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SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

DEVIPAN™ 100

Revision date: 19 September 2024 **Version:** 4 **Supersedes Date:** 21 November 2022

Print date: 19 September 2024

1. Product and Company Identification

Identification of the product/preparation

Product Name	DEVIPAN™ 100
Trade Name/Synonyms	None
Registration Number	L4669
Product Description and Formulation Type	An emulsifiable concentrate insecticide.

Active Ingredient

Dichlorvos

Formula	$C_4H_7Cl_2O_4P$
CAS Number	62-73-7

Relevant restrictions on use***

THIS REMEDY MAY ONLY BE SOLD TO AND USED BY A REGISTERED PEST CONTROL OPERATOR, OR BY SOMEONE UNDER THE SUPERVISION OF A REGISTERED PEST CONTROL OPERATOR, AND ONLY FOR THOSE USES COVERED BY THE PEST CONTROL OPERATOR'S SCOPE OF REGISTRATION, AND ONLY AS DIRECTED ON THE LABEL.

Supplier, Manufacturer, and/or Importer

Supplier

Company Name	ADAMA SOUTH AFRICA (PTY) LTD
Address	Ground Floor, Simeka House The Vineyards Office Estate 99 Jip de Jager Drive Belville 7530
Phone Number	+27 21 982 1460
Web-Address	www.adama.com

Emergency Phone Numbers

Nature of Emergency	Emergency Operator	Telephone Number
24 Hour Poisoning Emergency Helplines – National Advisory Bodies	Griffon Poison Information Centre	+27(0)82 446 8946
	Tygerberg Poison Information Centre:	+27 (0)861 155 5777
Spill Response and Transport Incidents	SPILL TECH®	+27(0)86 100 0366; +27 (0)83 253 6618
Product Properties and Hazards	ADAMA South Africa (Pty) Ltd	+27(0)21 982 1460

Relevant identified uses of the product and uses advised against

DEVIPAN™ 100 is an insecticide with short residual action and is used for the control of pests. The product is for professional use only.

2. Hazard(s) Identification

Classification of the substance or mixture

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals – SANS10234 and the Regulations for Hazardous Chemical Agents - 2021.

GHS Classification:

Hazard Class	Category	Hazard Statement Number
Flammable Liquids	3	H226
Acute Toxicity, Oral	3	H301
Aspiration Hazard	1	H304
Acute Toxicity, Dermal	2	H310
Skin Corrosion/Irritation	2	H315
Sensitization – Skin	1	H317
Serious Eye Damage/Irritation	1	H318
Acute Toxicity, Inhalation	2	H330
Carcinogenicity	2	H351
Acute Aquatic Toxicity	1	H400

Label Elements

Pictograms:

Signal Word:

Danger

Hazard Statements:

Statement Number	Hazard Statement
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways (aspiration hazard).
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.

Precautionary Statements:

Prevention -

Statement Number	Precautionary Statement
P203	Obtain, read and follow all safety instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion proof electrical, ventilation, lighting and other equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing fumes/mist/vapours/spray.
P262	Do not get in eye, on skin, or on clothing.
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.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, and eye and face protection.
P284	In case of inadequate ventilation, wear respiratory protection.
P264 + P265	Wash hands and face thoroughly after handling. Do not touch eyes.

Response -

Statement Number	Precautionary Statement
P316	Get emergency medical help immediately.
P320	Specific treatment is urgent – see information on the label and Section 4 of this SDS.
P330	Rinse mouth.
P331	Do not induce vomiting.
P391	Collect spillage.
P301 + P316	IF SWALLOWED: Get emergency medical help immediately.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P333 + P317	If skin irritation or rash occurs: Get medical help.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P370 + P378	In case of fire, use the available equipment to extinguish the fire.
P303 + P361 + P353	IF ON SKIN OR HAIR: Take off immediately all contaminated clothing. Rinse affected area/s under the safety shower.
P305 + P354 + P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage –

Statement Number	Precautionary Statement
P405	Store locked up.
P403 + P235 + P433	Store in a well-ventilated place. Keep cool and keep container tightly closed.

