

Product Name: Max Kill Vapo-Cide®

Issue Date: Oct. 25, 2017

Douglas Products encourages and expects you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product Name: Max Kill Vapo-Cide®

Description: End Use Fumigant

US-EPA Reg. No.: 1015-68

COMPANY IDENTIFICATION:

Douglas Products and Packaging Company, LLC

1550 East Old 210 Highway

Liberty, MO 64068

Customer Information Number: 816-781-4250

EMERGENCY TELEPHONE NUMBER

CHEMTREC: 800-424-930

2. HAZARDS IDENTIFICATION



DANGER

Causes severe skin burns and eye damage (H314)



Harmful if swallowed or in contact with skin (H302+H312)

May cause an allergic skin reaction (H317)



Flammable liquid and vapor (H226)



Very toxic to aquatic life (H400)



Suspected of causing cancer (H351)

GHS Toxicity Classifications

Skin corrosion/irritation

Cat. 1A,1B,1C

Carcinogenicity hazard

Cat. 2

Eye damage/irritation

Cat. 1

Flammable liquids

Cat. 3

Acute toxicity, oral

Cat. 4

Hazardous to the aquatic

Cat. 1

Acute toxicity, dermal

Cat. 5

environment, acute hazard

Sensitization, skin.

Cat. 1,1A,1N

Hazard Classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

2. HAZARDS IDENTIFICATION (CONT.)

Prevention

Obtain special instructions before use. (P201)
Do not handle until all safety precautions have been read and understood. (P202)
Do not breathe dusts or mists. (P260)
Wash hands and skin thoroughly after handling. (P264)
Do not eat, drink or smoke when using this product. (P270)
Wear coveralls over long-sleeved shirt and long pants, chemical resistant gloves, chemical resistant footwear plus socks, goggles or face shield, chemical resistant headgear for overhead exposure, and chemical resistant apron. (P280)

Contaminated clothing should not be allowed out of the workplace. (P272)
Avoid release to the environment. (P273)
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. (P303+P361+P353)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
Immediately call a POISON CONTROL CENTER or doctor for treatment advice. You may also contact CHEMTREC at 1-800-424-9300. (P310)
Wash contaminated clothing before reuse. (P363)
If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. (P301+P330+P331)
IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340)
Collect spillage. (P391)
IF exposed or concerned: Get medical advice/attention. (P308+P313)
In case of fire: Use water fog, foam, dry chemical powder, or carbon dioxide to extinguish. (P370+P378)
Specific treatment (see supplemental first aid instructions on product label). (P321)

Storage

Store locked up. (P405)

Disposal

Dispose of contents/container to an approved waste disposal plant. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Common Name</u>	<u>Chemical Names</u>	<u>CAS RN</u>	<u>Composition</u>
DDVP	2,2-dichlorovinyl dimethyl phosphate; Dichlorvos	62-73-7	5.0%
Light aromatic solvent naphtha (petroleum)	Solvent naphtha (petroleum), light aromatic	64742-95-6	< 5.0%

4. FIRST AID MEASURES

General Advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

Most important symptoms and effects, both acute and delayed: This product is a severe 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, 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. Product may cause slight but temporary irritation to the eyes and may cause irritation of the skin. Repeated exposures to small doses of Terbufos and other organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed.

4. FIRST AID MEASURES (CONT.)

IF ON SKIN OR CLOTHING: Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Call a physician or poison control center immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Call a physician or poison control center immediately. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. 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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

NOTE TO PHYSICIAN: Contains dichlorvos, an organophosphate that inhibits cholinesterase. Probable mucosal damage may contraindicate the use of gastric lavage. May pose an aspiration pneumonia hazard. Causes severe eye and skin damage.

Symptoms: Weakness, headache, tightness in chest, blurred vision, non-reactive pin-point pupils, salivation, sweating, nausea, vomiting, diarrhea, and abdominal cramps.

Treatment: Atropine is the specific therapeutic antagonist 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) is also antidotal and may be administered in conjunction with atropine. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion in 250 cc of saline over a 15 to 30 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5 percent solution in water over not less than two 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 dose of 2-PAM is 0.25 grams. Morphine is an improper treatment. 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 patient susceptibility to very small doses on any cholinesterase inhibitor. Allow no further exposure until cholinesterase regeneration has been attained as determined by blood test. Contains petroleum distillates.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂). Do not use water jet as an extinguisher, as this will spread the fire.

Hazardous combustion products: Fire conditions may cause this product to decompose. Refer to Section 10 – Chemical stability.

Fire and Explosion Hazards: Combustible. During fire, very toxic gases hazardous to health, may be formed. Do not breathe gas, fumes, or vapor. Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. In the event of fire and/or explosion do not breathe fumes.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS.

Special protective equipment for firefighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Evacuate area and fight fire from a safe distance. In case of fire and/or explosion do not breathe fumes. Keep upwind. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Water runoff can cause environmental damage.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up:

Small spills: Cover with absorbent (clay, sawdust, straw, kitty litter, etc.), to absorb the liquid. Sweep or shovel into an open drum. Clean surface thoroughly with caustic/bleach, followed by water to remove residual contamination. Absorb and sweep into the same open drum. Rinse with water, absorb, and add to the waste drum. Close the drum and dispose of properly, according to hazardous waste disposal procedures for your locality. For waste disposal, see section 13 of the SDS.

