

SAFETY DATA SHEET

1. Identification

| | | |
|---|---|-------------------|
| Product identifier | NUVAN Fog 5%™ | |
| Other means of identification | | |
| SDS number | 392 | |
| Product registration number | 5481-220 | |
| Synonyms | Alco® DDVP 5% Emulsifiable Concentrate™ | |
| Recommended use | Organophosphate insecticide. | |
| Recommended restrictions | This is a Restricted Use Pesticide and is for use by licensed applicators only. No other uses are advised. Keep out of the Reach of Children! | |
| EPA Registration number | EPA: 5481-220 | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Manufacturer | | |
| 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) |
| E-mail | CustServ@Amvac-Chemical.com | |
| Emergency phone number | Medical | 888-681-4261 |
| | CHEMTREC® (USA+Canada) | 800-424-9300 |
| | Product Use | 888-462-6822 |
| | CHEMTREC® (Outside USA) | 1+703-527-3887 |

2. Hazard(s) identification

| | | |
|------------------------------|--|-------------|
| Physical hazards | Flammable liquids | Category 4 |
| Health hazards | Acute toxicity, oral | Category 4 |
| | Acute toxicity, inhalation | Category 3 |
| | Serious eye damage/eye irritation | Category 2A |
| | Carcinogenicity | Category 1B |
| | Aspiration hazard | Category 1 |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 1 |
| | Hazardous to the aquatic environment, long-term hazard | Category 2 |
| OSHA defined hazards | Not classified. | |
| Label elements | | |



Signal word

Danger

| | |
|--|--|
| Hazard statement | Combustible liquid. Toxic if swallowed. Harmful in contact with skin. Toxic if inhaled. Causes serious eye irritation. May cause cancer. May be fatal if swallowed and enters airways. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. |
| Precautionary statement | |
| Prevention | Do not handle until all safety precautions have been read and understood. Keep away from flames and hot surfaces-No smoking. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well ventilated area. Avoid release to the environment. |
| Response | If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. 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 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) | DDVP, Nuvan, Vapona, Dimethyl 2,2-dichlorovinyl phosphate | 62-73-7 | 5 |
| Aromatic solvent | | 64742-94-5 | 80 - 90 |

Constituents

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

4. First-aid measures

| | |
|---------------------|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Get medical advice/attention if you feel unwell. Wash contaminated clothing before reuse. Wash off immediately with plenty of water for at least 15 minutes. |
| Eye contact | Immediately flush eyes 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. |

| | |
|---|--|
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. 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. Do not induce vomiting. If victim is conscious, administer an 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. |
| Most important symptoms/effects, acute and delayed | <p>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.</p> <p>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. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.</p> |
| Indication of immediate medical attention and special treatment needed | <p>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. 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 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.</p> |
| General information | <p>This product is a Cholinesterase Inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations. 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. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.</p> |
| 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 | Clean all clothing before reuse. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. 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. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. 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 protection, 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 | Prevent product from entering drains. Large Spills: Dike far ahead of spill for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. 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. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5%) and detergent. Never return spills to original containers for re-use. |
|--|--|

| | |
|----------------------------------|--|
| 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. Keep away from open flames, hot surfaces and sources of ignition. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or 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 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 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value |
|-----------------------------------|------|----------------------|
| Aromatic solvent (CAS 64742-94-5) | PEL | 400 mg/m3 100 ppm |
| 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

| Components | Type | Value | Form |
|---------------------------------------|------|-----------|-------------------------------|
| Aromatic solvent (CAS 64742-94-5) | TWA | 200 mg/m3 | Non-aerosol. |
| 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 | 25 ppm | |

US. ACGIH Threshold Limit Values

| Constituents | Type | Value |
|---------------------------|------|--------|
| Naphthalene (CAS 91-20-3) | TWA | 10 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|---------------------------------|------|---------|
| 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 No biological exposure limits noted for the ingredient(s).

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

Aromatic solvent (CAS 64742-94-5) Can be absorbed through the skin.
Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.
Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

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 (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/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Gloves of nitrile rubber, PVA or Viton are recommended.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

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 | 4 - 5.5 (1% emulsion) |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | 326 °F (163 °C) (solvent). |
| Flash point | 147 °F (64 °C) Tag Closed Cup |
| Evaporation rate | 0.1 (compared to –Butyl acetate = 1.0). |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | 1.8 % (77 °F (25 °C)) |
| Flammability limit - upper (%) | 11.7 % (77 °F (25 °C)) |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | 3.80E+00 mm Hg (Solvent). |
| Vapor density | Heavier than air. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Emulsifies. |
| Solubility (solvents) | Soluble in aromatic solvents. |
| Partition coefficient temp. | 38.4 @ 25 C |
| Auto-ignition temperature | 830 °F (443 °C) (approximate). |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Bulk density | 7.6 lb/gal |
| Explosive properties | Not explosive. |
| Flammability class | Combustible IIIA |
| Oxidizing properties | Not oxidizing. |
| Specific gravity | 0.91 |

