

Product Name: SureKill® VAP-5
 Issue Date: June 1st, 2016
 Replaces: June 1st, 2015
 SDS Number: CTL0165

1. PRODUCT IDENTIFICATION

Product Name: **SureKill® VAP-5**
 Product Number(s): 0744101
 Use: Insecticide
 Manufacturer: ChemTech, Ltd.
 1006 North Highway 5
 Pleasantville, IA 50225
 Manufacturer Phone: 1-800-477-8201
 Distributor: ChemTech, Ltd.
 1006 North Highway 5
 Pleasantville, IA 50225
 Distributor Phone: 1-800-477-8201
 Emergency Phone: **Medical: 1-888-681-4261 (United States and Canada)**
Spill: 1-800-424-9300 (United States and Canada)

2. HAZARDS IDENTIFICATION

Classifications:

Flammable liquids	Category 4
Acute Toxicity, Oral:	Category 3
Acute Toxicity, Inhalation:	Category 3
Skin Corrosion/Irritation:	Category 4
Serious Eye Damage/ Eye Irritation:	Category 1
Skin Sensitization:	Category 1
Carcinogenicity:	Category 2
Environmental Hazards:	Category 1
Aquatic Environment, long term hazard	Category 2

Signal Word (EPA): DANGER
 Signal Word (OSHA): DANGER

Hazard Statements: Toxic if swallowed.
 Harmful in contact with skin
 Causes serious eye irritation.
 Fatal if inhaled.
 Suspected of causing cancer.
 Combustible liquid.
 Very toxic to aquatic life.
 Very toxic to aquatic life with long lasting effects.



Hazard Symbols:

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- Precautionary Statements: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not breathe vapor.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Wear respiratory protection.
- If swallowed: Immediately call a poison center/doctor.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
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/doctor. Specific treatment is urgent (see this label). Rinse mouth. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
- In case of fire: Use appropriate media to extinguish. Collect spillage.
- Disposal: Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international, regulations.

Other Hazard Statements: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Common Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Dichlorvos (DDVP)	DDVP	62-73-7	5.0 %

4. FIRST AID MEASURES

Have the product container, label, or Safety Data Sheet with you when calling 1-800-498-5743, a poison control center or doctor, or going for treatment.

- Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the air of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
- Skin Contact: Get medical advice/attention if you feel unwell. Wash off immediately with plenty of water of at least 15 minutes. Wash contaminated clothing before reuse.
- Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. If there will be a delay in getting medical attention, rinse the eyes an additional 15 minutes.

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Ingestion: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If victim is conscious, administer and 8 oz. glass of water containing 2 tbsp. activated charcoal. Have person lie on their left side to slow down absorption of the ingested material. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Indication of immediate medical attention and special treatment needed:

This product is an Organophosphate (OP) insecticide. Do not handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning. In the USA and other countries, contact your local or national poison control center for more information. Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation Atropine Sulfate should be injected at 10 minute intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, and initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children the, the dose of 2-PAM is 0.25 grams. Avoid morphine, morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may without warning cause prolonged susceptibility very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. 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) 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 indotracheal tube. Keep victim under observation. Keep victim warm. Symptoms may be delayed.

General Information:

If exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Do not handle the patient without the following protective equipment in place: chemical resistant gloves an apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. This product is a Cholinesterase Inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Water spray, water fog, foam, dry chemical powder, carbon dioxide (CO₂)

Do not use water jet as an extinguisher, as this will spread the fire.

Specific Hazards:

The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed. Due to the solvent, this product can accumulate static charges which can cause an incendiary electrical discharge. Even empty containers may contain sufficient residues to cause an explosion.

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Special protective equipment and precautions for firefighters:

Firefighters should wear full protective clothing including self contained breathing apparatus. Clean all clothing before reuse. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed of as a hazardous waste. Shower with soap and water after contact with this product.

Immediately evacuate personnel to safe area. In case of fire and/or explosion do not breathe fumes. Keep upwind. Move containers from fire area if you can do so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

Combustible liquid.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protections, see section 8 of the SDS. Do not allow this material to drain into sewers/water supplies.

Methods and materials for containment and cleaning up:

Stop the flow of material, if this is without risk, to prevent entry into waterways, sewer, basements or confined areas. Dike the spilled material, where this is possible 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. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5%) and detergent. Never return spill to original containers for re-use. For waste disposal, see section 13 of SDS.

Environmental precautions:

Avoid release to the environment. Prevent further leakage of spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. HANDLING AND STORAGE

Precautions for safe handling:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. Keep product away from food, drink, cosmetics, and tobacco products. Wash thoroughly and change clothes after handling. Wash clothes separately; do not wash heavily contaminated clothing. Dispose of heavily contaminated clothing as hazardous waste.

Conditions for safe storage, including any incompatibilities:

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of SDS).

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING, AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limit

<u>Chemical Name</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OTHER</u>	<u>SOURCE</u>
Dichlorvos (DDVP)	1 mg/m ³ / 0.1 mg/m ³ PEL	0.1 mg/m ³ (inhalable fraction and vapor) TWA	25 ppm 1 mg/m ³ TWA	US NIOSH: Pocket Guide to Chemical Hazards

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye Contact: Wear safety glasses with side shields (or goggles).

Skin Contact: Gloves of nitrile rubber, PVA or Viton are recommended. Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing (see label).