Large spills: 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.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep out of reach of children. Do not get on skin, in eyes, or on clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store in dry, well ventilated, locked area away from heat or open flame. Post as pesticide storage area. Keep containers closed when not in use. Store only in the original labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Exposure limits are listed below, if they exist.

<u>Component</u>	<u>Regulation</u>	<u>Type of Listing</u>	<u>Value / Notation</u>
Dichlorvos (DDVP)	OSHA Z-1	PEL	1 mg/m ³

Exposure Controls

Engineering Controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Individual Protection Measures

Eye/face Protection: Wear goggles or face shield

Skin Protection: Wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure. When mixing, loading, and cleaning wear a chemical-resistant apron.

Respiratory Protection: Respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TX-23C) or a canister approved for pesticides (NIOSH approval TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

General: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Colorless
Odor	Characteristic of petroleum products
pH	7-8
Flash point (closed cup)	48°C
Relative Density (water = 1)	0.8883

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under normal ambient temperatures.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Avoid elevated temperatures exceeding the flash point, heat, flames, sparks, contact with strong oxidizing agents.

Incompatible materials: Oxidizing agents.

Hazardous decomposition products: Decomposition products can include and are not limited to: Aldehydes, hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and oxides of carbon, sulfur and phosphorus.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute Oral Toxicity (LD₅₀ rats): 1,098 mg/kg

Acute Dermal Toxicity (LD₅₀ rats): 1,542 mg/kg (female), >2,000-5,000 mg/kg (male)

Acute Inhalation Toxicity (4-hr LC₅₀ rats): >2.02 mg/L

Skin Corrosion / Irritation (rabbit) – Corrosive

Serious Eye Damage / Eye Irritation (rabbit) – Corrosive

Sensitization (guinea pig) – positive contact sensitizer

Carcinogenicity

EPA: Group B2 (probably human carcinogen)

ACGIH: Not Listed **NTP:** Not Listed

IARC: Group 2B **OSHA:** Not Listed

Reproductive Toxicity

Not known to cause reproductive or birth defects at normal exposure levels.

Mutagenicity

No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

This product is toxic to birds, fish and aquatic invertebrates.

The following information is for the active ingredient, DDVP:

AQUATIC TOXICITY

Rainbow trout (96h LC₅₀): 200 mg/L

Algae (5d EC₅₀): 52.8 mg/L

Daphnia (48h LC₅₀): 0.19 µg/L

AVIAN TOXICITY

Bobwhite Quail (LD₅₀): 24 mg/kg

Japanese Quail (8d LC₅₀): 300 mg/kg

OTHER TOXICITY

Bees: Oral LD₅₀ 0.29 µg/bee

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

US DOT (shipments by ground):

DOT Shipping Name: UN3017, Organophosphorus pesticides, liquid, toxic, flammable, 6.1, PG III
Emergency Response Guide No.: 131
Marine Pollutant: Yes

UN Number: 3017

Class: 92.5

Packing Group: III

Proper Shipping Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable, 6.1 (3), UN3017, PGIII, Item #45615, Sub 5, Class 92.5 (Vapocide 1x5G)

Reportable quantity (RQ): Dichlorvos (CAS No. 62-73-7) 10 lbs. (27 gallons product)

IMDG (shipments by vessel):

UN3017, Organophosphorus pesticides, liquid, toxic, flammable, 6.1, PG III, Marine Pollutant

Class: 92.5

EMS Number: F-A, S-A

IATA (shipments by air):

UN3017, Organophosphorus pesticides, liquid, toxic, flammable, 6.1, PG III

Class: 92.5

15. REGULATORY INFORMATION

FIFRA –

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. The following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Corrosive. Causes irreversible eye damage. Causes skin burns. May be fatal if absorbed through skin. Harmful if swallowed. Do not get on skin, in eyes, or on clothing.

ENVIRONMENTAL HAZARDS

Outdoor Use: This product is toxic to birds, fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Indoor Use: Do not discharge effluent containing this product directly into lakes, streams, ponds, estuaries, oceans or public waters in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

15. REGULATORY INFORMATION (CONT.)

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances

Dichlorvos (CAS No. 62-73-7)

SARA Title III – Section 311/312 Hazard Categories

Immediate, Delayed, Fire

SARA Title III – Section 312 Threshold Planning Quantity

Dichlorvos (CAS No. 62-73-7) 5%, TPQ: 1,000 lbs. (2,700 gallons of product)

SARA Title III – Section 313 Reportable Ingredients

Dichlorvos (CAS No. 62-73-7)

CERCLA Reportable Quantity (RQ) –

Dichlorvos (CAS No. 62-73-7) 5%, RQ: 10 lbs. (27 gallons product)

CALIFORNIA PROP 65 –

- ▲ **NOTICE:** This product can expose you to dichlorvos, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

CANADA –

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

NFPA Rating:

Health Hazard: 3 Fire Hazard: 2 Reactivity Hazard: 0

Douglas Products and Packaging Company, LLC urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

SDS Version: 1.1 (Oct. 25, 2017)