

JUDOX 148 SC

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: JUDOX 148 SC
Other identifier: Indoxacarb + Lambda-Cyhalothrin 148 SC
Recommended use: Insecticide
Restrictions on use: Agriculture
Supplier: Villa Crop Protection (Pty) Ltd.
Co. Reg. No.: 1992/002474/07
PO Box 10413
Aston Manor, 1630, South Africa
Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
(Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)
Griffon Poison Information Centre +27 82 446 8946
(Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
Griffon Poison Information Centre +27 82 446 8946
Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Health		
Oral	Acute Tox. 4	H302
Dermal	Skin sens. 1B	H317
Inhalation	Acute Tox. 4	H332
Specific Target Organ Toxicity Repeated Exposure	STOT RE 1	H372
Environment		
Aquatic	Aquatic acute 2	H400
	Aquatic Chronic 2	H411

The most important adverse effects:

Physiochemical effects:

None known.

Human health effects: Harmful if swallowed (Acute Tox. 4), may cause an allergic skin reaction (Skin sens. 1B), harmful if inhaled (Acute Tox. 4), causes damage to organs affected through prolonged or repeated exposure (STOT RE 1).

Label elements:



Signal word: Warning.

Hazard statements:

H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H332: Harmful if inhaled.
H372: Causes damage to organs (blood, nervous system, heart) affected through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

Precautionary statements:

P260: Do not breathe dust, fume, gas, mist, vapours and spray.
P264: Wash hands and face thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
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+ P330+P317: IF SWALLOWED: Rinse mouth: Get medical help.
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
P304+P340+P317: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P319: Get medical help if you feel unwell.
P333+P317: If skin irritation or rash occurs: Get medical help.
P391: Collect spillage.

P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Special labelling of certain mixtures:

None known.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 4.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Indoxacarb (95 % min)	144171-61-9	16.70 %	Acute Tox. 3 (H301) Skin Sens. 1B (H317) Acute Tox. 4 (H332) STOT RE 1

JUDO^X 148 SC

SAFETY DATA SHEET

			(H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Lambda-Cyhalothrin	91465-08-6	21.97 %	Acute Tox. 3 (H301) Acute Tox. 4 (H312) Acute Tox. 2 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Rhodasurf 860/P	78330-20-8	< 1 %	Acute Tox. 4 (H302) Eye Dam. 1 (H318)
MEG	107-21-1	< 60 %	Acute Tox. 4 (H302)

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. If symptoms develop consult a doctor.

Inhalation: If vapours or mists have been inhaled, move victim to fresh air and remove source of contamination if safe to do so. The patient should be kept under observation. **Obtain medical attention if irritation persists.**

Skin: Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Obtain medical attention if irritation persists.

Eyes: Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation occurs.

Ingestion: Do not give anything by mouth to an unconscious person. Do not induce vomiting unless instructed to do so by a poison control centre or doctor.

Seek medical attention or call a poison control centre for treatment advice if the person feels unwell.

Anticipated acute effects: Harmful if swallowed, may cause an allergic skin reaction, Harmful if Inhaled.

Anticipated delayed effects: Causes damage to the nervous system, heart and blood through prolonged or repeated exposure.

Most important symptoms/effects: **Lambda-cyhalothrin:** No cases of poisoning have been described in the general population and none from occupational exposure. However, symptoms that may arise if the product is mishandled and overexposure

occurs are nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence. Larger doses may cause convulsions and loss of consciousness.

Indoxacarb: In the case where **Indoxacarb** is ingested methemoglobinemia may occur. In contact with eye may cause irritation with tearing, pain or blurred vision. In contact with skin may cause irritation with itching, burning, redness, swelling or rash. May cause skin sensitization with allergic rashes.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish fires with carbon dioxide, dry chemical or alcohol foam, halogenated agents or water fog.

Unsuitable Extinguishing Media: Water jet. Use a water jet only to cool heated containers. Water may be ineffective in controlling fire.

Specific hazards: Heating may generate toxic vapours.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Burning chemicals may produce by-products more toxic than the original material. Remove container from fire area if possible and without risk. Avoid pollution of waterways by run-off from the site. Contain water used for fire fighting for later disposal.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Do not breathe in fumes. Avoid contact with skin.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

JUDO^X 148 SC

SAFETY DATA SHEET

Methods and Materials for Containment: Contain spilled product by diking area with sand, earth or clay.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Harmful if swallowed. May cause an allergic skin reaction. Harmful if inhaled. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used again.

Storage:

Conditions for safe storage: Keep out of reach of unauthorised persons, children and animals. Store in its original labelled container in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. Avoid cross contamination with other pesticides and fertilisers. Local regulations should be complied with.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits has been determined for the significant ingredients in this product.

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations

below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area wear an organic cartridge respirator suitable for protection from mists/ vapours of pesticides if inhalation is likely to occur.

Hand Protection: Employee must wear appropriate chemically resistant gloves e.g. nitrile rubber gloves to prevent contact with this mixture.

Eye Protection: This product is not likely to cause eye irritation, but the use of chemical safety goggles is recommended to prevent against eye contact as a safety precaution. Contact lenses are not protective eye devices.

Skin and Body Protection: The use of protective (impervious) clothing e.g. coveralls is recommended to prevent skin contact with this mixture.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this mixture; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White viscous liquid suspension.

Odour: No odour.

pH (1% aqueous dilution): 7.4 @ 18°C

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not available.

Flammability: Not available.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density: 1.073 g/ml @ 19°C.