Disposal -

Statement Number	Precautionary Statement
P501	Dispose of contents/container to a licensed waste facility and in accordance with local and national regulatory requirements.

Other Hazards

Gives off irritating or toxic fumes (or gases) in a fire. Will form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Containers may explode when heated.

3. Composition/Information on Ingredients

Mixture

Common Name: DEVIPAN
IUPAC/Chemical Name-Active ingredient: 2,2-Dichloroethenyl dimethyl phosphate
Chemical Family: Organophosphate
Formulation: Dichlorvos 1 000g/L – Emulsifiable Concentrate

Ingredients with Hazard Concerns (GHS)

According to UN GHS criteria.

Hazardous Component – Chemical Name	CAS Number	Weight - %	International GHS Classification
Dichlorvos	62-73-7	>60%	Acute Toxicity Oral, Category 3. Acute Toxicity Dermal, Category 3. Acute Toxicity Inhalation, Category 2. Skin Sensitization, Category 1. Carcinogenicity, Category 2.

			Aquatic Toxicity Acute, Category 1. M Factor = 1000.
Calcium dodecylbenzenesulphonate	26264-06-2	<10%	Acute Toxicity Oral, Category 4. Skin Corrosion/Irritation, Category 2. Serious Eye Damage/Irritation, Category 1.
Xylene	1330-20-7	<10%	Flammable Liquids, Category 3. Acute Toxicity Dermal, Category 4. Acute Toxicity Inhalation, Category 4. Skin Corrosion/Irritation, Category 2.
FLUIDAR 100 - Light Aromatic Petroleum Solvent	64742-95-6	<10%	Skin Corrosion/Irritation, Category 3. Aspiration Hazard, Category 1. STOT SE, Category 3. Aquatic Toxicity Acute, Category 2. Aquatic Toxicity Chronic, Category 2. Flammable Liquids, Category 3.
2-Methylpropan-1-ol	78-83-1	<10%	Flammable Liquids, Category 3. Skin Corrosion/Irritation, Category 2. Serious Eyes Damage/Irritation, Category 1. STOT SE, Category 3.

NOTE: The other ingredients do not cause or contrinute toward the correct GHS classification of DEVIPAN™ 100 and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed in the table above.

4. First-Aid Measures

Description of First-aid Measures

General Advice

Immediate medical attention is required. Acute exposure to DEVIPAN may require decontamination and life support for the victims. Provide this SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.
Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm and covered up. First Aid personnel should pay attention to their own safety.

Eye Contact

Immediately rinse/flush the eyes gently with water from the eye wash fountain for several minutes (at least 15 minutes), while holding the eyelids apart. Check for and remove contact lenses if easy to do so. Continue rinsing. Obtain immediate medical attention.

Skin Contact

Remove all contaminated clothing and shoes. Rinse the skin immediately with plenty of water for 15 to 20 minutes under the safety shower. Immediately contact a poison control centre or medical practitioner for advice. Wash contaminated clothing before re-use.

Inhalation

Immediately remove the affected victim from exposure to an area with fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the product; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediately obtain medical attention.

Ingestion	Obtain immediate medical attention - call a poison control centre or medical practitioner immediately for treatment advice. If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits.
Emergency Responders	Use Personal Protective equipment as required.

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.

Indication of any immediate medical attention and special treatment needed

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 give morphine.

5. Fire-Fighting Measures

Suitable (and unsuitable) 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.
Specific hazards arising from the chemical including thermal decomposition products	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 equipment and precautions 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.
Additional provisions	Fight fire from a safe distance, with adequate cover. Act in accordance with the site's Internal Emergency Plan and the Workplace Specific Procedures for actions to be taken after an accident or other emergencies. Keep container cool by spraying with water.

6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Eliminate all ignition sources. Do not breathe in fumes/vapour/spray mist and avoid contact with eyes, skin and clothes. Evacuate personnel to a safe area when necessary.
Ventilate the area of the spill or leak, especially when in confined areas. Beware of vapours accumulating in low areas to form explosive concentrations.
Do not touch or walk through spilled material as it could be slippery when spilt.
Contain spills if it can be done without risk and clean-up immediately.
Wear appropriate protective and ant-static clothing recommended in Section 8 of the SDS including chemical impermeable gloves.

