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UPDATED BY: Avima (Pty) Ltd
UPDATED: APRIL 2022

**SAFETY DATA SHEET
NUVAN PROFI**

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY / UNDERTAKING

- 1.1 **Product Name:** NUVAN PROFI
Product description: A rapidly acting uninterrupted release aerosol for space fumigation of dwelling houses, stores, warehouses, mills, silos, ships, aircraft, etc.
Product Identification: L1301 Nuvan Profi
Product Type: Organophosphate Insecticide
- 1.2 **Relevant identified uses of the substance or mixture and uses advised against**
Relevant uses: Insecticide ONLY
- 1.3 **Details of the supplier of the safety data sheet**
Avima (Pty) Ltd
Co. Reg. Nr.: 1961/00174407
18 Aschenberg Street
Chamdor
Krugersdorp
+27 11 769 1300
- 1.4 **Emergency telephone number**
Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
+27(0)82 446 8946

SECTION 2: HAZARD IDENTIFICATION

- 2.1 **Classification of the substance or mixture:**
The product is a mixture

Hazard statement code	Hazard class & category	Hazard statement
H301	Acute oral tox. 3	Toxic if swallowed
H311	Acute dermal tox. 3	Toxic in contact with skin
H332	Acute inhalation tox. 4	Harmful if inhaled
H280	Press. gas	Contains gas under pressure; may explode if heated
H220	Flam. gas 1	Extremely flammable gas
H225	Flam. liq. 2	Highly flammable liquid and vapour
H319	Eye irrit. 2	Causes serious eye irritation
H317	Skin sens. 1	May cause an allergic skin reaction
H410	Aquatic chronic 1	Very toxic to aquatic life with long lasting effects

2.2. Label elements

Hazard pictograms:



Signal Word: Danger

Hazard Statements:

H301 – Toxic if swallowed.
H311 – Toxic in contact with skin.
H332 – Harmful if inhaled.
H280 – Contains gas under pressure; may explode if heated.
H220 – Extremely flammable gas.
H225 – Highly flammable liquid and vapour.
H319 – Causes serious eye irritation.
H317 – May cause an allergic skin reaction.
H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264 – Wash hands and face thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release into the environment.
P280 – Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301+310 – IF SWALLOWED: Immediately call a POISON CENTER.
P302+352 – IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P305+351+338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 – Call a POISON CENTER or a doctor/physician if you feel unwell.
P321 – Specific treatment (see supplemental first aid instructions on this label).
P330 – Rinse mouth.
P333+313 – If skin irritation or rash occurs: Get medical advice.
P337+313 – If eye irritation persists: Get medical advice.
P361 – Take off contaminated clothing and wash before reuse.
P377 – Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 – Eliminate all ignition sources if safe to do so.
P391 – Collect spillage.
P405 – Store locked up.
P410+403 – Protect from sunlight. Store in a well-ventilated place.
P501 – Dispose of content/container to suitable landfill in accordance with local regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1. **Substances:** The product is not a substance

3.2. **Mixtures:** Dichlorvos, solvent, gas

Inert	CAS no.	Concentration (%)	Hazard class	Hazard statement code
Dichlorvos tech	62-73-7	12.4	Acute oral tox. 3	H301

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			Acute dermal tox. 3 Acute inhalation tox. 2 Skin sens. 1 Aquatic acute 1	H311 H330 H317 H400
Stabilizer	28159-98-0	3.0	Skin sens. 1 Aquatic acute 1 Aquatic chronic 1	H317 H400 H410
Solvent	67-64-1	>15	Flam. liq. 2 Eye irrit. 2 STOT SE 3	H225 H319 H336
Gas	106-97-8	>65	Press. gas Flam. gas 1 Muta. 1B Carc. 1A	H220 H340 H350

SECTION 4: FIRST AID MEASURES

- 4.1 Inhalation:** Remove to fresh air.
If not breathing, give artificial respiration.
If breathing difficult, give oxygen.
Get medical attention immediately
- Eyes:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes.
Remove contact lenses, if present, after the first five minutes; then continue rinsing eyes.
Call a poison control center or doctor for treatment advice.
- Skin:** Take off contaminated clothing.
Rinse skin immediately with plenty of water for 15-20 minutes.
Call a poison control center or physician for treatment advice.
- Ingestion:** Call a poison control center or physician immediately for treatment advice.
Do not give any liquid to the person.
Do not induce vomiting unless told to do so by a poison control center or physician.
Do not give anything by mouth to an unconscious person.
- 4.2 Most important symptoms and effects, both acute and delayed:**
May be fatal if absorbed through skin.
Causes moderate eye irritation.
May cause allergic skin reaction.
Acetyl cholinesterase inhibitor. (Dichlorvos)
Aspiration pneumonia hazard.
May displace oxygen and cause rapid suffocation.
Exposure to CO₂ gas can cause skin frostbite.
- 4.3 Indication of any immediate medical attention and special treatment needed:**
- Contains petroleum distillates. Vomiting may cause aspiration pneumonia hazard.
 - This product contains an organophosphate insecticide. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning (i.e. atropine for cholinesterase inhibition).

