

# SAFETY DATA SHEET

## 1. Identification

|   |   |
|---|---|
| <b>Product identifier</b>                                     | <b>Dibrom 8 Emulsive</b>  |
| <b>Other means of identification</b>                          |   |
| <b>SDS number</b>   | 254   |
| <b>Product registration number</b>                            | 5481-479  |
| <b>Synonyms</b>   | Dibrom 94.4 EC * Dibrom 58 EC   |
| <b>Recommended use</b>  | Organophosphate insecticide.  |
| <b>Recommended restrictions</b>                               | This is a Restricted Use Pesticide and is for use by licensed applicators only.<br>No other uses are advised.<br>Keep out of the Reach of Children!   |
| <b>EPA Registration number</b>                                | EPA: 5481-479   |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |
| <b>Manufacturer</b>   |   |
| <b>Company name</b>   | AMVAC Chemical Corporation  |
| <b>Address</b>  | 4695 MacArthur Court<br>Suite 1200<br>Newport Beach, CA 92660<br>United States  |
| <b>Telephone</b>  | AMVAC Chemical Corp      949-260-1200<br>AMVAC Chemical Corp      949-260-6270(FAX)   |
| <b>E-mail</b>   | CustServ@Amvac-Chemical.com   |
| <b>Emergency phone number</b>                                 | Medical                      888-681-4261<br>CHEMTREC®                800-424-9300<br>(USA+Canada)<br>Product Use                888-462-6822<br>CHEMTREC® (Outside      1+703-527-3887<br>USA) |

## 2. Hazard(s) identification

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



**Signal word**

Danger

**Hazard statement** Combustible liquid.  
 Causes severe skin burns and eye damage.  
 Causes serious eye damage.  
 Toxic if swallowed.  
 Harmful if inhaled.  
 May cause cancer by inhalation.  
 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**

Do not breathe mist or vapor.  
 Do not get in eyes, on skin, or on clothing.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing.  
 Wear eye/face protection.  
 Contaminated work clothing must not be allowed out of the workplace.

**Response**

If swallowed: Immediately call a poison center/doctor.  
 Rinse mouth.  
 If on skin: Wash with plenty of water.  
 Take off contaminated clothing and wash before reuse.  
 Immediately call a POISON CENTER or doctor/physician.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 Immediately call a poison center/doctor.  
 Specific treatment is urgent (see this label).  
 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 | %      |
|--|---|------------|--------|
| Naled                                    | DIBROM, Dimethyl<br>1,2-dibromo-2,2-dichloroethyl phosphate | 300-76-5   | 62     |
| Solvent naphtha (petroleum), heavy arom. |   | 64742-94-5 | 21 -30 |

**Constituents**

| Chemical name           | Common name and synonyms | CAS number | %     |
|-------------------------|--------------------------|------------|-------|
| 1,2, 4-Trimethylbenzene |                          | 95-63-6    | < 0.1 |
| Naphthalene             |                          | 91-20-3    | < 0.3 |

**Impurities**

| Chemical name     | Common name and synonyms                                     | CAS number | %     |
|-------------------|--|------------|-------|
| Dichlorvos (DDVP) | DDVP, Nuvan, Vapona, Dimethyl<br>2,2-dichlorovinyl phosphate | 62-73-7    | < 0.3 |

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**Composition comments** All concentrations are in percent by weight.

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell. 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.

### Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

### Ingestion

Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

### Most important symptoms/effects, acute and delayed

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.

This is a cholinesterase inhibiting organophosphorous pesticide. 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. Repeated exposures to small doses of organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed.

### Indication of immediate medical attention and special treatment needed

This product is an Organophosphate (OP) Insecticide. Do not handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning. In the USA and other countries, contact your local or national poison control center for more information.

Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minute intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, 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 to very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

### General information

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. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

### Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

### Unsuitable extinguishing media

None known.

### Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed. This product will emit toxic fumes when heated sufficiently to decompose, including hydrogen chloride, hydrogen bromide and carbon monoxide. Vapors of the unburned product will also be hazardous. Do not breathe gas, fumes, or vapor.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

In case of fire: Evacuate area. Keep upwind. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

**Specific methods**

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

**General fire hazards**

This is a noncombustible liquid that will not support fire.

This product will emit toxic fumes when heated sufficiently to decompose, including hydrogen chloride, hydrogen bromide and carbon monoxide. Vapors of the unburned product will also be hazardous.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not get in eyes. Avoid contact with skin. Avoid contact with clothing. 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.

