Material Safety Data Sheet
U.S. Department of Labor (OSHA 29 CFR 1910.1200)

1: Product and Company Identification

Product: 655-492 Prentox® Vapon™ 20% Emulsifiable Concentrate

Manufacturer's Name: Prentiss Incorporated
C. B. 2000
Floral Park, NY 11001
Telephone Number: (516) 326-1919

2: Composition/Information on Ingredients

Component:		OSHA PEL	ACGIH TLV	%
Dichlorvos (CAS # 62-73-7)		(TWA) 1.0 mg/M^3	(TWA) 0.9 mg/M^3 (Skin)	20.0
(2,2-dichlorovinyl dimethyl phosphate)				
Related Compounds to Dichlorvos				1.4
Xylene Range Aromatic Solvent (CAS # 64742-95-6)			See below	75.0
Contains the following ingredients by weight:				
1,2,4-Trimethyl Benzene (CAS # 95-63-6)	32.0	(TWA) 25 ppm		
Mixed Xylenes (CAS # 1330-20-7)	3.0	(TWA) 100 ppm		
Cumene (CAS # 98-82-8)	1.5	(TWA) 50 ppm		
Ethyl Benzene (CAS # 100-41-4)	0.5	(TWA) 100 ppm		
Emulsifier (CAS # 051811-79-1)			N/D	5.0

3: Hazards Identification:

EMERGENCY OVERVIEW

Danger! Poison! Poisonous if swallowed, inhaled or absorbed through skin and eyes. Rapidly absorbed through skin. Repeated inhalation or skin contact may, without symptoms, progressively increase susceptibility to Dichlorvos (DDVP) poisoning.

Routes of Exposure: Inhalation: Yes. **Skin:** Yes. **Ingestion:** Yes.
Dichlorvos (DDVP) is poisonous if swallowed, inhaled or absorbed through skin or eyes. Toxicity of other components: This product contains a Xylene Range Aromatic Solvent composed of xylenes, ethylbenzenes and aromatic naphtha containing trimethylbenzenes. Inhalation of solvent vapors at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress, and coma. Exposure to extremely high levels of xylenes may cause kidney or liver damage.

Signs of Acute Overexposure: Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, abdominal cramps, excessive sweating, salivation, and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion. In extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur.

Signs of Chronic Overexposure: Repeated exposure to small doses of DDVP or other organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed.

Carcinogenicity: NTP: No. **IARC Monographs:** Possible (Group 2B). **OSHA Regulated:** No.

EPA has classified Dichlorvos as a Class C possible human carcinogen. **CARE SHOULD BE EXERCISED IN HANDLING THIS PRODUCT.**

Medical Conditions Generally Aggravated by Exposure: Pre existing conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. These include: (for plasma) genetic cholinesterase deficiency, advanced liver disease, chronic alcoholism, malnutrition, dermatomyositis, existing toxicity from exposure to carbon disulfide, bezalkonium salts, organic mercury compounds, ciguatoxins of solanines, and (for RBC) hemolytic anemias.

4: First Aid Measures:

If swallowed: Call a physician or Poison Control Center immediately. Gastric lavage is indicated if material was taken internally. Do not induce vomiting unless other treatment is not available. Vomiting may cause aspiration pneumonia. If it is necessary to induce vomiting, give person one or two glasses of water and insert finger in back of throat. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth to unconscious person.
If inhaled: Remove person to fresh air. Apply respiration if indicated.
If on skin: Wash immediately with soap and water.
If in eyes: Flush eyes for at least 15 minutes with water.

Note to physicians: Dichlorvos (DDVP) is an Organophosphate (OP) Insecticide and a cholinesterase inhibitor. Do not wait to treat patients with strong clinical evidence of poisoning. The Health Information Service (HIS) is available for further recommendations regarding control of poisoning, emergency treatment, and other information regarding the toxicity of DDVP. The toll free number for HIS is 1-800-228-5635, ext. 169.
Establish airway and oxygenation. IV Atropine is the antidote of choice. Moderately severe poisoning: use 0.4 - 2.0 mg in adults or 0.05 mg/Kg in children. Repeat every 15 minutes until atropinization is achieved. Severe poisoning may require larger doses. Cholinergic toxicity may recur as atropinization wears off; monitor patient closely. Draw blood for RBC and plasma cholinesterase. In addition, pralidoxime (2-PAM) is indicated during the first 36 hours in severe poisonings. Slow IV administration (no less than 2 minutes) of 1 gm in adults of 20 - 50 mg in children may be repeated in 1 to 2 hours if muscle weakness, twitching, and/or respiratory depression persist. Avoid morphine, aminphylline, phenothiazines, reserpine furosemide and ethacrynic acid. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) followed by water (2 glasses for adults, 1 glass for children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

5: Fire Fighting Measures:

Flash Point (Method Used): 110^{o} F. closed cup.
Flammable Limits: **LEL:** 1.9 **UEL:** 12.6 (Solvent - approximate)
Extinguishing Media: CO_2, Foam, Dry Chemical, water spray.

Special Fire Fighting Procedures: Fight fire from upwind position. Use self contained breathing apparatus and equipment designed to prevent skin and eye contact. Cool exposed containers with water spray. This product is toxic to birds, fish and other wildlife. Prevent spread of contaminated runoff.
Unusual Fire and Explosion Hazards: May give off hydrogen chloride, CO, phosphorus oxides and other carbon oxides. Foam is preferred method of fighting fires to help prevent spread of contaminated runoff.

