SAFETY DATA SHEET

1. Identification

Product identifier	**NUVAN® Fog 2EC™**
Other means of identification	
SDS number	186
Product registration number	5481-205
Synonyms	Alco™ DDVP 2-E™ Emulsifiable Concentrate
Recommended use	Organophosphate insecticide.
Recommended restrictions	This is a Restricted Use Pesticide and is for use by licensed applicators only. See product label for restrictions. Keep out of the Reach of Children!
EPA Registration number	EPA: 5481-205
Manufacturer/Importer/Supplier/Distributor information	
Company Name	AMVAC Chemical Corporation
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660 United States
Telephone	
AMVAC Chemical Corp	949-260-1200
AMVAC Chemical Corp	949-260-6270(FAX)
Product Use	888-462-6822
Website	www.amvac.com
E-mail	CustServ@amvac.com
Emergency phone number	
Medical	888-681-4261
CHEMTREC® (USA+Canada)	800-424-9300
CHEMTREC® (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 4
Health hazards	Acute toxicity, oral	Category 3
	Acute toxicity, inhalation	Category 3
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement

Combustible liquid.
Toxic if swallowed.
Toxic if inhaled.
Causes serious eye damage.
Suspected of causing cancer.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep away from flames and hot surfaces. - No smoking.
Avoid breathing mist/vapors.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wash thoroughly after handling.

Response

If swallowed: Immediately call a poison center/doctor. Rinse mouth.
Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor.
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.
If exposed or concerned: Get medical advice/attention.
In case of fire: Use appropriate media to extinguish.
Collect spillage.

Storage

Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

This is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Dichlorvos (DDVP)	Dimethyl 2,2-dichlorovinylphosphate	62-73-7	22.9
Aromatic solvent		64742-94-5	60 - 75

Constituents

Chemical name	Common name and synonyms	CAS number	%
1,2,4-Trimethylbenzene		95-63-6	< 1
Naphthalene		91-20-3	< 7

Composition comments

Occupational Exposure Limits for constituents are listed in Section 8.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison center or doctor/physician for further treatment advice.

Skin contact

Remove contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center for treatment advice.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Get medical attention immediately.

Ingestion	Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Most important symptoms/effects, 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. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Convulsions. Headache. Nausea, vomiting. Diarrhea.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. 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. 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 minutes 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, 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 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 dose of 2-PAM is 0.25 grams. Avoid 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 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 endotracheal tube.
General information	This product is a cholinesterase inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations. 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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	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.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Clean all clothing before reuse. Shower with soap and water after contact with this product.
Fire fighting equipment/instructions	Immediately evacuate personnel to safe areas. 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.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Combustible liquid.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Ensure adequate ventilation. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not allow this material to drain into sewers/water supplies. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5%) and detergent.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

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

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. Use only outdoors or in a well-ventilated area. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Keep away from open flames, hot surfaces and sources of ignition. Keep product away from food, drink, cosmetics, and tobacco products. Do not get this material in contact with eyes. Do not taste or swallow. Avoid breathing mist/vapors. Avoid prolonged exposure. When using, do not eat, drink or smoke. Avoid release to the environment. Wash hands thoroughly after handling.

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 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 the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dichlorvos (DDVP) (CAS 62-73-7)	PEL	1 mg/m3

Constituents	Type	Value
Naphthalene (CAS 91-20-3)	PEL	50 mg/m3 10 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Dichlorvos (DDVP) (CAS 62-73-7)	TWA	0.1 mg/m3	Inhalable fraction and vapor.

Constituents	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	10 ppm
Naphthalene (CAS 91-20-3)	TWA	10 ppm

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Dichlorvos (DDVP) (CAS 62-73-7)	IDLH	100 mg/m3

Constituents	Type	Value
Naphthalene (CAS 91-20-3)	IDLH	0.9 %
		250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
Aromatic solvent (CAS 64742-94-5)	TWA	100 mg/m3
Dichlorvos (DDVP) (CAS 62-73-7)	TWA	1 mg/m3

Constituents	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m3
		25 ppm
Naphthalene (CAS 91-20-3)	STEL	75 mg/m3
		15 ppm
	TWA	50 mg/m3
		10 ppm

Biological limit values

ACGIH Biological Exposure Indices (BEI)

Components	Value	Determinant	Specimen	Sampling Time
Dichlorvos (DDVP) (CAS 62-73-7)	70 %	Acetylcholinesterase activity	Reduction from individual baseline activity in red blood cells	*
	60 %	Butyrylcholinesterase activity	Serum or Plasma	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.
Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Dichlorvos (DDVP) (CAS 62-73-7) Skin designation applies.

US - Tennessee OELs: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Danger of cutaneous absorption
Naphthalene (CAS 91-20-3) Danger of cutaneous absorption

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation 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/face protection Wear chemical goggles. Face shield is recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves are listed on the label.

Other	Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required. Chemical resistant apron. (when mixing, loading, or cleaning equipment or spills).
Respiratory protection	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	Not applicable.
General hygiene considerations	Observe any medical surveillance requirements. 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.

