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PREPARED BY: SM Peters  
UPDATED BY: Ursula Du Pisanie  
UPDATED: 4 December 2017

# MATERIAL SAFETY DATA SHEET

## NUVAN PROFI

### 1. COMPANY DETAILS:

**Name:** Avima (Pty) Ltd  
**Address:** No. 18 Aschenberg Street  
Chamdor  
Krugersdorp  
**Tel. Nr.:** (011) 769 1300  
**Fax Nr.:** (011) 762 5712  
**Emergency Tel Nr.:** 083 326 3581 / 082 823 4473                      **OR**                      0800 172 743

### 2. PRODUCT IDENTIFICATION:

**Trade Name:** Nuvan Profi  
**Common Name (ISO):** Dichlorvos  
**Chemical Name:** Dichlorvos  
**Simplified formula:**  $C_4H_7Cl_2O_4P$   
**Molecular weight:** 221,0  
**Cas number:** [62-73-7]  
**Chemical Class:** Organophosphate

### 3. COMPOSITION:

Ingredients per 330 ml can:

|                 |           |
|-----------------|-----------|
| Dichlorvos tech | 28,7625 g |
| Irgarol         | 6,75 g    |
| Acetone         | 39,4875 g |
| Butane B56      | 150 g     |

### 4. PHYSICAL AND CHEMICAL CHARACTERISTICS:

**Appearance:** Pale yellow liquid  
**Odour:** Aromatic odour  
**Density @ 20 °C (kg/ ℓ):** 1,425  
**Solubility in H<sub>2</sub>O:** Emulsify in water.

**DATE ISSUED:** 22 July 2005  
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## 5. HAZARDS IDENTIFICATION:

**Flash Point:** N/A  
**Flammability:** Flammable  
**Auto ignition Temperature:** Not available  
**Decomposition Temperature:** Not available  
**Acute Hazards:** Formulation contains organic solvents  
**Special fire fighting procedures:** Keep fire exposed containers cool with water spray. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop leak. No unprotected persons should be allowed the vicinity. Water spray may be used to flush spills away from exposures. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Contain run-off with temporary earth barriers.  
**Extinguishing Media:** Water spray or fog, foam, dry chemical or carbon dioxide. (water may be ineffective for putting out fires, unless used by experienced fire-fighters)  
**Special protective equipment:** Do not breath fumes. For fires in close areas, fire fighters must use self-contained breathing apparatus, as well as full protective nitrile rubber gloves, close fitting safety goggles or face shield, effective respiratory protection. Full length protective clothing and boots must be worn when handling gear, this material in an emergency.  
**Hazardous decomposition products:** Toxic fumes including smoke CO<sub>2</sub>, aldehydes and other decomposition products.

## 1. REACTIVITY DATA:

**Stability:** Stable  
**Conditions to avoid:** Heat, sparks, flame and build up of static electricity, spillage onto roadways, etc.  
**Hazardous decomposition products:** Incomplete combustion will produce carbon monoxide and other toxic fumes.  
**Degradation:** In the environment degradation occurs.

## 2. WARNINGS:

Store under lock and key.  
Store in a cool, dry place, away from source of heat & naked flames.  
Keep away from oxidizers and acids.  
Keep containers closed when not in use.

**DATE ISSUED:** 22 July 2005  
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**UPDATED:** 4 December 2017

Minimize skin and eye contact.  
Decontaminate all equipment before repairing.  
Keep out of reach of children, uninformed persons and animals.  
Store away from farm feeds, foodstuffs, eating utensils and drinking water.  
Flammable liquid.

### 3. HEALTH HAZARD DATA: (Acute Hazards & Symptoms)

**Effects of overexposure:** Symptoms of acute poisoning develop within 12 hours (usually within 4 hours) of contact. Headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness of the chest, anxiety, blurred vision, confusion, muscle twitching, beginning in the eyelids and tongue, small pupils, respiratory distress, convulsions and coma.

**Inhalation:** May cause tightness of chest respiratory failure, headache, dizziness, sweating, nausea, vomiting, abdominal cramps, weakness, loss of coordination, seizures, & coma.

