

Material Safety Data Sheet

VAPONA[®] CONCENTRATE INSECTICIDE

Version: Revision 1

Date Issued: 9/7/2011

MSDS No. 6148375

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY: KMG- Bernuth, Inc.
9555 W. Sam Houston Pkwy. S., Suite 600
Houston, Texas 77099-2145

PHONE NUMBER: 800-322-8177

EMERGENCY PHONE: CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: Vapona Concentrate Insecticide

PRODUCT USE: Control Flies, Gnats, and Mosquitoes on Cattle and around Livestock, and Poultry and Premises

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>IDENTITY</u>	<u>CAS NUMBER</u>	<u>TYPICAL %</u>	<u>OTHER INFORMATION</u>
Dichlorvos 2,2-Dichlorovinyl dimethyl phosphate	62-73-7	40.2 %	Active Ingredient

Petroleum Hydrocarbons	64742-94-5	50 – 55%	Solvent
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Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

SECTION 3: HAZARDS IDENTIFICATION

PHYSICAL HAZARDS: Combustible. Do not use, pour, spill or store near heat or open flame. Do not use with thermal foggers or heat-generating devices.

HEALTH HAZARDS: DANGER - POISONOUS IF SWALLOWED 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. Do not swallow or get in eyes (including animals), on skin, or on clothing. Do not breathe vapor. Do not contaminate food or feed products. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

SECTION 4: FIRST AID MEASURES

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to this person. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to by a poison control center or doctor.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

CALIFORNIA ONLY: When used in enclosed structures, do not enter or allow worker entry during the Restricted Entry Interval (REI) of 24 hours.

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SECTION 4: FIRST AID MEASURES - CONTINUED

HOTLINE NUMBER: Contains an organophosphate that inhibits cholinesterase. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact 1-800-322-8177 for emergency medical treatment.

NOTE TO PHYSICIAN: This product is a cholinesterase inhibitor. Product contains petroleum hydrocarbons. Vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.

Poisoning Symptoms: Symptoms include weakness, headache, tightness in chest, blurred vision, non-reactive pinpoint 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. Pralidoxine chloride (2-PAM) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected preferably as an infusion in 250cc 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 prolonged susceptibility to very small doses of any cholinesterase inhibitor. Allow no further exposure until cholinesterase regeneration has been attained as determined by blood test.

SECTION 5: FIREFIGHTING MEASURES

FLASH POINT: 71.5°C (160.7°F)

AUTOIGNITION TEMPERATURE: Not available.

FLAMMABLE LIMITS (STP): Not available. Product is Combustible

EXTINGUISHING MEDIA: For small fire, use dry chemical, carbon dioxide, water spray or foam. For large fire, use water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion. Contain run-off to prevent contamination of surface waters.

PROTECTIVE EQUIPMENT: Self-contained positive pressure breathing apparatus with full facepiece and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible. Noxious fumes (carbon monoxide, hydrogen chloride, phosphorous compounds and chlorinated organic vapors) may be emitted under fire conditions.

HMS RATING: Health 3 Fire 2 Reactivity 0 PPE J

NFPA RATING: 0 Least; 1 Slight; 2 Moderate; 3 High; 4 Severe
Health 3 Fire 2 Reactivity 0

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SECTION 6: ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak: Wear long-sleeved shirt and long pants, rubber boots over shoes and socks, chemical resistant waterproof gloves, protective chemical safety goggles and a NIOSH-approved pesticide respirator or Air-supplied respirator. For small spills, absorb on absorbent material, sweep up and place in an approved chemical container. Use non-sparking tools and remove ignition sources.

Wash the spill area with a solution of water and household bleach (1:2), absorb on absorbent material, sweep up and place in a disposal container. Wash area with detergent and absorb liquid and sweep up and place into container. Seal the container and handle in an approved manner.

Flush the area with water to remove any residue. Contain any washwaters. Do not allow washwaters to contaminate surface waters and don not flush to sewer systems.

For disposal, refer to Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

Not for use or storage in or around the home.

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store product in its original container in a cool, dry area that is inaccessible to children and animals. Store at temperatures above 32°F. **Combustible. Do not use, pour, spill or store near open flame.**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

DANGER

POISONOUS IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN AND EYES. RAPIDLY ABSORBED THROUGH SKIN. REPEATED INHALATION OR SKIN CONTACT MAY WITHOUT SYMPTOMS, PROGRESSIVELY INCREASE SUSCEPTIBILITY TO DICHLORVOS (DDVP) POISONING. Do not swallow or get in eyes, on skin or on clothing. Do not breathe vapor. Do not contaminate food or feed products. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart in the Worker Protection Standard.

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Polyvinyl Chloride or Viton.
- Protective eyewear
- Chemical resistant apron required for mixing/loading and cleaning equipment.
- Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE Prefilter.
- Chemical resistant headgear for overhead exposure.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION - CONTINUED

USER SAFETY RECOMMENDATIONS

Users should:

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Do not enter or allow others to enter the treated areas until sprays have dried.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

OCCUPATIONAL EXPOSURE LIMITS:

AEL Recommended	1 mg/m ³
ACGIH TLV	100 ppm
OSHA PEL	100 ppm

OCCUPATIONAL EXPOSURE STANDARDS: Not established

VENTILATION: Provide exhaust ventilation or other engineering controls to keep exposure to airborne contaminants below the exposure limit.

EYE PROTECTION: See **PERSONAL PROTECTIVE EQUIPMENT (PPE)** above.

BODY PROTECTION: See **PERSONAL PROTECTIVE EQUIPMENT (PPE)** above.