**Methods and materials for containment and cleaning up**

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. Clean the area as described for a small spill.

Small Spills: Cover residue with absorbent (clay, sawdust, straw, kitty litter, etc.), to absorb the remaining 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.

Never return spills to original containers for re-use.

**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.

**7. Handling and storage****Precautions for safe handling**

Keep out of the reach of children. Keep away from food, drink and animal feedstuffs. Do not taste or swallow. Do not get this material in contact with eyes. Avoid inhalation of vapors and spray mists. 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. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. Handle and open container with care. Avoid release to the environment.

**Conditions for safe storage, including any incompatibilities**

Keep out of the reach of children. Store locked up. Store in original tightly closed container. Keep away from food, drink and animal feedstuffs. Store in a well-ventilated place. 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                 |
|---|------|-----------------------|
| Naled (CAS 300-76-5)                                      | PEL  | 3 mg/m <sup>3</sup>   |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | PEL  | 400 mg/m <sup>3</sup> |
|   |      | 100 ppm               |
| Constituents  | Type | Value                 |
| Naphthalene (CAS 91-20-3)                                 | PEL  | 50 mg/m <sup>3</sup>  |
|   |      | 10 ppm                |
| Impurities  | Type | Value                 |
| Dichlorvos (DDVP) (CAS 62-73-7)                           | PEL  | 1 mg/m <sup>3</sup>   |

**US. ACGIH Threshold Limit Values**

| Components  | Type | Value     | Form                          |
|---|------|-----------|-------------------------------|
| Naled (CAS 300-76-5)                                      | TWA  | 0.1 mg/m3 | Inhalable fraction and vapor. |
| Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) | TWA  | 200 mg/m3 | Non-aerosol.                  |
| Constituents  | Type | Value     |                               |
| 1,2, 4-Trimethylbenzene (CAS 95-63-6)                     | TWA  | 25 ppm    |                               |
| Naphthalene (CAS 91-20-3)                                 | TWA  | 10 ppm    |                               |
| Impurities  | Type | Value     | Form                          |
| Dichlorvos (DDVP) (CAS 62-73-7)                           | TWA  | 0.1 mg/m3 | Inhalable fraction and vapor. |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                            | Type | Value     |
|---------------------------------------|------|-----------|
| Naled (CAS 300-76-5)                  | TWA  | 3 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    |
| Impurities                            | Type | Value     |
| Dichlorvos (DDVP) (CAS 62-73-7)       | TWA  | 1 mg/m3   |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines****US - California OELs: Skin designation**

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

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

Naled (CAS 300-76-5) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Solvent naphtha (petroleum), heavy arom. (CAS 64742-94-5) 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.

Naled (CAS 300-76-5) 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** Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Safety glasses with side shields or tight fitting chemical goggles should be used whenever hazardous chemicals are being handled. A full face respirator should be worn whenever there is a chance of splashing or misting.

**Skin protection**

**Hand protection** Wear chemical resistant gloves (preferably nitrile)

|                                       |   |
|---------------------------------------|---|
| <b>Other</b>                          | The following clothing is required: overalls or pants and long-sleeved shirt, chemical resistant gloves (preferably nitrile), chemical resistant boots. For added protection a chemical resistant apron and a full face shield are recommended. It there is a risk of splashing, misting or release the following additional PPE is required: two piece hooded chemical resistant suit with either a full face respirator or a SCBA. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are available, use detergent and hot water. Keep and wash PPE separately. |
| <b>Respiratory protection</b>         | For exposures that may exceed the TLV, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) is required. A full-face respirator or a SCBA may be required if misting or splashing are possible.   |
| <b>Thermal hazards</b>                | Wear appropriate thermal protective clothing, when necessary.   |
| <b>General hygiene considerations</b> | When using, do not eat, drink or smoke. Do not get in eyes. Avoid contact with skin. Avoid contact with clothing. 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

|  |                           |
|--|---------------------------|
| <b>Physical state</b>                          | Liquid.                   |
| <b>Form</b>                                    | Liquid.                   |
| <b>Color</b>                                   | Off-white to straw yellow |
| <b>Odor</b>                                    | Sharp, pungent            |
| <b>Odor threshold</b>                          | Not available.            |
| <b>pH</b>                                      | 3 (5% in deionized water) |
| <b>Melting point/freezing point</b>            | 59 °F (15 °C)             |
| <b>Initial boiling point and boiling range</b> | 320 °F (160 °C)           |
| <b>Flash point</b>                             | 145 °F (63 °C) Closed Cup |
| <b>Evaporation rate</b>                        | Not available.            |
| <b>Flammability (solid, gas)</b>               | Not applicable.           |

