard class or Division: 3

Identification Numbers: UN1279 PG: II

Label Codes: 3 Special provisions: IB2, N36, T4, TP1

Packaging: Exceptions: 150 Packaging: Non- bulk: 202

Packaging: Exceptions: 150 Quantity limitations: 5 L

Passenger aircraft/rail:

Quantity Limitations: Cargo 60 L Vessel stowage: Location: B aircraft only:

Vessel stowage: Other: None

Hazardous materials descriptions and proper shipping names: 1,2-Dichloropropane

### Air Transport IATA:

ICAO/IATA Class: 3 ICAO/IATA Subrisk: None

UN/ID Number: 1279 Packing Group: II

Special provisions: None

Cargo Only

Packing Instructions: 308 Maximum Qty/Pack: 60 L

Passenger and Cargo Passenger and Cargo

Packing Instructions: 306 Maximum Qty/Pack: 5 L

Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity

Packing Instructions: Y306 Maximum Qty/Pack: 1 L

Shipping Name: 1,2-DICHLOROPROPANE

### Maritime Transport IMDG:

IMDG Class: 3 IMDG Subrisk: None

UN Number: 1279 Packing Group: II

EMS Number: F-E , S-D Special provisions: None

Limited Quantities: 1 L

Shipping Name: 1,2-DICHLOROPROPANE

## Section 15 - REGULATORY INFORMATION

### 1,2-dichloropropane (CAS: 78-87-5) is found on the following regulatory lists;

"Canada - Alberta Occupational Exposure Limits", "Canada - British Columbia Occupational Exposure Limits", "Canada - Northwest Territories Occupational Exposure Limits (English)", "Canada - Nova Scotia Occupational Exposure Limits", "Canada - Prince Edward Island Occupational Exposure Limits", "Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens", "Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)", "Canada - Saskatchewan Industrial Hazardous Substances", "Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits", "Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances", "Canada Ingredient Disclosure List (SOR/88-64)", "Canada National Pollutant Release Inventory (NPRI)", "Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals", "US - Alaska Limits for Air Contaminants", "US - California Air Toxics ""Hot Spots"" List (Assembly Bill 2588) Substances for which emissions must be quantified", "US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List", "US - California Permissible Exposure Limits for Chemical Contaminants", "US - California Proposition 65 - Carcinogens", "US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens", "US - California Toxic Air Contaminant List Category IV", "US - Connecticut Hazardous Air Pollutants", "US - Hawaii Air Contaminant Limits", "US - Idaho - Limits for Air Contaminants", "US - Maine Chemicals of High Concern List", "US - Massachusetts Oil & Hazardous Material List", "US - Michigan Exposure Limits for Air Contaminants", "US - Minnesota Hazardous Substance List", "US - Minnesota Permissible Exposure Limits (PELs)", "US - New Jersey Right to Know Hazardous Substances", "US - Oregon Permissible Exposure Limits (Z-1)", "US - Pennsylvania - Hazardous Substance List", "US - Rhode Island Hazardous Substance List", "US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US - Vermont Hazardous Constituents", "US - Vermont Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US - Washington Class A toxic air pollutants: Known and Probable Carcinogens", "US - Washington Dangerous waste constituents list", "US - Washington Discarded Chemical Products List - ""U"" Chemical Products", "US - Washington Permissible exposure limits of air contaminants", "US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants", "US ACGIH Threshold Limit Values (TLV)", "US ACGIH Threshold Limit Values (TLV) - Carcinogens", "US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)", "US CAA (Clean Air Act) - HON Rule - Organic HAPs (Hazardous Air Pollutants)", "US Clean Air Act - Hazardous Air Pollutants", "US CWA (Clean Water Act) - Priority Pollutants", "US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides", "US DOE Temporary Emergency Exposure Limits (TEELs)", "US EPA High Production Volume Program Chemical List", "US EPA Master Testing List - Index I Chemicals Listed", "US EPA National Priorities List - Superfund Chemical Data Matrix (SCDM) - Hazard Ranking System - Hazardous Substance Benchmarks", "US EPCRA Section 313 Chemical List", "US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act", "US NIOSH Recommended Exposure Limits (RELs)", "US OSHA Permissible Exposure Levels (PELs) - Table Z1", "US RCRA (Resource Conservation & Recovery Act) - Appendix IX to Part 264 Ground-Water Monitoring List 1", "US RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261", "US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Inorganic and Organic Constituents 1", "US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Wastes", "US RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards", "US -Texas Air Monitoring Comparison Values for Evaluating Carbonyls", "US Toxic Substances Control Act (TSCA) - Inventory", "US TSCA Section 12(b) - List of Chemical Substances Subject to Export Notification Requirements", "US TSCA Section 4/12 (b) - Sunset Date/Status", "US TSCA Section 8 (a) - Preliminary Assessment Information Rules (PAIR) - Reporting List", "US TSCA Section 8 (d) - Health and Safety Data Reporting", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water"

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

- Skin contact may produce health damage\*.
  - Cumulative effects may result following exposure\*.
  - Limited evidence of a carcinogenic effect\*.
  - Repeated exposure potentially causes skin dryness and cracking\*.
  - Vapours potentially cause drowsiness and dizziness\*.
  - Exposure may produce irreversible effects\*.
- \* (limited evidence).

*Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.*

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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