6: Accidental Release Measures:

Steps to be taken in case material is released or spilled: Evacuate personnel and thoroughly ventilate the area. Use adequate ventilation and air supplied respirators, as well as impervious clothing and safety goggles. Keep bystanders upwind and away from the spill.
Small spill: Cover with absorbent material, such (clay, sawdust, straw, kitty litter, etc.) to absorb the liquid. Sweep onto a shovel and put the sweepings into a salvage drum. Decontaminate the area and equipment with dilute alkalai or ammonia (less than 5% solution) and detergent. Flush the area with water. Absorb and sweep into the same salvage drum. Close the drum and dispose of as a hazardous waste. Place any leaking container into another salvage drum.

Large spill: Dike the spill to prevent contamination of local water sources. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill.

7: Handling and Storage:

Handling: Do not contaminate water, food or feed by storage or disposal. Store in a dry place away from temperature extremes. Avoid inhalation of vapors. Poisonous if swallowed, inhaled or absorbed through skin. Avoid contact with skin. Wear clean protective clothing. Wash thoroughly and change clothes after handling.

Storage: Do not contaminate water, food or feed by storage or disposal. Store in a cool, dry, locked place out of reach of children.

Other precautions: Periodically inspect stored materials.

8: Exposure Control/Personal Protection:

Respiratory protection: Wear a pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly US Bureau of Mines) and the National Institute for Occupational Safety and Health (NIOSH), under the provisions of 30 CFR Part II, for DDVP protection.

Ventilation:

Local Exhaust: As required to meet TLV values.
Special: As required to meet TLV values.
Mechanical: As required to meet TLV values.
Other: As required to meet TLV values.

Protective Gloves: Chemical resistant.

Eye Protection: Face shield if there is a chance of splashing, or goggles, or safety glasses.

Other protective clothing or equipment: Wear clothing designed to prevent skin contact, such as long pants and long sleeved shirt, or overalls, shoes with socks and headgear for overhead exposure.

Work/Hygienic practices: Poisonous if inhaled, absorbed through skin or eyes. Do not get in eyes, or on skin. Do not breathe fumes. Rapidly absorbed through skin. Wear chemical resistant gloves, protective clothing, and goggles when handling. Wash hands, arms and face thoroughly with soap and water before eating or smoking. Wash all contaminated clothing with soap and hot water before reuse. Keep all unprotected persons out of operational area. Do not allow children or pets to contact treated areas until spray has dried. This product is toxic to fish, birds and other wildlife. Birds and other wildlife feeding in treated areas may be killed. Do not apply directly to water. Do not apply this product when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes. This pesticide is highly toxic to bees exposed to direct treatment or residues remaining on the treated area. Do not apply when bees are actively visiting vegetation or weeds blooming in the treatment area. Applications should be timed to provide maximum possible interval between treatment and the next period of bee activity. Do not use, pour or spill near heat or open flame.

9: Physical and Chemical Properties

Boiling Point:	N/D
Specific Gravity (H_2O = 1):	0.9492
Vapor Pressure (mm/Hg):	N/D
Melting Point:	N/D
Vapor Density (Air = 1):	N/D
Evaporation Rate (Butyl Acetate = 1):	N/D
Solubility in Water:	Emulsifies.
Appearance and Odor:	Pale yellow liquid, xylene type odor.

10: Stability and Reactivity

Reactivity:

Stability: Stable.
Conditions to avoid for stability: This product is stable under normal use and storage conditions.

Incompatibility: Alkalies, strong oxidizers, strong acids, heat and sources of ignition.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Hydrogen chloride, CO, phosphorus oxides and other carbon oxides.

11: Toxicological Information:

Ingestion:	Oral LD_{50} (Rat)	56 mg/Kg (DDVP technical)
Inhalation:	Inhalation LC_{50} (Rat)	140 mg/Kg (DDVP technical)
Skin:	Dermal LD_{50}	205 mg/Kg (DDVP technical)
Eye Irritation:		Irritant (DDVP technical)
Skin Irritation:		Irritant (DDVP technical)
Skin Sensitization:	Guinea Pig	Possible sensitizer (DDVP technical)

12: Ecological Information:

This product is toxic to fish, birds and other wildlife. Keep out of any body of water. Do not contaminate water when disposing of equipment washwaters or wastes.

13: Disposal Considerations:

Waste disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Open dumping is prohibited. **Container disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

14: Transportation Information:

DOT Classification:

INSECTICIDES, OTHER THAN POISON
NMFC ITEM 102120

B/L Description:

ORGANOPHOSPHORUS PESTICIDES, LIQUID, TOXIC, FLAMMABLE, (DICHLORVOS/PETROLEUM NAPHTHA), 6.1 (3), UN3017, PG III, RQ MARINE POLLUTANT

15: Regulatory Information:

SARA Title III Classification:

Section 302 Extremely Hazardous Substances: DDVP (dichlorvos, CAS #62-63-7)

Section 311/312:

Immediate health hazard	yes	
Delayed health hazard	yes	
Fire hazard		yes
Reactive hazard	no	
Sudden pressure release hazard	no	

Section 313 chemicals:

Dichlorvos (2,2-dichlorovinyl dimethyl phosphate) (CAS # 62-73-7) (18.6%)

Xylene Range Aromatic Solvent (CAS # 64742-95-6) (75.0%)

Contains the following SARA listed ingredients, by weight (typical):

1,2,4-Trimethyl Benzene (CAS # 95-63-6)	32.0
Mixed Xylenes (CAS # 1330-20-7)	3.0
Cumene (CAS # 98-82-8)	1.5
Ethyl Benzene (CAS # 100-41-4)	0.5

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Any copies or redistribution of this MSDS must include this notice.

CERCLA: DDVP (Dichlorvos) - 10 lbs.

Proposition 65: This product contains a chemical known to the State of California to cause cancer - DDVP.

16: Other Information:

NFPA Hazard Ratings:

Health:	3	0	Least	
Flammability:	2	1	Slight	
Reactivity:	1	2	Moderate	
		3	High	
		4	Severe	

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