### Upper/lower flammability or explosive limits

|                                       |                            |
|---------------------------------------|----------------------------|
| <b>Flammability limit - lower (%)</b> | 0.7 % estimated            |
| <b>Flammability limit - upper (%)</b> | 5 % estimated              |
| <b>Explosive limit - lower (%)</b>    | Not available.             |
| <b>Explosive limit - upper (%)</b>    | Not available.             |
| <b>Vapor pressure</b>                 | 1.00E+01 mm Hg @ 100 F     |
| <b>Vapor density</b>                  | Heavier than air           |
| <b>Relative density</b>               | Not available.             |
| <b>Solubility(ies)</b>                |                            |
| <b>Solubility (water)</b>             | Not available.             |
| <b>Auto-ignition temperature</b>      | Not available.             |
| <b>Decomposition temperature</b>      | Not available.             |
| <b>Viscosity</b>                      | Not available.             |
| <b>Other information</b>              |                            |
| <b>Bulk density</b>                   | 11.88 - 12.13 lb/gal       |
| <b>Flammability class</b>             | Combustible IIIA estimated |
| <b>Specific gravity</b>               | 1.424 - 1.454 @ 25°C/4°C   |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.                     |
| <b>Chemical stability</b>                 | Material is stable under normal conditions. Unstable in the presence of iron. Corrosive to aluminum and magnesium |
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization does not occur.  |

|   |  |
|---|--|
| <b>Conditions to avoid</b>              | Contact with incompatible materials. Excessive heat.   |
| <b>Incompatible materials</b>           | Strong oxidizing agents. Strong acids. Strong bases. May be corrosive to metals.   |
| <b>Hazardous decomposition products</b> | Heating product to decomposition will cause emission of acrid smoke and fumes of hydrogen chloride, hydrogen bromide, phosphorous oxides, and carbon oxides. |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Harmful if inhaled.                      |
| <b>Skin contact</b> | Causes severe skin burns and eye damage. |
| <b>Eye contact</b>  | Causes serious eye damage.               |
| <b>Ingestion</b>    | Toxic if swallowed.                      |

### Symptoms related to the physical, chemical and toxicological characteristics

This is a cholinesterase inhibiting organophosphorous pesticide. 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.

Repeated exposures to small doses of organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

**Acute toxicity** Toxic if swallowed. Harmful if inhaled. Causes serious eye damage. Causes severe skin burns and eye damage. May be fatal if swallowed and enters airways.

| Product           | Species | Test Results                  |
|-------------------|---------|-------------------------------|
| Dibrom 8          |         |                               |
| <b>Acute</b>      |         |                               |
| <b>Dermal</b>     |         |                               |
| <i>Liquid</i>     |         |                               |
| LD50              | Rabbit  | 5050 mg/kg (female)           |
| <b>Inhalation</b> |         |                               |
| <i>Mist</i>       |         |                               |
| LC50              | Rat     | 1.51 mg/l/4h male (nose only) |
| <b>Oral</b>       |         |                               |
| <i>Liquid</i>     |         |                               |
| LD50              | Rat     | 235 mg/kg                     |

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

### Respiratory or skin sensitization

|                                  |                   |
|----------------------------------|-------------------|
| <b>Respiratory sensitization</b> | Not available.    |
| <b>Skin sensitization</b>        | Not a sensitizer. |

**Germ cell mutagenicity** No clear evidence of in vivo mutagenicity in mammalian assay.

**Carcinogenicity** No evidence of carcinogenicity in laboratory animals with Naled Technical. However, EPA under its 1999 proposed Guidelines for Carcinogen Risk Assessment has classified DDVP, an impurity in Naled, as having "suggestive evidence of carcinogenicity, but not sufficient to assess human carcinogenic potential." IARC listed DDVP (Dichlorvos) as being possibly carcinogenic to humans (Group 2B).

### IARC Monographs. Overall Evaluation of Carcinogenicity

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.

NALED TERATOGENICITY: Maternal toxicity in rats was observed at 40 mg/kg/day (body weight loss, tremors, painful or difficult breathing, and decreased activity) using Naled Technical (a.i.). No developmental effects were observed at this dose level. The maternal NOEL was 10 mg/kg/day. The developmental NOEL was 40 mg/kg/day.