Environmental precautions

Prevent spillage or further leakage if safe to do so.
Do not allow the spilt product to enter water courses and drains and avoid contact with soil.
Do not allow the spilt product to spread to other areas - keep the spilt material contained and isolated.
Report spills and releases as required to appropriate authorities if the spilt product has caused environmental pollution (sewers, water ways, soil or air).

Methods for cleaning up

For small spills, soak up with damp non-combustible absorbent material. Sweep together and place into a labelled waste container with a shovel (using spark-resistant tools). Cover for subsequent disposal.
Dispose of collected spilt material as hazardous waste. Clean the contaminated surface with water to remove any residues of the spilt product. Keep the wash water out of drains, sewers and waterways.

For large spills, do not wash away into sewers. Contain/dyke or cover to prevent dispersal using absorbent socks, pillows or pads supplied in a spill kit. Collect the spilt product and place it into suitable labelled containers for proper disposal as hazardous waste.

Reference to other SDS sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

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.

The formulation is stable if stored well ventilated, out of direct sunlight, cool and free of moisture and high humidity. Keep out of reach of children, uninformed persons and animals. Protect containers from physical damage. Do not contaminate water, food, or feed by storage or disposal.
Avoid cross contamination with other agricultural products.
Store away from incompatible materials like strong alkalis and oxidizing agents.
It is recommended to have appropriate spill control kits equipped with absorbent material in close proximity to storage areas (see Section 6).
Store in accordance with national and local regulations.
NOTE: Dichlorvos is not stable at high temperatures or under Ultraviolet Light. Store away form direct sunlight at lower temperatures.

8. Exposure Controls and Personal Protection

Components with workplace control parameters – National Occupational Exposure Limits

This product, as supplied, contains Dichlorvos, Xylene, 2-Methylpropan-1-ol, and a small amount of Ethyl Benzene for which occupational exposure limits have been established by the South African Department of Labour and Employment.

Component	Type	Control Parameter	Update	Basis
Xylene	OEL-eight-hour TWA	200 ppm	2021	South African RELs*
	OEL – STEL/C	300 ppm	2021	South African RELs*
Ethyl Benzene	OEL-eight-hour TWA	100 ppm	2021	South African RELs*
Dichlorvos	OEL-eight-hour TWA	0.2 mg/m^3 (inhalable fraction and vapour)	2021	South African RELs*
2-Methylpropan-1-ol	OEL-eight-hour TWA	100 ppm	2021	South African RELs*

*REL: Recommended Exposure Limit.

OEL-eight hour TWA:	Occupational Exposure Limit- Time Weighted Average. Calculated over an eight-hour working day, for a five-day working week.
OEL-STEL/C:	Occupational Exposure Limit – short Term Exposure Limit /Ceiling Limit. Peak airborne concentration determined over the shortest analytically practicable period of time, which does not exceed 15 minutes.

A Biological Exposure Index for Ethyl Benzene has been established by the South African Department of Labour and Employment.

Component	Sample Matrix	Sample Time	Value
Ethyl Benzene	Urine	End of shift	0.15g/g creatinine

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:

Respiratory protection selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
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.

Skin and hand protection:

Select skin and hand protection based on the task being performed and the risks involved with the task.
Wear fire/flame resistant/retardant clothing and antistatic boots.
Elbow length impervious chemical resistant gloves recommended for hand protection (e.g., butyl rubber, nitrile rubber, etc.). Consider the glove penetration time - information on glove penetration time is available from the manufacturer of the glove. The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).
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.

Eye/face 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.

General safety and hygiene measures:

The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained.
Handle the product in accordance with good industrial hygiene and safety

practice.
An eye wash fountains and safety showers should be available and easily accessible.
Keep the product away from food, drink and animal feeding stuffs.
Wash the hands and/or face before breaks, eating, smoking or using the lavatory and at the end of the shift/working period.

Environmental exposure controls	In accordance with the local legislation for the protection of the environment it is recommended to avoid environmental spillage or releases of both the product and its container.

9. Physical and Chemical Properties

Unless otherwise stated, the data is applicable to the formulation.

