

# Propoxur

sc-258043



The Power to Question

## Material Safety Data Sheet

Hazard Alert Code  
Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

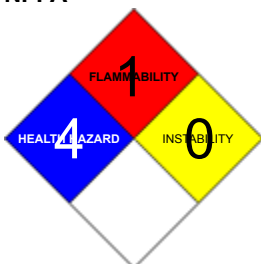
### PRODUCT NAME

Propoxur

### 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

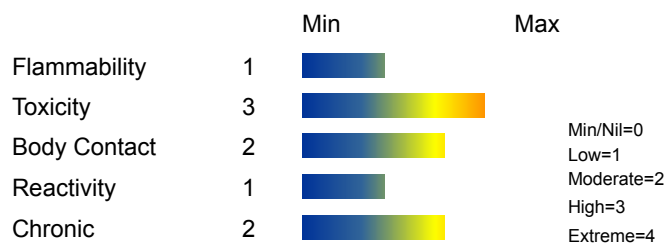
ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C11-H15-N-O3, "o-isopropoxyphenyl N-methylcarbamate", "2-isopropoxyphenyl methylcarbamate", "2-(1-methylethoxy)phenol methylcarbamate", N-methyl-2-isopropoxyphenylcarbamate, "phenol, o-isopropoxy-, methylcarbamate", "carbamic acid, methyl-, o-isopropoxyphenyl ester", "carbamic acid, methyl-, 2-(1-methethoxy)phenylester", "2-(1-methylethoxy)phenol-methylcarbamate", "o-isopropoxyphenyl methylcarbamate", Aprocarb, Arprocarb, "Bay 9010", "Bay 39007", Baygon, Bifex, Blattanex, Boygon, "propotox M", Brygou, "Chemagro 9010", "ENT 25, 671", o-IMPC, Invisi-gard, Isocarb, OMS-33, PHC, Propyon, Sendran, Suncide

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS



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



## CANADIAN WHMIS SYMBOLS



### EMERGENCY OVERVIEW

#### RISK

Toxic by inhalation and if swallowed.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.
  - Ingestion may produce nausea, vomiting, depressed appetite, abdominal cramps, and diarrhoea.
  - The human acute lethal dose of propoxur is about 200 ml of a concentrated solution.
- Accidental or intentional ingestion causes tachycardia, pinpoint pupils, coma and pulmonary oedema (evidenced by frothing and rales).

##### EYE

- There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
- Direct eye contact can produce tears, eyelid twitches, pupil contraction, loss of focus, and blurred or dimmed vision.

Dilation of the pupils occasionally occurs.

##### SKIN

- The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures.
  - Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
  - There may be sweating and muscle twitches at site of contact.
- Reaction may be delayed by hours.
- Open cuts, abraded or irritated skin should not be exposed to this material.
  - 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 dusts, generated by the material, during the course of normal handling, may produce toxic effects.
  - The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
  - Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
- If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.
- Poisoning due to cholinesterase inhibitors causes symptoms such as increased blood flow to the nose, watery discharge, chest discomfort, shortness of breath and wheezing.
- Other symptoms include increased production of tears, nausea and vomiting, diarrhoea, stomach pain, involuntary passing of urine and stools, chest pain, breathing difficulty, low blood pressure, irregular heartbeat, loss of reflexes, twitching, visual disturbances, altered pupil size, convulsions, lung congestion, coma and heart failure.
- Symptoms of carbamate poisoning are similar to that of organophosphate poisoning, however, recovery from carbamate poisoning is quicker and generally less likely to be cause death.
  - Reports of large scale spray programs, using propoxur in malaria control, indicate signs of intoxication amongst spray workers and residents include lethargy, sweating, nausea and headache.

Amongst spraymen with gross dermal and inhalation exposures, tachycardia, emesis and vertigo ensued.

#### **CHRONIC HEALTH EFFECTS**

■ Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

Repeated or prolonged exposures to cholinesterase inhibitors produce symptoms similar to acute effects. In addition workers exposed repeatedly to these substances may exhibit impaired memory and loss of concentration, severe depression and acute psychosis, irritability, confusion, apathy, emotional liability, speech difficulties, headache, spatial disorientation, delayed reaction times, sleepwalking, drowsiness or insomnia. An influenza-like condition with nausea, weakness, anorexia and malaise has been described. There is a growing body of evidence from epidemiological studies and from experimental laboratory studies that short-term exposure to some cholinesterase-inhibiting insecticides may produce behavioural or neuro-chemical changes lasting for days or months, presumably outlasting the cholinesterase inhibition. Although the number of adverse effects following humans poisonings subside, there are still effects in some workers months after cholinesterase activity returns to normal. These long-lasting effects include blurred vision, headache, weakness, and anorexia. The neurochemistry of animals exposed to chlorpyrifos or fenthion is reported to be altered permanently after a single exposure. These effects may be more severe in developing animals where both acetyl- and butyrylcholinesterase may play an integral part in the development of the nervous system. Padilla S., The Neurotoxicity of Cholinesterase-Inhibiting Insecticides Past and Present Evidence Demonstrating Persistent Effects. Inhalation Toxicology 7903-907, 1995.

