

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND THE SUPPLIER

Product name:	Dichlorvos 1000G/L EC
Other name:	/
Recommended use of the chemical and restrictions on use	Insecticide
Supplier name:	Shandong Weifang Rainbow Chemical Co., Ltd.
Supplier address:	Binhai Economic Development Area, Weifang, Shandong, China
Supplier phone:	+86-531-88875222, 88875231
Supplier fax:	+86-531-88875232, 88875224
Emergency phone number:	+86-531-88875222

2. HAZARDS IDENTIFICATION

Hazard statement(s):

Toxic if swallowed. Fatal if absorbed through skin or inhaled.
Very toxic to aquatic organisms.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Dichlorvos	62-73-7	1000G/L
Other ingredients		Up to 1L

4. FIRST AID MEASURES

Description of necessary first aid measures

Inhalation: Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Skin contact: Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Eye contact: Rinse with pure water for at least 15 minutes. Consult a doctor.

Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

Acute illness from dichlorvos is limited to the effects of cholinesterase inhibition. Symptoms may occur during use or be delayed - even up to 8 hours after use. Dichlorvos inhalation symptoms: Pupillary constriction, muscle cramp, excessive salivation, muscle twitching, convulsions, dizziness, sweating, wheezing, laboured breathing, and unconsciousness. Dichlorvos eye exposure symptoms: Redness, pain, pupillary constriction, and blurred vision. Dichlorvos ingestion symptoms: Excessive salivation. Nausea, vomiting, abdominal cramp, and diarrhoea.

Very high doses may result in unconsciousness, incontinence, and convulsions or fatality.

Accumulation of the product in the human body may occur and may cause some concern following repeated or long-term occupational exposure.

Notes to physician

Administer atropine sulphate intravenously (1-4mg) every 5-10 minutes until signs of atropinisation (dry flushed skin and tachycardia) occur. Alternatively administer obidoxime chloride or Pralidoxime (PAM) at 50 mg/kg up to a total dose of 1-2 g or administer Protopam at 2/3 of the dose of PAM. Repeat oximes if necessary. Do not

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give morphine.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Use dry chemical, carbon dioxide, water spray, or foam. Contain fire control water for later disposal. Do not use high volume water jets due to potential contamination.

Special hazards arising from the chemical:

Flammable liquid and vapour. Fires involving the product may produce irritating or toxic products of combustion including chloride fumes, phosgene and oxides of carbon and phosphor. Containers may explode in heat of fire. Flashback may occur along vapour trail.

Special protective actions for fire-fighters:

Firefighters must wear emergency equipment including positive pressure self-contained breathing apparatus with a full-face mask. Remove unaffected containers from fire area if possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods and materials for containment and cleaning up:

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:

Always provide good ventilation in the work area. Prevent contact with eyes, skin, and clothing. Do not breathe in vapours/spray mist.

Wear protective clothing and equipment during handling as described in Section 8 of the SDS. Do not eat or drink during use. Wash the hands and face thoroughly with soap after handling. Keep containers closed when not in use.

Do not permit smoking in use or storage areas. Use explosion proof equipment and ensure that all transfer equipment is grounded and bonded. Take precautionary measures against static discharges.

Locate emergency showers and eye-rinsing facility near the work/handling area. Maintain good normal industrial hygiene and housekeeping practices in areas where the product is used/handled.

Remove contaminated clothing immediately if the product gets inside. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of work area and work clothing is recommended.

Keep unprotected persons away from the area where the product is being applied.

Conditions for safe storage, including any incompatibilities:

Store away from potential ignition sources. The entrance to storage facilities should be granted only to appropriately trained personnel. Always store locked up and keep containers tightly closed when not in use. Store only in properly labelled containers. Check storage containers regularly for leaks.

Dichlorvos is not stable at high temperatures or under Ultraviolet Light. Store away from direct sunlight at lower temperatures.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls:

Use explosion-proof electrical/ventilating/lighting/equipment. Use with local exhaust ventilation to maintain airborne concentrations and exposure below occupational exposure limits.

Personal protective equipment:

Respiratory protection: In case of vapour formation, use an approved respirator (full face mask) with a particulate filter and an organic vapour cartridge or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration.

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Eye protection: Safety eyewear compliant with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or vapour. Splash resistant safety goggles and a full face shield are recommended if a full face respirator is not used.

Skin and body protection: Wear fire/flamm resistant/retardant clothing and antistatic boots. Elbow length impervious chemical resistant gloves recommended for hand protection (e.g., butyl rubber, nitrile rubber, etc.). Impervious coveralls, apron, shoes, and socks as required to prevent skin contact and contamination of personal clothing. Overalls must be buttoned to the neck and sleeves worn over the gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.):	Light Yellow Liquid
Explosive properties:	Not explosive.
Oxidizing properties:	Corrosive to iron and mild steel. Non-corrosive to stainless steel, aluminum, nickel and Teflon, in the absence of water.
Flammability (solid, gas):	Flammable. >23 °C
Vapor pressure:	No data available.
Relative density:	1.195 g/mL
Solubility(ies):	No data available.

10. STABILITY AND REACTIVITY

Chemical stability:

Stable under normal condition.

Incompatible materials:

Incompatible with alkaline materials, chinomethionat and dichlofluanid.

Hazardous decomposition products:

Does not decompose when used for intended uses. Can decompose under fire or during burning – toxic chloride fumes and phosgene could form if heated to decomposition or on contact with acid or acid fumes.

11. TOXICOLOGICAL INFORMATION

Numerical measures of toxicity:

Acute oral LD50:	102 mg/kg in the rat
Acute dermal LD50:	132mg/kg in the rabbit
Acute inhalation LC50:	0.11 g/L in the rat, 4h
Skin irritation:	Moderate irritation
Eye irritation:	Serious irritation
Skin sensitization:	Sensitizer

12. ECOLOGICAL INFORMATION

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Ecotoxicity:

Birds - Acute LD50:	> 1640 mg/kg in the <i>Colinus virginianus</i>
Fish - Acute 96 hour LC50:	0.55 mg/L in the <i>Oncorhynchus mykiss</i>
Aquatic invertebrates - Acute 48 hour EC50:	0.0009 mg/L in the <i>Daphnia magna</i>
Honeybees - contact acute 48 hour LD50	Toxic to bees.

13. DISPOSAL CONSIDERATIONS

Safe handling of waste residues and disposal methods:

Product:

Avoid and minimize the generation of waste.

Dispose product related waste in accordance with all local regulations and prevent the contamination of water, food, or feed by storage or disposal of the waste. Do not use empty containers for any other purpose. The product or empty containers must not be disposed of as part of general waste.

Contaminated packaging:

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill.

14. TRANSPORT INFORMATION

UN number:

3017

UN proper shipping name:

ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, Flash Point not less than 23°C

Transport hazard class(es):

3

Packing group, if applicable:

II

Marine pollutant (Yes/No):

Yes

15. REGULATORY INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and /or local laws.

16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.