4.4 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) obidoxime chloride relieves the nocotinic effects of poisoning.

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

4.5 Cholinesterase inhibition – treatment

Much information on (acetyl) cholinesterase inhibition by organophosphate insecticides and its treatment can be found on the internet.

Decontamination procedures such as whole body washing, gastric lavage and administration of activated charcoal are often required.

Especially in the case of diazinon, treatment with atropine sulphate is essential. Results of treatment with oxime for diazinon poisoning are notoriously varying and it may happen that oxime doesn't have any positive effect. In no case should oxime be used in-stead of atropine sulphate. At first sign of pulmonary oedema the patient should be given supplementary oxygen and treated symptomatically. Relapse can occur after initial improvement.

VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS, DEPENDING ON THE SEVERITY OF POISONING.

SECTION 5: FIREFIGHTING MESURES

5.1 Extinguishing Media:

Suitable Extinguishing Media:	Foam, dry chemical or CO2 extinguisher, water spray (fog)
Unsuitable Extinguishing Media:	Direct water stream

5.2 Specific Hazards Arising from the Chemical including Hazardous Combustion Products

- Do not use or store near heat or open flame.
- Do not apply this product in or on electrical equipment, due to the possibility of ignition or shock hazard.

5.3 Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride, phosphorus oxides sulfur oxides.
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5.3 Advice for Fire Fighters

Special Protective Equipment:	Wear self-contained breathing apparatus and full turnout gear for fire situations.
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Precautions for Fire Fighters:	Stay upwind. Do not breathe vapors. Move containers from fire area if you can do it without risk.
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Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures:

- While wearing personal protective equipment, evacuate personnel and ventilate area.
- Extinguish or remove all sources of potential ignition.
- If indoors, ventilate area of spill.
- Soak up with absorbent material, such as sand, sawdust, earth or fuller's earth, and discard with chemical wastes.
- After clean-up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

6.2 Environmental Precautions

- Do not allow spilled or leaking material to enter drains, sewers, or waterways.
- Prevent entry into basements and other confined areas.

6.3 Methods and Materials for Containment and Cleaning Up

- Stop leak if without risk. Dike the spilled material where possible with sand, earth, or vermiculite.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

- This product is a highly hazardous material and must be handled with care only by those individuals experienced with its proper use.
- IF THIS PRODUCT IS BEING APPLIED AND THE INFORMATION IN THIS SDS DIFFERS FROM THAT ON THE END USE LABELING FOR THIS PRODUCT, THE HANDLER MUST FOLLOW THE PRECAUTIONARY STATEMENTS ON THE END USE LABELING.
- Take prudent precautions to avoid contact with skin, eyes, and clothing.
- Take prudent precautions to avoid breathing vapors and/or spray mists of this product.
- Wear PPE in accordance with the label (See Section 8). Leather or other abrasion resistant gloves can be worn when handling or moving closed and capped cylinders containing this product.
- Always have adequate clean water available to wash the skin.
- Wash hands and face before eating, drinking, or smoking after handling material.
- Handle in accordance with good industrial hygiene and safety practice.
- Avoid contact with incompatible materials. See Section 10 for specific materials to avoid.
- Keep away from heat or open flame.
- Do not contaminate water, food, or feedstuffs by storage, handling, or disposal.
- Read and observe all precautions and instructions on the label.

7.2 Conditions for Safe Storage

- KEEP OUT OF REACH OF CHILDREN
- Cylinders or containers should be tightly closed, stored upright in a dry, well-ventilated area under lock and key (secured).
- Keep away from heat, open flame, and/or ignition sources.
- Post as a pesticide storage area.
- Do not contaminate water, food, or feed by storage, handling, or disposal.

7.3 Specific End Uses

Use only in accordance with the product's end use label.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

OCCUPATIONAL EXPOSURE LIMITS FOR Dichlorvos (CAS 62-73-7)

SOURCE OF EXPOSURE LIMIT	TYPE	VALUE	NOTE
US ACGIH Threshold Limit Values (TLVs) (Basis of TLV is Cholinesterase Inhibition)	TWA	0.1 mg/m ³ 0.01 ppm	Skin
US OSHA, Table Z-1 Limits for Air Contaminants, 29 CFR 1910.1000, Permissible Exposure Limit	TWA	1.0 mg/m ³ 0.1 ppm	Skin
US NIOSH, Recommended Exposure Limits	TWA	1.0 mg/m ³ 0.1 ppm	Skin
US NIOSH, Documentation for Immediately Dangerous to Life or Health IDLH 100 mg/m ³ 11 ppm			

8.2 Exposure/Engineering Controls

General Hygiene:

- Wash promptly if skin becomes contaminated.
- Wash at the end of each work shift and before eating, drinking, smoking, and using the toilet.
- Handle in accordance with good industrial hygiene and safety practice.
- Use personal protective equipment as required.
- Keep working clothes separate.
- Do not eat, drink, smoke or apply cosmetics when using this product.