A lifetime propoxur feeding study involving certain strains of rat produced hyperplasia of the bladder epithelium at 50 mg/kg and bladder carcinoma and uterine carcinomas at 250 mg/kg The lifetime no-observed-adverse-level (NOAEL) for mice was 300 mg/kg/day. The chronic dog NOAEL was 6.25 mg/kg/day.

### **Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

NAME	CAS RN	%
propoxur	114-26-1	>95

### **Section 4 - FIRST AID MEASURES**

#### **SWALLOWED**

If swallowed

- Contact a Poisons Information Centre or a doctor at once.
- If swallowed, activated charcoal may be advised.
- Give atropine if instructed.
- REFER FOR MEDICAL ATTENTION WITHOUT DELAY.

#### **EYE**

If this product comes in contact with the eyes

- Immediately hold eyelids apart and flush the eye continuously with 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.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

#### **SKIN**

If product comes in contact with skin

- Contact a Poisons Information Centre or a doctor.
- DO NOT allow clothing wet with product to remain in contact with skin, strip all contaminated clothing including boots.
- Quickly wash affected areas vigorously with soap and water.
- DO NOT give anything by mouth to a patient showing signs of narcosis, i.e. losing consciousness.

## INHALED

- If spray mist, vapour are inhaled, remove from contaminated area.
- Contact a Poisons Information Centre or a doctor at once.
- Lay patient down in a clean area and strip any clothing wet with spray.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

## NOTES TO PHYSICIAN

- Following acute or short term repeated exposures to carbamates
- Carbamylation of acetylcholinesterase produces symptoms of muscarinic and nicotinic poisoning. Clinical effects disappear within 24 hours following spontaneous, in vivo, hydrolysis of the complex. Symptoms develop within 15 minutes to 2 hours.
- Access the adequacy of the airway and ventilation and use oxygen, suction, intubation, artificial ventilation, intravenous lines and cardiac monitors as needed.
- Usual methods of decontamination (Ipecac / lavage / charcoal / cathartics) may be used when the patient presents within 2-4 hours after exposure. When Ipecac Syrup is used the patient must be observed closely to prevent aspiration.
- Atropine is the antidote of choice. Pralidoxime [and other oximes] usually is unnecessary and, in any case, may reduce the effectiveness of atropine. [Mild cases should be given 1 to 2 mg intramuscularly every 10 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should given 2 to 4 mg intramuscularly every 10 minutes until fully atropinized, then every 30 to 60 minutes to maintain the effect for at least 12 hours - Incitec] [Ellenhorn and Barceloux Medical Toxicology]

Transformed in vivo by depropylation to 2-hydroxyphenol-N-methylcarbamate and hydrolysis to phenol. Depending on dose urine accounts for some 60% to 95% of the dose, expired CO<sub>2</sub> for 20-26% and small amounts can be found in the faeces.

## Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available
Specific Gravity (water=1)	Not available.
Lower Explosive Limit (%)	Not available

## EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

## FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).
- If containment of runoff is not possible, consider allowing fire to burn-out. Use of water may present a significant pollution hazard.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

## GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form

flammable dust clouds.; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.

- In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL).are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC)
- A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.

Combustion products include carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

Decomposes on heating and produces toxic fumes of methyl isocyanate and unidentified organic compounds.

#### **FIRE INCOMPATIBILITY**

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

### **Section 6 - ACCIDENTAL RELEASE MEASURES**

#### **MINOR SPILLS**

- Clean up waste regularly and abnormal spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.

#### **MAJOR SPILLS**

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.

### **Section 7 - HANDLING AND STORAGE**

#### **PROCEDURE FOR HANDLING**

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers.
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

#### **RECOMMENDED STORAGE METHODS**

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.
- Glass container is suitable for laboratory quantities

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure.

<.

