

SAFETY DATA SHEET

NUVOS™

1. SUBSTANCE IDENTIFICATION

NUVOS containing 1000g/l dichlorvos in the form of an emulsifiable concentrate.

Chemical Type: Organo-phosphorous insecticide
Manufacturer and Distributor: Orion Crop Protection Limited
106 Bush Road, Albany, Auckland, New Zealand
Phone 09 415 1679
Emergency Response Number 0800 CHEMCALL
0800 24362255
ACVM Registration Number: P01132

2. COMPOSITION INFORMATION

<u>Ingredients</u>	<u>CAS Number</u>	<u>Content</u>
dichlorvos	62-73-7	1000 g/l
Ingredients determined to be non hazardous or proprietary		<100 g/l

3. HAZARDS IDENTIFICATION

Symptoms of Acute Poisoning

Overdoses cause poisoning by cholinesterase inhibition. Symptoms in humans are: exhaustion, diarrhoea, dripping mouth and nose, excessive salivation, stomach cramps, vomiting, excessive sweating, trembling, lack of muscle co-ordination, muscle twitches, extreme weakness, mental confusion, blurred vision, difficulty breathing, cough, rapid pulse, flushed or yellow skin, tearing eyes.

Swallowed: Highly toxic
Eye: Highly toxic, Irritant
Skin: Highly toxic, Irritant
Inhaled: Highly toxic, May irritate airways

Symptoms of Chronic Toxicity:

Dichlorvos technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, teratogenic or reproductive effects were obtained. Repeated minor exposure may cause a cumulative poisoning effect due to cholinesterase inhibition. Cholinesterase levels will return to normal within a few weeks after exposure is stopped.

Hazardous Decomposition Products: can decompose at high temperatures to form toxic gases.

Unusual Fire, Explosion and Reactivity Hazards: Irritating and toxic gases may be formed by thermal decomposition or combustion.

Ecotoxicity: Toxic to fish and aquatic organisms.

4. FIRST AID MEASURES

In case of poisoning by any route contact a doctor or Poisons Information Centre

Swallowed: If more than 15 minutes from emergency medical care induce vomiting and administer a large quantity of activated charcoal in plenty of water. No milk or alcoholic beverages.

Eye: Flush eyes with large quantities of water for 15 minutes.

Skin: If contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water.

Inhaled: Move affected person to fresh air and keep at rest until recovered.

Advise to Doctor: Inject 2-4mg (adults) atropine sulphate. Repeat at 5-10 minute intervals until signs of atropinisation appear. Patient should be atropinised for 24-48 hours because of possible continued adsorption of the poison.

5. FIRE FIGHTING MEASURES

Dangerous Goods Class:	6.1 - Dangerous Poison
Hazchem Code:	3XE
Extinguishing media:	Foam, carbon dioxide or dry chemicals
Unsuitable extinguishing media:	Water (unless as a fog)
Special exposure hazards:	Highly toxic gases released by thermal decomposition
Fire and Explosive Properties:	Combustible
Flammability:	Flash point 80 - 90°C

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak: Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. If a solid, sweep up material and place in a compatible disposal container. If a liquid, cover entire spill with absorbing material and place into compatible disposal container. Scrub area with a hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion:	Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
Eye Contact:	Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Skin Contact:	Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.
Inhalation:	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. Always ensure adequate ventilation. An organic vapour cartridge may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Personal Protection Requirements:

Respiratory Protection (Vapour)	Required
Eye/Face Protection	Required
Skin Protection	Required

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow to yellow brown clear liquid
Odour:	Distinctive
pH:	Not available
Boiling Point:	234.1 °C / 1x10 ⁵ Pa
Melting Point:	Not available
Flash Point:	80-90 °C
Flammable (Explosive) Limits:	Not available
Autoflammability:	Not available
Explosive Properties:	Not available
Oxidizing Properties:	Not an oxidizing agent
Vapour Pressure:	2.1x10 ³ mPa (25 °C)
Relative density:	1.29-1.31 g/l
Solubility:	18g/l (25 °C)
Partition Coefficient:(n-octanol/H₂O)	L _{ow} log P 1.9

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	None
Materials to avoid:	None
Hazardous Decomposition Products:	Toxic gases formed by thermal decomposition
Hazardous Polymerisation:	Does not occur

11. TOXICOLOGICAL INFORMATION

LD₅₀ Information (based on active ingredient)



Oral
Dermal
Inhaled

LD₅₀ 50 mg/kg (rat)
LD₅₀ 90 mg/kg (rat)
LC₅₀ (4h) 340 mg/m³ (rats)

THIS PRODUCT IS HIGHLY TOXIC

Irritation:	Eye – irritant Skin – irritant
Sensitisation:	Skin – non sensitising (Guinea pig)
Mutagenicity:	Not a known mutagen
Reproductive Toxicity:	Not a known teratogen
Carcinogenicity:	Not a known carcinogen

12. ECOLOGICAL INFORMATION

Mobility:	Not mobile
Persistence:	DT ₅₀ < 1 day
Bioaccumulation:	Does not bioaccumulate
Ecotoxicity:	LC ₅₀ (96 h) 200 mg/l (Rainbow trout) Toxic to fish, birds and bees
Other adverse Effects:	

13. DISPOSAL CONSIDERATIONS

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to regional or local body bylaws.

14. TRANSPORT INFORMATION

UN Number:	3018
UN Shipping Name:	Organophosphorous Pesticide, Liquid, Toxic N.O.S
UN Classification:	6.1
UN Packing Group:	II

15. REGULATORY INFORMATION

Registered pursuant to the ACVM Act 1997 No. P01132
See: www.nzfsa.govt.nz/acvm/ for registration conditions

16. OTHER INFORMATION

Always read the product label before use.

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredient of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists. This material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should familiarise themselves with the product label and SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.