**Skin:** Product is can be easily absorbed through the skin. Prolonged or repeated contact may cause dermatitis.

**Eyes:** Will cause irritation, blurred vision & possible blindness.

**Ingestion:** May cause headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting, diarrhoea, tightness in the chest, anxiety, blurred vision, muscle twitching beginning in the eyelids and tongue, small pupils, respiratory distress, convulsions, coma.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Inhalation:** Avoid inhalation of spray mist. Use only in well-ventilated areas, in case of insufficient ventilation, wear suitable respiratory equipment. Approved respiratory equipment must be use when vapour or mists concentrations exceed applicable standards.

**Skin:** Wear protective clothing (long sleeve shirt & pants) as well as protective gloves (solvent resistant gloves). Launder contaminated clothing before re-use. Avoid skin contact. Keep working clothes separately and do not take home. Good personal hygiene practices should always be followed. Provide local emergency shower.

**Eyes:** Avoid contact with eyes. Wear eye & face protection (safety glasses & face shields). When handling this product, wear goggles giving completely eye protection. Normal industrial eye protection practices should be employed. Provide emergency eye wash stations.

**DATE ISSUED:** 22 July 2005  
**PREPARED BY:** SM Peters  
**UPDATED BY:** Ursula Du Pisanie  
**UPDATED:** 4 December 2017

**Ingestion:** Store away from food & feedstuffs. Do not eat, drink or smoke whilst handling this product. Wash hands & face after handling the product, before eating and drinking.

## 9. FIRST AID MEASURES:

**Inhalation:** Remove patient from source of poisoning to well ventilated area and keep him quiet and reassured. If breathing is difficult, give oxygen. If necessary administer artificial respiration and oxygen or closed chest cardiac massage. Seek medical attention immediately.

**Skin:** Remove contaminated clothing & shoes. Immediately rinse the affected skin area with plenty of soap & cool water or shower. Do not rub skin. Launder contaminated clothing before re-use. If irritation occurs & persists, seeks medical attention.

**Eyes:** Flush contamination of eyes with copious amounts of clean water for at least 15 min. Cover with a sterile pad and seek medical attention.

**Ingestion:** Keep patient quiet & reassured, rinse mouth with water. If water diluted mixture has been swallowed, induce vomiting by tickling the back path of the throat. If concentrate has been swallowed, firstly give copious quantities of either beaten egg white, starch solution of Milk of Magnesia before inducing vomiting. Repeat until vomiting fluid is clear and free from smell of poison. Never give anything by mouth to an unconscious person. **DO NOT** apply direct mouth to mouth respiration, use a disposable protective mouthpiece. Contact a doctor or hospital.

## NOTE TO PHYSICIAN:

Administer Atropine Sulphate, intravenously, (1-4mg) every 5-10 minutes until signs of atropinization(dry flushed skin & tachycardia) ; 2 – PAM 50 mg/kg up to a total dose of 1-2g or 2/3 of this dose of protopam. Repeat oximes if necessary. **DO NOT GIVE MORPHINE, AMINOPHYLLINE, PHENOTHIAZINES, RESERPINE, FUROSEMIDE OR ETHACRYNIC ACID.** SEEK MEDICAL ADVICE AND SHOW THIS MSDS TO A MEDICAL DOCTOR.

Administer doidoxime chloride ( Toxogonin, Merck ) in cases of severe poisoning in which respiratory depression, muscle weakness and twitchings are severe. When administer early ( less than 36 hours after poisoning ) obidoxine chloride relieves the nocotinic effects of poisoning.

**Adult dosage:** 3-5 mg/kg intravenously and slowly, 5ml after atropine administration.

**DATE ISSUED:** 22 July 2005  
**PREPARED BY:** SM Peters  
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**Child's dosage:** 4 – 8 mg/kg intravenously and slowly, 5 minutes after Atropine administration (the upper limit should not be exceeded and administration should not be repeated within 2 hours).