#### **STORAGE REQUIREMENTS**

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
Canada - Alberta Occupational Exposure Limits	propoxur (Propoxur)		0.5						
Canada - British Columbia Occupational Exposure Limits	propoxur (Propoxur)		0.5						
US ACGIH Threshold Limit Values (TLV)	propoxur (Propoxur)		0.5						TLV® Basis Cholinesterase inhib ; BEIA
US NIOSH Recommended Exposure Limits (RELs)	propoxur (Propoxur)		0.5						
US - Minnesota Permissible Exposure Limits (PELs)	propoxur (Propoxur (Baygon))		0.5						
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	propoxur (Propoxur (Baygon))		0.5						
US - California Permissible Exposure Limits for Chemical Contaminants	propoxur (Propoxur; 2-isopropoxyphenyl N-methyl carbamate)		0.5						
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	propoxur (Propoxur (Baygon))		0.5						
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	propoxur (Propoxur)		0.5						

Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	propoxur (Propoxur)	0.5	1.5	
US - Hawaii Air Contaminant Limits	propoxur (Propoxur (Baygon))	0.5	2	
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	propoxur (Baygon (Propoxur))	-	0.5	- 2
US - Washington Permissible exposure limits of air contaminants	propoxur (Propoxur (Baygon))	0.5	1.5	
US - Alaska Limits for Air Contaminants	propoxur (Propoxur (Baygon7))	0.5		
Canada - Nova Scotia Occupational Exposure Limits	propoxur (Propoxur)	0.5		TLV Basis cholinesterase inhibition. BEI-A
Canada - Prince Edward Island Occupational Exposure Limits	propoxur (Propoxur)	0.5		TLV® Basis Cholinesterase inhib ; BEIA
US - Michigan Exposure Limits for Air Contaminants	propoxur (Propoxur (Baygon))	0.5		
Canada - Northwest Territories Occupational Exposure Limits (English)	propoxur (Baygon (Propoxur))	0.5	2	

## PERSONAL PROTECTION



## RESPIRATOR

- Particulate dust filter. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

## EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an



account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

#### **HANDS/FEET**

- Wear chemical protective gloves, eg. PVC.
  - Wear safety footwear or safety gumboots, eg. Rubber
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include
- frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity

#### **OTHER**

- Overalls.
- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.
- Ensure that there is a supply of atropine tablets on hand
- Ensure all employees have been informed of symptoms of cholinesterase poisoning and that the use of atropine in first aid is understood .

#### **ENGINEERING CONTROLS**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

### **Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

#### **PHYSICAL PROPERTIES**

Does not mix with water.

Toxic or noxious vapours/gas.

State	DIVIDED SOLID	Molecular Weight	209.24
Melting Range (°F)	197	Viscosity	Not Applicable
Boiling Range (°F)	Not available.	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	Not available	pH (1% solution)	Not available.
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	Not available.
Lower Explosive Limit (%)	Not available	Relative Vapour Density (air=1)	7.2
Volatile Component (%vol)	Negligible	Evaporation Rate	Not applicable
propoxur			
log Kow (Sangster 1997)		1.52	

#### **APPEARANCE**

Crystalline solid, odorless. Very slightly soluble in water (approx. 0.2%). Soluble in methanol, acetone and many organic solvents, but only slightly soluble in cold hydrocarbons.

## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

### STORAGE INCOMPATIBILITY

- Carbamates are incompatible with strong acids and bases, and especially incompatible with strong reducing agents such as hydrides.
- Flammable gaseous hydrogen is produced by the combination of active metals or nitrides with carbamates.
- Strongly oxidising acids, peroxides, and hydroperoxides are incompatible with carbamates.
- Avoid strong bases.

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

## Section 11 - TOXICOLOGICAL INFORMATION

propoxur

### TOXICITY AND IRRITATION

#### PROPOXUR

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

Carbamate pesticides are less dangerous than organophosphorus pesticides. It requires higher dose to produce toxicity or mortality. However, its toxicity via skin contact is low to moderate. Its rapid metabolism causes acute toxic effect but subsequent rapid recovery. It may cause skin and eye irritation, increased pigmentation, sperm abnormalities, sensitization, cancer, mutations and genetic and foetal defects. It is easily absorbed through the skin, mucous membranes, airway and digestive tract. It can cause changes to the function of the blood-making system and the liver and kidney, at higher concentrations it can cause degeneration of the liver, kidney and testes. Its metabolites are detectable in urine.

#### For propoxur

Acute toxicity Propoxur is highly toxic via the oral route, with reported LD50 values of approximately 100 mg/kg in rats and mice . An oral LD50 of 40 mg/kg is reported for guinea pigs.