RESPIRATORY PROTECTION: None required but recommend MSHA-NIOSH approved respirator for organic vapors and mists.

OTHER PROTECTIVE EQUIPMENT: Eyewash station and safety shower in work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

FORMULATION:	Emulsifiable Concentrate
PHYSICAL STATE:	Clear Liquid
COLOR:	Light Yellow to Amber
ODOR:	Petroleum-like
BOILING POINT:	> 148.9° C (>300° F)
MELTING POINT:	Not applicable
FREEZING TEMPERATURE:	Not available
VAPOR PRESSURE:	<2 mm Hg @ 25° C (77° F)
VAPOR DENSITY: (Air = 1)	>5
EVAPORATION RATE:	Not available
SPECIFIC GRAVITY:	1.062
BULK DENSITY:	8.86 lbs/gal
SOLUBILITY IN WATER:	Miscible
pH VALUE:	2.90 (1% solution in water)
% VOLATILES, 1 Hr @ 230°F:	58.98
VISCOSITY (Centistokes)	2.322 @ 20° C (68° F) 1/589 @ 40° C (104° F)

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SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable and Non-Corrosive
CONDITIONS TO AVOID:	Excessive heat and sunlight
MATERIALS TO AVOID:	Strong bases
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon and phosphorus and hydrochloric acids. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiates.
HAZARDOUS POLYMERIZATION:	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE ORAL LD₅₀ (RAT):	78.5 mg/kg
ACUTE DERMAL LD₅₀ (RABBIT):	>200 mg/kg
ACUTE INHALATION (RAT – 4 HR LC₅₀):	<2.00 mg/L (no deaths)
PRIMARY EYE IRRITATION (RABBIT):	Severe Irritant
PRIMARY DERMAL IRRITATION (RABBIT):	Severe Irritant
DERMAL SENSITIZATION:	Contact Sensitizer

EFFECTS OF OVEREXPOSURE:

Acute overexposure: Poisonous if swallowed, inhaled or absorbed through the skin and eyes. Rapidly absorbed through skin. Repeated inhalation or skin contact may without symptoms, progressively increase susceptibility to dichlorvos (ddvp) poisoning. Poisoning symptoms include weakness, headache, tightness in chest, blurred vision, non-reactive pinpoint pupils, salivation, sweating, nausea, vomiting, diarrhea and abdominal cramps. Corrosion can cause eye/skin damage. May produce acute cholinesterase depression.

Chronic overexposure:

DDVP – According to the USEPA (RED 2006), Dichlorvos did not cause organophosphate induced delayed neurotoxicity (OPIDN) in the hen following single or multiple (28 days) exposures. Following a single oral dose to rats, dichlorvos was associated with a variety of neurological and physiological changes. Subchronic and chronic oral exposures in rats and dogs as well as chronic inhalation exposure in rats resulted in significant decreases in plasma, red blood cell and/or brain cholinesterase activity. The carcinogenic potential of dichlorvos has been classified as “suggestive” under the 1999 Draft Agency Cancer Guidelines and no quantitative assessment of cancer risk is required. There was no evidence of increased susceptibility following *in utero* exposures to rats and rabbits as well as pre/post natal exposure to rats. Also, there was no evidence of abnormalities in the development of the fetal nervous system in the frbrlopnrnysl/neurotoxicity studies submitted to the Environmental Protection Agency.

SECTION 12: ECOLOGICAL INFORMATION

This pesticide is highly toxic to fish, birds and aquatic invertebrates. Do not apply to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur or when weather conditions favor drift from areas treated. Drift and runoff from treated areas may be hazardous to aquatic organisms in treated areas. Do not contaminate water when disposing of equipment washwaters.

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SECTION 13: DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are acutely 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. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, for reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

SECTION 14: TRANSPORT INFORMATION

Follow the precautions indicated in the Handling and Storage Section, Section 7 of this MSDS

DOT PROPER SHIPPING NAME:

For containers 1 gallon (4L) or less: CONSUMER COMMODITY, ORM-D PER 49 CFR 173.153(C)

For containers 2.5 – 5 gallons : UN3018, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, N.O.S. (DICHLORVOS), 6.1, PGIII, MARINE POLLUTANT (DICHLORVOS)

IATA/CAO CLASSIFICATION:

UN3018, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, COMBUSTIBLE (DICHLORVOS), 6.1, (3), III

IMO CLASSIFICATION:

UN3018, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, COMBUSTIBLE (DICHLORVOS), 6.1, (3), III, MARINE POLLUTANT (DICHLORVOS), FP 67.8 C cc, EMS F-E, S-D

SECTION 15: REGULATORY INFORMATION

UNITED STATES EPA: EPA Reg. No. 61483-75
EPA Signal Word – DANGER - POISON

OTHER:

SARA Hazard Notification/Reporting

Immediate Y Fire Y Sudden Release of Pressure N
Delayed Y Reactive N

SARA 302-304 (40CFR 350): Dichlorvos – 62-73-7, extremely hazardous substance (EHS)

SARA 313, TOXIC CHEMICALS: Dichlorvos – 62-73-7, 1000 pounds

REPORTABLE QUANTITIES: Dichlorvos – 62-73-7 10 lbs.

CALIFORNIA PROPOSITION 65: This product contains ingredients known to the State of CA to cause cancer or reproductive toxicity.

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SECTION 16: OTHER INFORMATION

Reason for MSDS Revision: Convert to 16-Section Format and Update Information

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, KMG-Bernuth, Inc. (Company) makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

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Approved by H. R. O'Neal