In a two-generation rat reproduction study with Naled Technical (a.i.), a decrease in male body weight gain was observed at 18 mg/kg/day; however, no effects on reproduction were found in adult animals. Decreases in offspring survival, number of pups born and decreased pup weights were noted at 18 mg/kg/day. The NOEL for both adults and offspring was 6 mg/kg/day.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

**Aspiration hazard**

Not available.

**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. Notify authorities if any exposure to the general public or environment occurs or is likely to occur.

| Components           | Species | Test Results   |
|----------------------|---------|--|
| Naled (CAS 300-76-5) |         |  |
| <b>Aquatic</b>       |         |  |
| Crustacea            | EC50    | Water flea (Daphnia pulex)                           |
| Fish                 | LC50    | Rainbow trout, donaldson trout (Oncorhynchus mykiss) |

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential**

Not available.

**Mobility in soil**

No data available.

**Other adverse effects**

None known.

**13. Disposal considerations****Disposal instructions**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site according to all applicable regulations. 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 all applicable 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 methods/information).

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**14. Transport information****DOT**

|                                   |  |
|-----------------------------------|--|
| <b>UN number</b>                  | UN2922   |
| <b>UN proper shipping name</b>    | Corrosive liquids, toxic, n.o.s. (Naled RQ = 10 lbs), MARINE POLLUTANT |
| <b>Transport hazard class(es)</b> |  |
| <b>Class</b>                      | 8  |
| <b>Subsidiary risk</b>            | 6.1(PGIII)   |
| <b>Label(s)</b>                   | 8, 6.1   |
| <b>Packing group</b>              | III  |



**Environmental hazards**

**Marine pollutant** Yes

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

**Special provisions** IB3, T7, TP1, TP28

**Packaging exceptions** 154

**Packaging non bulk** 203

**Packaging bulk** 241

**IATA**

**UN number** UN2922

**UN proper shipping name** Corrosive liquids, toxic, n.o.s. (Naled)

**Transport hazard class(es)**

**Class** 8

**Subsidiary risk** 6.1(PGIII)

**Label(s)** 8, 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** UN2922

**UN proper shipping name** Corrosive liquids, toxic, n.o.s. (Naled), MARINE POLLUTANT

**Transport hazard class(es)**

**Class** 8

**Subsidiary risk** 6.1(PGIII)

**Label(s)** 8, 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.

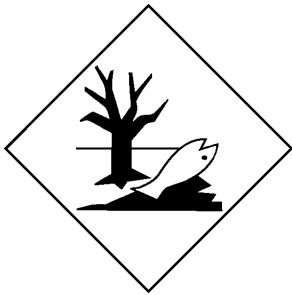
**DOT**



**IATA; IMDG**



## Marine pollutant



### General information

DOT Regulated 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 chemical 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.

#### HAZARD TO HUMANS AND DOMESTIC ANIMALS.

**DANGER: CORROSIVE!** Causes irreversible eye damage. Causes skin burns. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not breathe mist/vapors/spray.

#### ENVIRONMENTAL HAZARDS

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. Before making the first application in a season, consult with the primary State agency responsible for regulating the pesticide to determine if permits are required or regulatory mandates exist. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Do not apply over bodies of water (e.g., lakes, swamps, rivers, permanent streams, natural ponds, commercial fish ponds, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. See the label for more complete information.

#### PHYSICAL AND CHEMICAL HAZARDS

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

For additional information see the label.

### 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. |
| Naled (CAS 300-76-5)            | 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** Yes

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Carcinogenicity  
Aspiration hazard

### SARA 313 (TRI reporting)

| Chemical name     | CAS number | % by wt. |
|-------------------|------------|----------|
| Naled             | 300-76-5   | 62       |
| Dichlorvos (DDVP) | 62-73-7    | < 0.3    |

## 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:** WARNING: This product contains a chemical known to the State of California to cause cancer. This product can expose you to chemicals including Dichlorvos (DDVP), which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://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)   | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | No                     |

\*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** Sep-11-2017  
**Revision date** Jul-31-2018

**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 #**

2.0

**HMIS® ratings**

Health: 3  
Flammability: 2  
Physical hazard: 0

**NFPA ratings**

Health: 3  
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.

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HMIS is a trademark of the American Coatings Association.

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

**Revision information**

Product and Company Identification: Product and Company Identification

Hazard(s) identification: Hazard statement

Hazard(s) identification: Supplemental information

Composition / Information on Ingredients: Disclosure Overrides

Toxicological information: Symptoms related to the physical, chemical and toxicological characteristics

Regulatory information: California Proposition 65

Regulatory information: Water Pollution Control Act

Other information, including date of preparation or last revision: Disclaimer

GHS: Classification