Physical or Chemical Property		Value	Test Method or Remarks
Appearance	Appearance/physical state	Liquid	
	Odour characteristics	No information available	
	Colour	Light yellow	
Volatility	Boiling point (°C)	234 at 101.3kPa	Dichlorvos
	Vapour pressure at 20°C	0.012 mm Hg	Dichlorvos
	Evaporation Rate at 20 ºC	Not determined	
Product Descriptors	Solubility in water	18 g/l at 20 °C	Dichlorvos
	Decomposition temperature (°C)	Not determined	
	Melting point (°C)	Not applicable (liquid)	
	pH	Not determined	
	Density (g/cm^3) at 20°C	Not determined	
	Bulk Density/relative density (g/L)	Not determined	
	Particle characteristics	Not applicable - liquid	
	Octanol/water partition coefficient as Log P_{OW}	1.47	Dichlorvos
Flammability	Flammable (Y/N)	Flammable	
	Flash point (°C)	>23	Closed Cup
	Flammable limits-LEL	Not determined	
	Flammability limits -UEL	Not determined	

Auto-ignition Temperature (°C)	Not determined

Other Hazard Information
None

10. Stability and Reactivity

Reactivity	The product is not reactive under normal ambient and anticipated storage and handling conditions of temperature and pressure. Decomposes at elevated temperatures.
Chemical Stability	Hazardous polymerization will not occur. Stable under normal ambient conditions of use, storage and transport.
Possibility of Hazardous Reactions	None known under conditions of normal use.
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.

Conditions to Avoid

Shock and Friction	Contact with Air	Heat and Ignition Sources	Sunlight	Humidity or Moisture Conditions
Not applicable	Avoid storage without ventilation.	Avoid exposing to excessive heat and ignition sources.	Do not store in direct sunlight.	Avoid moisture conditions during storage.

Incompatible Materials
Incompatable with:

Strong Acids	Water	Combustive Materials	Strong Alkalis	Other Incompatible Substances
Yes	Not applicable	Yes	Yes	Attacks iron, steel, plastics, and rubber.

11. Toxicological Information

Information on likely routes of exposure

The product is toxic if ingested and fatal in contact with skin or inhaled. It may be absorbed into the body by inhalation of vapour or spray. The product may come into contact with the skin or eyes.

Information on toxicological effects

Specific test data for the product is not available. The classification is based on calculation and the data of the ingredients/components.

Acute toxicity:

Product Information	Fatal	Toxic	Harmful	May be Harmful	Not classified
Ingestion - Oral		√			
Dermal/Skin Contact	√				
Inhalation	√				

Assessment of acute toxicity:

Product/ingredient Name	Dose Acute -	Species	Test Result
DEVIPAN™ 100	102 mg/kg	Rat	$ATE_{(MIX)}$ Oral
DEVIPAN™ 100	132 mg/kg	Rat	$ATE_{(MIX)}$ Dermal
DEVIPAN™ 100	0.11 g /L	Rat (4h)	$ATE_{(MIX)}$ Inhalation (Dust/Mist)

Irritation – Dermal/Skin and Eyes:

Assessment of irritation effects (skin/eyes):
Based on available data, the classification criteria are met for mild/moderate skin and sever eye irritation.
Xylene: Mild-moderate skin irritation was reported in rats and rabbits treated topically with mixed xylene or xylene isomers (ECHA). Repeated or prolonged skin contact could cause skin inflammation and defatting resulting in cracking and peeling - particularly after prolonged or repeated contact. Redness of the skin and blisters may also occur (ATSDR – Agency for Toxic Substances and Disease Registry – Medical Guidelines for Xylene).
Calcium dodecylbenzenesulphonate: The results of the study (Rhodia,1998) indicate that the ingredient is an irritant to skin - 0.5 mL according to OECD GHS guidelines. The acute eye irritation study (Rhodia,1998) indicates that Calcium dodecylbenzenesulphonate caused serious eye irritation.
Results: Irritant to skin at 0.5 mL and irritating to eye at 0.1 mL.