9. Physical and chemical properties

Appearance	Clear, pale amber liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear, pale amber.
Odor	Aromatic solvent.
Odor threshold	Not available.
pH	3 - 4.5 (1% emulsion)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	326 °F (163.3 °C) (solvent).
Flash point	147 °F (63.9 °C) Tag Closed Cup
Evaporation rate	0.12 (compared to –Butyl acetate = 1.0).
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	1.8 % (77 °F (25 °C))
Explosive limit - upper (%)	11.7 % (77 °F (25 °C))
Vapor pressure	3.8 mm Hg (Solvent).
Vapor density	Heavier than air.
Relative density	1.07
Solubility(ies)	
Solubility (water)	Emulsifies.
Solubility (solvents)	Soluble in aromatic solvents.
Auto-ignition temperature	830 °F (443 °C) (approximate).
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	The data presented in this section are typical values and should not be construed as a specification.
Bulk density	8.93 lb/gal
Explosive properties	Not explosive.
Flammability class	Combustible IIIA
Oxidizing properties	Not oxidizing.

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.
Possibility of 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 bases. Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known. Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Toxic if inhaled. May cause drowsiness or dizziness. Headache. Nausea, vomiting.
Skin contact	May be harmful in contact with skin.
Eye contact	Causes serious eye damage.
Ingestion	Toxic if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	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. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Nausea.

Information on toxicological effects

Acute toxicity Toxic if swallowed. Toxic if inhaled. May be harmful in contact with skin.

Product	Species	Test Results
NUVAN® Fog 2EC™		
Acute		
Dermal		
LD50	female rat	3357 mg/kg
	male rat	2210 mg/kg
Inhalation		
Mist		
LC50	Rat	0.7 - 2.3 mg/kg
Oral		
LD50	female rat	98 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye damage.

Eye

NUVAN® Fog 2EC™ — Result: Extremely irritating

Respiratory or skin sensitization

ACGIH sensitization

Dichlorvos (DDVP), inhalable fraction and vapor (CAS 62-73-7) — Dermal sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization Not classified.

Germ cell mutagenicity Not classified.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Dichlorvos (DDVP) (CAS 62-73-7) — 2B Possibly carcinogenic to humans.
Naphthalene (CAS 91-20-3) — 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Naphthalene (CAS 91-20-3) — Known To Be Human Carcinogen.
Reasonably Anticipated to be a Human Carcinogen.

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

Specific target organ toxicity - single exposure May cause drowsiness or dizziness. Potential neurotoxicity as an organophosphate.

Specific target organ toxicity - repeated exposure Potential neurotoxicity as an organophosphate.

Aspiration hazard May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.

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

12. Ecological information

Ecotoxicity 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.

Components		Species	Test Results
Dichlorvos (DDVP) (CAS 62-73-7)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia pulex)	>= 0 - <= 0.0001 mg/l, 48 hours
Fish	LC50	Cutthroat trout (Oncorhynchus clarki)	>= 0.141 - <= 0.321 mg/l, 96 hours

Constituents		Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
NUVAN® Fog 2EC™	1.58
Dichlorvos (DDVP)	1.43

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions 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.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent).

14. Transport information

DOT

UN number UN3018

UN proper shipping name Organophosphorus pesticides, liquid, toxic (Dichlorvos RQ = 10 LBS), MARINE POLLUTANT

Transport hazard class(es)

Class 6.1

Subsidiary hazard -

Label(s) 6.1

Packing group III

Environmental hazards

Marine pollutant Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions IB3, N76, T7, TP2, TP28

Packaging exceptions 153

Packaging non bulk 203

Packaging bulk	241

IATA

UN number	UN3018
UN proper shipping name	Organophosphorus pesticide, liquid, toxic (Dichlorvos)
Transport hazard class(es)	
Class	6.1
Subsidiary hazard	-
Packing group	III
Environmental hazards	No
ERG Code	6L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3018
UN proper shipping name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (Dichlorvos), MARINE POLLUTANT
Transport hazard class(es)	
Class	6.1
Subsidiary hazard	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-A
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT

IATA; IMDG

Marine pollutant

General information DOT Regulated Severe Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations as a RESTRICTED USE PESTICIDE. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

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

ENVIRONMENTAL HAZARDS
This product is toxic to fish, birds, 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 washwater or rinsate.

PHYSICAL OR CHEMICAL HAZARDS
Combustible. Do not use or store near heat or open flame.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Aromatic solvent (CAS 64742-94-5)	Listed.
Dichlorvos (DDVP) (CAS 62-73-7)	Listed.
Naphthalene (CAS 91-20-3)	Listed.

SARA 304 Emergency release notification

Phosphoric acid, 2-dichloroethenyl dimethyl ester; Dichlorvos (CAS 62-73-7)	10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Dichlorvos (DDVP)	62-73-7	10	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)
Aspiration hazard

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Dichlorvos (DDVP)	62-73-7	22.9

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Dichlorvos (DDVP) (CAS 62-73-7)
Naphthalene (CAS 91-20-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

US state regulations

California Proposition 65

WARNING: This product can expose you to chemicals including Dichlorvos (DDVP), which are known to the State of California to cause cancer, and Ethylene Glycol, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date Oct-29-2015

Revision date Oct-27-2023

Version # 4.0

HMIS® ratings
Health: 3*
Flammability: 2
Physical hazard: 0

NFPA ratings
Health: 3
Flammability: 2
Instability: 0

Disclaimer

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Revision information This document has undergone significant changes and should be reviewed in its entirety.