### CARCINOGEN

Propoxur	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A3
propoxur	US - Rhode Island Hazardous Substance List	IARC	
PROPOXUR	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	OPP-CAN, P65-CAND
TWA_MG_M3~	US - Maine Chemicals of High Concern List	Carcinogen	A3
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	CA Prop 65
TWA_MG_M3~	Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens	Notes	TLV® Basis Cholinesterase inhib ; BEIA
TWAPPM~	Canada - Prince Edward Island Occupational Exposure Limits - Carcinogens	Notes	TLV Basis cholinesterase inhibition. BEI-A

## Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

## Section 13 - DISPOSAL CONSIDERATIONS

### US EPA Waste Number & Descriptions

#### B. Component Waste Numbers

When propoxur 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 U411 (waste code T).

#### Disposal Instructions

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

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

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. 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. In most instances the supplier of the material should be consulted.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Consult manufacturer for recycling options.
- Consult Land Waste Management Authority for disposal options.
- For disposal of residue:
  - Add with stirring to strongly alkaline solution of calcium hypochlorite. Let stand for 24 hours and then route cyanate to sewage treatment plant.

OR

- Mix with flammable solvent and spray into incinerator equipped with afterburner and scrubber.
- Decontaminate empty containers.
- Return containers to drum reconditioner or recycler.

OR

- Puncture containers to prevent reuse and bury at an authorised landfill.

## Section 14 - TRANSPORTATION INFORMATION



DOT:

Symbols:	None	Hazard class or Division:	6.1
Identification Numbers:	UN2757	PG:	III

Label Codes:	6.1	Special provisions:	IB8, IP3, T1, TP33
Packaging: Exceptions:	153	Packaging: Non-bulk:	213
Packaging: Exceptions:	153	Quantity limitations: Passenger aircraft/rail:	100 kg
Quantity Limitations: Cargo aircraft only:	200 kg	Vessel stowage: Location:	A
Vessel stowage: Other:	40	S.M.P.:	YES

Hazardous materials descriptions and proper shipping names:

Carbamate pesticides, solid, toxic

**Air Transport IATA:**

ICAO/IATA Class:	6.1	ICAO/IATA Subrisk:	None
UN/ID Number:	2757	Packing Group:	III
Special provisions:	A3		

Cargo Only

Packing Instructions:	677	Maximum Qty/Pack:	200 kg
Passenger and Cargo		Passenger and Cargo	
Packing Instructions:	670	Maximum Qty/Pack:	100 kg
Passenger and Cargo Limited Quantity		Passenger and Cargo Limited Quantity	
Packing Instructions:	Y645	Maximum Qty/Pack:	10 kg

Shipping Name: CARBAMATE PESTICIDE, SOLID, TOXIC \*(CONTAINS PROPOXUR)

**Maritime Transport IMDG:**

IMDG Class:	6.1	IMDG Subrisk:	None
UN Number:	2757	Packing Group:	III
EMS Number:	F-A,S-A	Special provisions:	61 223 274
Limited Quantities:	5 kg	Marine Pollutant:	Yes

Shipping Name: CARBAMATE PESTICIDE, SOLID, TOXIC(contains propoxur)

## Section 15 - REGULATORY INFORMATION

**ppropoxur (CAS: 114-26-1) 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 Occupational Health and Safety Regulations - Contamination Limits","Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances","Canada Domestic Substances List (DSL)","International Maritime Dangerous Goods Requirements (IMDG Code) - Marine Pollutants","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","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 Toxic Air Contaminant List Category VI","US - Connecticut Hazardous Air Pollutants","US - Delaware Pollutant Discharge Requirements - Reportable Quantities","US - Hawaii Air Contaminant Limits","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 - 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 Dangerous waste constituents list","US - Washington Discarded Chemical Products List - ""U"" Chemical Products","US - Washington Permissible exposure limits of air contaminants","US - Wisconsin Control of Hazardous Pollutants - Emission Thresholds, Standards and Control Requirements (Pesticides, Rodenticides, Insecticides, Herbicides or Fungicides)","US ACGIH Threshold Limit Values (TLV)","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US Clean Air Act - Hazardous Air Pollutants","US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides","US Department of Transportation (DOT) Marine Pollutants - Appendix B","US DOE Temporary Emergency Exposure Limits (TEELs)","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 RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Wastes","US RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards","WHO Guidelines for Drinking-water Quality - Chemicals excluded from guideline value derivation"

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

- Skin contact may produce health damage\*.
- Cumulative effects may result following exposure\*.
- May produce discomfort of the eyes\*.

\* (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.

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