Corrosion/Damage – Dermal/Skin and Eyes:

Assessment of corrosion/damage effects (skin/eyes):
Based on available data, the classification criteria are met for serious eye damage.
Calcium dodecylbenzenesulphonate and 2-Methylpropan-1-ol: Causes serious eye damage.

Respiratory/Skin Sensitization:
Assessment of sensitization:
Based on available data, the classification criteria are met for skin sensitization.
Dichlorvos: Skin sensitizer - cases of irritant contact dermatitis has been reported in humans who came into direct contact with 1% to 10% solutions of, or mixtures containing, dichlorvos.
In a guinea pig maximization test, induction with dichlorvos by intradermal injection and topical application and subsequent challenge with topical dichlorvos solutions showed sensitization.

Germ cell mutagenicity:
Assessment of mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity:
Assessment of carcinogenicity:
Based on available data, the classification criteria are met.
Dichlorvos International Agency for Cancer Research (IARC) classification - there is inadequate evidence in humans for the carcinogenicity of dichlorvos. There is sufficient evidence in experimental animals for the carcinogenicity of dichlorvos. Overall evaluation Dichlorvos is possibly carcinogenic to humans (Croup 2B) based on significant increases of forestomach tumours in mice and leukaemia's and pancreatic acinar adenomas in rats as evaluated by the U.S. EPA.

Reproductive toxicity:
Assessment of reproduction toxicity:
Based on available data, the classification criteria are not met.

Developmental toxicity:
Assessment of teratogenicity:
Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure):
Assessment of STOT (single):
Based on available data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure):
Assessment of repeated dose toxicity:
Based on available data, the classification criteria are not met.

Aspiration hazard:
Assessment of repeated dose toxicity:
Based on available data, the classification criteria are met.

Xylene, Ethyl benzene and Light Aromatic Petroleum Solvent: May be drawn into the lungs if swallowed or vomited. Pulmonary aspiration of toxic vomitus or ingested liquid may cause inflammation of the lungs.

Symptoms related to the physical, chemical, and toxicological characteristics	The symptoms are included in Section 4.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	Skin contact: irritation and possible sensitization (allergic reaction). Eye contact: serious eye damage or irritation. Other effects are included in Section 4.

12. Ecological Information

Ecotoxicity

DEVIPAN™ 100 is very toxic to aquatic life.

The information below refers to the active ingredient Dichlorvos:

Species and Genus	Exposure (hours/days)	Result in fresh water
Crustacea (Daphnia magna)	48h	Acute EC_{50} 0.0009 mg/L (US EPA ECOTOX Database)
Fish (Oncorhynchus mykiss)	96h	Acute LC_{50} 0.55 mg/L (Pesticide Properties Database)
Algae and aquatic plants (Scenedemus subspicatus)	72h	Acute EC_{50} Growth 52.80 mg/L (Pesticide Properties Database)

Toxicity to Other Species

Toxic to bees.

Other Environmental and Adverse Effects:

Environmental effect	Environmental Effect Applicable to Ingredient	Description
Persistence and degradability:	Dichlorvos	Based on laboratory and field studies, dichlorvos is expected to degrade in the environment, with dissipation half-lives of <1-16 days. Dichlorvos has been reported to undergo hydrolysis in environmental aqueous systems in <1-70 days depending on the temperature, pH and other environmental conditions.
Bioaccumulative potential:	Dichlorvos	BCFs in fish of <0.5-0.8 suggest bioconcentration in aquatic organisms is low.
Mobility in soil:	Dichlorvos	If released to soil, dichlorvos is expected to have very high to moderate mobility based upon K_{oc} values of 27.5 - 151. Volatilization from moist soil surfaces is expected to be an important fate process. Dichlorvos is not expected to volatilize from dry soil surfaces based upon its vapor pressure. If released into water, dichlorvos may adsorb to suspended solids and sediment based upon the K_{oc} values.

	Dichlorvos
Other adverse effects:	None known.