Equipment:

Provide easy access to adequate water supply for eye flushing or skin decontamination in the work area. For field handling and application situations, refer to the pesticide end-use label for emergency water requirements.

Ventilation:

Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary

8.4 In cases of incidental high exposure, maximal personal protection may be necessary, such as respirator, face mask, chemical resistant coveralls.



Respiratory protection

In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers must put on officially approved respiratory protection equipment with a universal filter type including particle filter.



Protective gloves

Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown. Generally, however, the use of protective gloves will give only partial protection against dermal exposure. Small tears in the gloves and cross-contamination can easily occur. It is recommended to shift the gloves frequently and to limit the work to be done manually.



Eye protection

Wear safety glasses. It is recommended to have an eye wash fountain immediately available in the workplace when there is a potential for eye contact.



Other skin protection

Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of excessive or prolonged exposure, coveralls of barrier laminate may be required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Physical state:	Liquid pressurized with gas
9.2 Appearance:	Pale yellow
9.3 Odour:	Aromatic
9.4 Form:	Liquid
9.5 Product stability:	Stable
9.6 Volatility:	Volatile fumigation gas
9.7 Density at 20 °C:	1.425
9.8 Explosive properties:	FLAMMABLE

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:	Hazardous polymerization is not known to occur.
10.2 Chemical Stability:	Product is stable.
10.3 Possibility of Hazardous Reactions:	No information available.
10.4 Conditions to Avoid:	Exposure to heat or flame from fire
10.5 Incompatible Materials:	May react with strong acids, bases, or other strong oxidizing materials.
10.6 Hazardous Decomposition Products:	Thermal decomposition in the presence of air may yield acid smoke. Hydrogen chloride, phosphorus oxide, and carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity classification done according to toxicity calculations:

Exposure route	LD50 value	GHS classification
Acute oral	>132.99 mg/kg	Category 3
Acute dermal	>837.03 mg/kg	Category 3
Acute inhalation	>3.99 mg/L	Category 4

SECTION 12: ECOLOGICAL INFORMATION:

12.1 Toxicity

Dichlorvos Technical (Pesticide manual)

Toxicity to fish:	LC50 200 ug/l Rainbow trout
Exposure time:	96 h

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.19 ug/l
 Exposure time: 48 h

Toxicity to aquatic plants

EC50 (Algae): 52.8 mg/l
 Exposure time: 5 days

Piperonyl Butoxide (Pesticide manual)

The value mentioned relates to the active ingredient deltamethrin.

12.2 Persistence and degradability

Biodegradability

Dichlorvos technical: Non-persistent in the environment, with rapid decomposition in the atmosphere.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

13.2 Disposal of packaging:

Treat as hazardous waste and dispose of in accordance with municipal, provincial and national regulations.

SECTION 14: TRANSPORT INFORMATION

UN number	Class	Packaging group	Proper shipping name
3018	6.1	II (100 ml)	Organophosphorus pesticide; liquid, toxic (active 124 g/kg).
3018	6.1	III (5 L)	Organophosphorus pesticide; liquid, toxic (active 124 g/kg).

UN No. 3018
NAME and description ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC
Class 6.1
Classification code T6
Packing group I
Labels



Special provisions

61 274 648

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Limited quantities 0
Excepted quantities E5
Packing instructions P001
Special packing provisions
Mixed packing provisions MP8 MP17
Portable tanks and bulk containers instructions T14
Portable tanks and bulk containers special provisions TP2 TP27
ADR tank code L10CH
ADR tank special provisions TU14 TU15 TE19 TE21
Vehicle for tank carriage AT
Transport category (Tunnel restriction code) 1 (C/E)
Special provisions for carriage - packages
Special provisions for carriage - bulk
Special provisions for carriage - loading, unloading and handling CV1 CV13 CV28
Special provisions for carriage - operation S9 S14

66

3018

SECTION 15: REGULATORY INFORMATION

15.1.

Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso category (Dir. 2012/18/EU): Dangerous for the environment

Second Seveso category: Flammable

15.2. Chemical safety assessment:

A chemical safety assessment is not required to be included for this product.

SECTION 16: OTHER INFORMATION

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or nonstandard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.