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 | Keep away from heat, hot surfaces, 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 | May cause damage to organs by inhalation. Toxic if inhaled. |
|-------------------|---|

| | | |
|---|---|--|
| Skin contact | Harmful in contact with skin. | |
| Eye contact | Causes serious eye irritation. | |
| 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 | 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. Severe eye irritation. Aspiration may cause pulmonary edema and pneumonitis. | |
| Information on toxicological effects | | |
| Acute toxicity | Toxic if swallowed. Toxic if inhaled. Causes severe eye irritation. May be fatal if swallowed and enters airways. | |
| Product | Species | Test Results |
| NUVAN Fog 5% | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | > 5050 mg/kg (Toxicity Category IV) |
| Inhalation | | |
| LC50 | Rat | > 2.06 mg/kg (Toxicity Category IV) |
| Oral | | |
| LD50 | Rat | 1030 mg/kg female (Toxicity Category IV) |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. | |
| Serious eye damage/eye irritation | Causes serious eye irritation. | |
| Eye | | |
| NUVAN Fog 5% | | 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 | Possible skin sensitizer. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% show any germ cell mutation. | |
| Carcinogenicity | May cause 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 1910.1001-1052) | | |
| Not regulated. | | |
| US. National Toxicology Program (NTP) Report on Carcinogens | | |
| Naphthalene (CAS 91-20-3) | | 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 | Causes damage to organs. Potential neurotoxicity as an organophosphate. | |
| Specific target organ toxicity - repeated exposure | Causes damage to organs through prolonged or 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. | |

12. Ecological information

Ecotoxicity Very toxic to aquatic life. 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 |
|-----------------------------------|---------|---|
| Aromatic solvent (CAS 64742-94-5) | | |
| Aquatic | | |
| Crustacea | EC50 | Water flea (Daphnia pulex) 2.7 - 5.1 mg/l, 48 hours |
| Fish | LC50 | Rainbow trout, donaldson trout (Oncorhynchus mykiss) 8.8 mg/l, 96 hours |
| | | 8.8 mg/l, 96 hours |
| Dichlorvos (DDVP) (CAS 62-73-7) | | |
| Aquatic | | |
| 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 |

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

Bioaccumulative potential

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 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). Dispose of container and residues in accordance with all applicable regulations.

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), MARINE POLLUTANT |
| Transport hazard class(es) | |
| Class | 6.1(PGIII) |
| Subsidiary risk | - |
| 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 pesticides, liquid, toxic (Dichlorvos) |
| Transport hazard class(es) | |
| Class | 6.1(PGIII) |

| | |
|---|---|
| Subsidiary risk | - |
| Label(s) | 6.1 |
| Packing group | III |
| Environmental hazards | Yes |
| 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 pesticides, liquid, toxic (Dichlorvos), MARINE POLLUTANT |
| Transport hazard class(es) | |
| Class | 6.1(PGIII) |
| Subsidiary risk | - |
| Label(s) | 6.1 |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | Yes |
| EmS | Not available. |
| 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. |

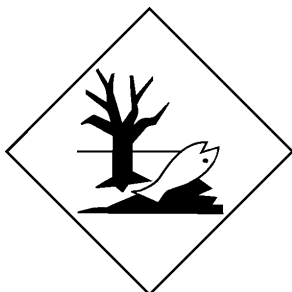
DOT



IATA; IMDG



Marine pollutant



General information

DOT Regulated Severe Marine Pollutant. IMDG Regulated Severe 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. 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. Do not get in eyes, on skin, or on clothing. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Avoid breathing vapor or spray mist.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds, and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present (except for application to cranberry bogs) or to intertidal areas below the mean high water mark. Do not allow this material to drift onto neighboring crops or non crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues, or other undesirable results may occur. Do not contaminate water when disposing of equipment washwater or rinsate. This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on treated area. Do not apply when bees are visiting ornamentals, weeds, or other vegetation blooming in the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

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

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Dichlorvos (DDVP) (CAS 62-73-7) Listed.

Naphthalene (CAS 91-20-3) Listed.

SARA 304 Emergency release notification

Dichlorvos (DDVP) (CAS 62-73-7) 10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

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

Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Germ cell mutagenicity
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 | 5 |

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) Not regulated.**US state regulations****California Proposition 65****WARNING:** This product can expose you to Dichlorvos (DDVP), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Dichlorvos (DDVP) (CAS 62-73-7)

Listed: January 1, 1989

Naphthalene (CAS 91-20-3)

Listed: April 19, 2002

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2, 4-Trimethylbenzene (CAS 95-63-6)

Naphthalene (CAS 91-20-3)

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-22-2015**Revision date** Jul-30-2018

References

ACGIH®: American Conference of Governmental Industrial Hygienists
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
EPA: Environmental Protection Agency
FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
IARC: International Agency for Research on Cancer
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Agency
SARA: Superfund Amendments and Reauthorization Act
TSCA: Toxic Substances Control Act
DOT: Department of Transportation
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association

Version # 3.0

HMIS® ratings

Health: 4*
Flammability: 2
Physical hazard: 0

NFPA ratings

Health: 4
Flammability: 2
Instability: 0

Disclaimer

This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

©2018 AMVAC Chemical Corporation. All Rights Reserved. AMVAC and the AMVAC Logo are trademarks owned by AMVAC Chemical Corporation.

Nuvan, Nuvan Fog 4EC, Alco, and Alco DDVP 4E are trademarks owned by AMVAC Chemical Corporation.

ACGIH is a trademark of the American Conference of Governmental Industrial Hygienists.

CHEMTREC is a trademark of the American Chemistry Council, Inc.

HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

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