Inhalation: When respiratory protection is required, or concentrations may exceed the PEL, use an approved air-purifying respirator equipped with organic vapor cartridges or canisters. It is recommended that the canisters be changed whenever breakthrough occurs or eight (8) hours of use has occurred, whichever comes first. For emergency and other conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-airline with auxiliary self-contained air supply.

Thermal hazards:

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations:

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquified gasses
Odor:	Aromatic solvent
pH:	Not Available
Melting Point:	Not Available
Freezing Point:	Not Available
Boiling Point and Boiling Range:	Not Available
Flash Point (Test Method):	Not Available
Flammable Limits (% in air):	Not Available
Flammability:	Not Applicable
Vapor Pressure:	Not Available
Vapor Density:	Heavier than air
Relative Density:	0.9 g/mL
Solubility (ies):	Not Available
Partition Coefficient:	Not Available
Viscosity:	Not Available
Other:	Not Available

10. STABILITY AND REACTIVITY

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability:	Material is stable under normal conditions
Possible Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible Materials:	Strong acids, strong oxidizing agents, strong bases.
Hazardous Decomposition:	No hazardous decomposition products are known. This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS when these conditions are present.

11. TOXICOLOGICAL INFORMATION

Health Effects Information

Likely routes of exposure:	FATAL if INHALED Harmful in contact with skin. Causes serious eye irritation. Toxic if swallowed.
Symptoms of exposure:	This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. These include: (for plasma) chronic alcoholism, malnutrition, dermatomyositis, existing toxicity from exposure to carbon disulfide, benzalkonium salts, organic mercury compounds, ciguatoxins or solanines, and (for RBC) hemolytic anemia. Acute cholinesterase depression may be evidenced by headache, nausea,

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vomiting, diarrhea, abdominal cramps, excessive seeping, salivating and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusing; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Product may cause slight but temporary irritation to the eyes and may cause irritation of the skin.

Severe eye irritation. Symptoms may include sting, tearing, redness, swelling, and blurred vision.

Delayed, immediate and chronic effects of exposure: Fatal if inhaled. Toxic if swallowed. Harmful in contact with skin.

Numerical Measures of Toxicity (Acute Toxicity/Irritation Studies – Finished Product)

Ingestion:	Oral LD ₅₀ (Rat, Female):	55 mg/kg body weight
	Oral LD ₅₀ (Rat, Male):	Not Available.
Dermal:	Dermal LD ₅₀ (Rabbit):	2475 mg/kg body weight
Inhalation:	Inhalation LC ₅₀ (Rat):	1.04 mg/l
	Inhalation LC ₅₀ (Rat, female):	0.74mg/l
Eye Contact:	Causes serious eye irritation.	
Skin Contact:	Prolonged skin contact may cause temporary irritation.	
Skin Sensitization:	Possible skin sensitizer.	

Reproductive/Developmental Effects

This product is not expected to cause reproductive or developmental effects.

Chronic/Subchronic Toxicity Studies

Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Carcinogenicity

Suspected carcinogen.

Chemical Name
Dichlorvos (CAS 62-73-7)

NTP / IARC / OSHA Carcinogen
2B

Other Toxicity Information

Not Available.

Toxicity of Other Components

Not Applicable

Target Organs

Active Ingredients

Potential neurotoxicity as an organophosphate.
If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.
Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Inactive Ingredients

Not Applicable

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12. ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects. 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

Disposal: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents /container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

DOT Classification

Proper Shipping Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable
Hazard Class: 6.1
UN Number: 3017
Packing Group: III
Label: Poison 6
Special Instructions:

IMDG Classification

Proper Shipping Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable
Hazard Class: 6.1
UN Number: 3017
Packing Group: III
Label: Poison 6
Special Instructions:

IATA Classification

Proper Shipping Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable
Hazard Class: 6.1
UN Number: 3017
Packing Group: III
Label: Poison 6
Special Instructions:

Canadian Classification

Proper Shipping Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable
Hazard Class: 6.1
UN Number: 3017
Packing Group: III
Label: Poison 6
Special Instructions:

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15. REGULATORY INFORMATION

Pesticide Registration

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

DANGER: Corrosive. Causes irreversible eye damage. Causes skin burns. May be fatal if absorbed through the skin. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing vapor or spray mist.

EPA Registration Number:	47000-74
EPA SARA Title III Classification	Immediate hazard, delayed hazard, fire hazard
Section 311/312 Hazard Classes:	No
Section 313 Toxic Chemicals:	Dichlorvos (DDVP, CAS 62-73-7)
California Proposition 65 :	This product contains Dichlorvos (DDVP, CAS 62-73-7) a chemical known in the State of California to cause cancer.
CERLA/SARA 302 Reportable Quantity (RQ) :	Dichlorvos (DDVP, CAS 62-73-7)
RCRA Hazardous Waste Classification (40 CFR 261):	Not listed
TSCA Status:	Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

<u>NFPA Hazard Ratings</u>	<u>HMIS Hazard Ratings</u>	
Health: 4	Health: 4	0 - Minimal
Flammability: 0	Flammability: 0	1 - Slight
Instability: 0	Reactivity: 0	2 - Moderate
	Other:	3 - Serious
		4 - Extreme
		* - Chronic

For Non-Emergency Questions About This Product Call:

1-800-621-8829

Neogen Corporation

Lexington, KY

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