## 10. ACCIDENTAL RELEASE MEASURES:

**Notification procedures:** Report spills as required to appropriate authorities.

**Procedures if material is released or spilled:** Evacuate unprotected personnel, dike / contain spill with dry sand, inert material and sweep up and place into proper container as for toxic waste in accordance with local/national regulations. DO NOT BURN. Protective clothing to be worn when clearing spillage. If safe disposal is not possible contact manufacturer, dealer or local representative.

**Environmental Precautions:** Prevent spills from entering storm sewers or drains, waterways and contact with soil.

## 11. HANDLING & STORAGE:

**Suitable Material:** Aluminium / tin-plate.

**Handling /storage precaution:** Do not inhale spray mist. Avoid contact with skin, eyes and clothing. Avoid inhalation of fog and vapours, wash with soap and water after use/accidental skin contact. Do not eat, drink or smoke while working. Exposed operating positions must have an efficient local exhaust source, working areas must be well ventilated. In addition to the measures taken usually in the chemical works like splash proof filling and measuring equipment (including vapour stripping). Further personnel protection measures may have to be implemented to avoid possible contact with the product.

**Cleaning of equipment after use:** During application and when cleaning equipment and protective clothing, contamination of all sources of drinking H<sub>2</sub>O, rivers, dams, other crops or grazing shall be prevented. Clean protective clothing, used protective clothing and the workers personal clothing shall be kept

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apart. At the end of each day, all protective clothing and respirators, shall be decontaminated, washed, rinsed and dried. Extra care must be taken when cleaning equipment after use.

## 12. DISPOSAL CONSIDERATION:

### **Waste disposal:**

Product should be utilized completely to avoid disposal of excess product.

### **Disposal of residue:**

Residue to be disposed of as toxic waste in accordance with local/national regulations. DO NOT BURN.

## 13. TRANSPORTATION DATA:

**Hazardous Description Label:** Organophosphorous pesticide, liquid, flammable, toxic, n.o.s contains dichlorvos.  
Keep away from foodstuffs.  
Flammable liquid (aerosol)  
Toxic.

**UN Hazard Class:** 2.1  
**UN Packing Group:** III

**ICAO/IATA: Shipping Name:** Flammable liquids. (contains AROMATIC / ALIPHATIC SOLVENT BLEND)

**Label(s):** Flammable liquid.  
Poison

**Class:** 2.1  
**Subsidiary risk:** 6.1  
**UN No.:** 1950

**Additional information:** Contains Dichlorvos. Marine pollutant.

## 14. ENVIRONMENTAL DATA:

|                                   |                        |                        |
|-----------------------------------|------------------------|------------------------|
| Acute Oral LD <sub>50</sub>       | 200 mg/kg              | (Rat)                  |
| Acute Dermal LD <sub>50</sub>     | 600 mg/kg              | (Rat)                  |
| Acute Inhalation LD <sub>50</sub> | 600 mg/m <sup>3</sup>  | (Rat 4 h / 20 °C)      |
| Acute Inhalation LD <sub>50</sub> | 1200 mg/m <sup>3</sup> | (Rat 1 h / calculated) |
| Eye Irritation                    | Slight                 | (Rabbit)               |
| Skin Irritation                   | Slight                 | (Rabbit)               |
| Fish LC <sub>50</sub>             | 2,2 mg/L               | (Trout, toxic)         |

## 15. OTHER INFORMATION:

HARMFUL OR FATAL IF SWALLOWED.  
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COMBUSTIBLE LIQUID AND VAPOUR.

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MAY CAUSE SKIN IRRITATION ON PROLONGED, REPEATED SKIN CONTACT.  
AVOID BREATHING OF VAPOUR OR MIST.  
KEEP AWAY FROM HEAT OR FLAME.  
KEEP CONTAINER CLOSED.  
USE WITH ADEQUATE VENTILATION.

#### **16. NOTE:**

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR KNOWLEDGE ON THE PRODUCT, ALL INFORMATION IS GIVEN IN GOOD FAITH BUT WITHOUT GUARANTEE IN RESPECT OF ACCURACY, AND NO RESPONSIBILITY IS ACCEPTED FOR ERRORS OR EMISSION OR THE CONSEQUENCES THEREOF.