13. Disposal Considerations

Waste handling and disposal	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. Special help is available for the disposal of Agricultural Chemicals. The product label will supply general advice regarding disposal of small quantities, and how to cleanse containers.
General container handling	Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Empty containers and offer for recycling, if an available option. Recondition if appropriate, or puncture and dispose of in a hazardous waste landfill, or by other procedures approved by the local authorities. Contaminated packaging: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the product.
Additional special precautions	The product and its container must always be disposed of in a safe manner. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. Transport Information

	Land Transport (ADR/RID)	Inland Waterways (AND/ADNR)	See Transport (IMDG)	Air Transport (ICAO-TI/IATA-DGR)
UN Number	3017	3017	3017	3017
UN Proper Shipping Name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, Flash Point not less than 23°C	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, Flash Point not less than 23°C	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, Flash Point not less than 23°C	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, Flash Point not less than 23°C
Transport Hazard Class	3	3	3	3

Transport Hazard Class Pictogram				
Transport Subsidary Class				
Packaging Group	II	II	II	II
Environmental Hazard	Yes	Yes	Yes	Yes
Special Precautions for User	-	-	Marine pollutant	-

15. Regulatory Information

Safety, health and environmental regulations specific for the product in question

Symbol

F: Flammable, **C:** Corrosive, **N:** Dangerous for the Environment, **T+**: Very Toxic, **Xi:** Sensitizing by skin contact, **T**: Carcinogenicity.

R- Phrase Number	R Phrase
R10	Flammable.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R27	Very toxic in contact with skin.
R40	Limited evidence of a carcinogenic effect.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R38	Irritating to skin.
R50	Very toxic to aquatic organisms.

No known specific country national and/or local regulations applicable to the product (including its ingredients). A summary of country specific general laws/regulations are supplied below.

Country Specific Registration Requirements

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947)	Registration to manufacture or sell an agricultural remedy.

Country Specific Pesticide Handling and Storage Safety

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	SANS10206: 2020.	The Handling, Storage and Disposal of Pesticides.

Country Specific Safety Data Sheet and Occupational Exposure Limit Requirements

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act.	Handling, labelling and Safety Data Sheets for hazardous and GHS classified substances and mixtures. Occupational Exposure Limits.
	SANS11014:2010.	Safety Data Sheet for Chemical Products – Content and Order of Sections.

Country Specific control of handling of poisonous/hazardous and non-poisonous/non-hazardous substances/chemicals in industry and the workplace

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	**Hazardous Substances Act,** 1973 (Act No.15 of 1973).	Requirements on the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of **hazardous substances.**
	Occupational Health and Safety Act No. 85 of 1993.	Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

16. Other Information

Key to Abbreviations

AND	European Provisions concerning the International Carraige od Dangerous Goods by inland Waterways
ADR	The European Agreement concerning the International Carraige of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS Number	Chemical Abstracts Service Number
COD	Chemical Oxygen Demand
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IMDG	International Maritime Dangerous Goods
Log_{Pow}	Logarithm of the octanol/water partition coefficient
LD_{50}	Lethal Dose 50
LC_{50}	Lethal Concentration 50
RID	The Regulations concerning the International Carraige of Dangerous Goods by Rail
SDS	Safety Data Sheet
STOT	SpecificTarget Organ Toxicity
TWA	Time Weighted Average

UN United Nations

Document Control

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Revision date	19 September 2024
Revision Note	Changes made to the last version are labelled with the sign ***. NOTE: Previous revision incorporates the GHS requirements for DEVIPAN™ 100 and therefore the total content of the SDS has been revised.

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification of the Mixture - Classification Procedure

H Statement Number	H Statement	Classification Basis: Test Data/Calculation Method
H226	Flammable liquid and vapour.	Flash Point of product.
H301	Toxic if swallowed.	Calculated.
H304	May be fatal if swallowed and enters airways (aspiration hazard).	Calculated and Kinematic viscosity of the ingredients and product.
H310	Fatal in contact with skin.	Calculated.
H315	Causes skin irritation.	Calculated for ingredients.
H318	Causes serious eye damage.	Calculated.
H319	Causes serious eye irritation.	Calculated for ingredients.
H330	Fatal if inhaled.	Calculated.
H351	Suspected of causing cancer.	Active ingredient animal studies data.
H400	Very toxic to aquatic life.	Data for active ingredient.

Disclaimer

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End of Safety Data Sheet