Solubility: Miscible in water.

n-octanol/water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

JUDO^X 148 SC

SAFETY DATA SHEET

Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Extreme heat.
Incompatible Materials: Alkaline pesticides,
Hazardous Decomposition Products: (Indoxacarb) Nitride, chloride, carbon dioxide. **(Lambda)** Carbon dioxide, Carbon monoxide, Nitrogen oxides, Ammonia, trace amounts of Hydrogen Cyanide.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Based on experimental data:

Oral LD₅₀ (24 h) rats > 766 mg/kg.

Dermal LD₅₀ (24 h) rats > 15491 mg/kg.

Inhalation LC₅₀ (4 h) rats > 3 mg/l.

Skin Irritation/Corrosion: Not calculated.

Eye Damage/Irritation: Not calculated.

Skin Sensitization: May cause an allergic skin reaction.

Respiratory Sensitization: Harmful if inhaled.

Reproductive cell mutagenicity: Not calculated.

Carcinogenicity: Not calculated.

Reproductive toxicity: Not calculated.

Specific target organ toxicity – single exposure: Not calculated.

Specific target organ toxicity – repeated exposure: Causes damage to the nervous system, heart and blood through prolonged or repeated exposure.

Aspiration hazard: Not calculated.

Chronic Effects: Not calculated.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled

Skin contact: May cause an allergic skin reaction.

Eye contact: None known.

Ingestion: None known.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA: Active ingredients

Fish:

Indoxacarb:

LC ₅₀ (96 h)	Rainbow trout	>0.17 mg/l
	Bluegill sunfish	0.9 mg/l
	Rainbow trout	0.65 mg/l
	Sheepshead minnows	> 0.374 mg/l

Lambda-cyhalothrin:	Bluegill sunfish	0.00021 mg/l
	Rainbow trout	0.00036 mg/l
LC ₅₀ (96 h)	Channel catfish	0.00016 mg/l
	Zebrafish	0.00064 mg/l
	Fathead minnows	0.00070 mg/l

Daphnia:

> 0.17 mg/l

Indoxacarb: 0.60 mg/l

EC₅₀ (48 h)

Lambda-cyhalothrin: 0.00023 µg/l

EC₅₀ (72 h)

Algae: *Pseudokirchneriella*

Indoxacarb: *subcapitata* >0.0674mg/l

ErC₅₀ (96 h) >0.11 mg/l

Lambda-cyhalothrin: *Selenastrum* >1.0 µg/l

capricornutum

Birds: Bobwhite quail 98 mg/kg

Indoxacarb

Acute oral LD₅₀

Dietary LC₅₀ Bobwhite quail 808 mg/kg

Lambda-Cyhalothrin Mallard ducks >3950 mg/kg

Acute oral LD₅₀

Dietary LC₅₀ Quail >5300 mg/kg

Bees:

Indoxacarb 0.26 mg/bee

LD₅₀(oral) 0.23mg/bee

(contact) 0.068 mg/bee

0.094 mg/bee

Lambda-Cyhalothrin

LD₅₀(oral) 0.909 mg/bee

(contact) 0.038 mg/bee

Worms:

Indoxacarb + *Eisenia foetida* >1000 mg/kg soil

Lambda-Cyhalothrin

LC₅₀

ENVIRONMENTAL EFFECTS:

Based on information for the formulation / active ingredient(s).

Plants:

Lambda-Cyhalothrin:

For details of metabolism of lambda-cyhalothrin in cotton and soybean leaves, see D. A. French & J. P. Leahey, Proc. Br. Crop Prot. Conf. - Pests Dis., 1990, 3, 1029–1034.

Animals:

Indoxacarb: Metabolism in rats after oral dosing was studied using both DPX-JW062 and DPX-MP062. Most of the dose was excreted within 96 hours. Extensive metabolism to numerous minor metabolites occurs. In urine, metabolites were cleaved products (indane or trifluoromethoxyphenyl ring products), whilst, in faeces, major metabolites retained both these moieties. Major metabolic reactions included hydroxylation of the indane ring, hydrolysis of the carboxymethyl group from the amino nitrogen, and opening of the oxadiazine ring, which gave rise to cleaved products.

Lambda-Cyhalothrin:

JUDO^X 148 SC

SAFETY DATA SHEET

In rats, following oral administration, rapidly eliminated in urine and faeces. The ester group is hydrolysed, both moieties forming polar conjugates.

Persistence and degradability:

Indoxacarb: Indoxacarb is considered to be moderately persistent; aerobic DT50 3–23 d, anaerobic DT50 186 d

Lambda-Cyhalothrin:

Rapidly degraded in soil; DT50 under lab. conditions 23–82 d, in the field 6–40 d. Rapid and extensive degradation of parent compound in aquatic systems; DT50 for degradation in lab. water-sediment systems 7–15 d; in a microcosm, DT50 <3 h, DT90 <3 d.

cumulative Potential:

Indoxacarb: Not determined.

Lambda-Cyhalothrin: Not determined.

Mobility in soil:

Indoxacarb: DT50 17 d in tana silt loam soil. It is considered to be immobile; Koc 3300–9600 ml/g. Kd 26–95 l/kg (EU Rev. Rep.). DT50 for aquatic photolysis 3.0 d (pH 5.0).

Lambda-Cyhalothrin: Strongly adsorbed to soil and sediment organic matter, Koc 330000. Negligible potential for leaching of lambda-cyhalothrin and its degradation products through soil. Rapid dissipation from water in aquatic systems. DT50 for dissipation from surface waters in lab. water-sediment systems 5–11 h; in a microcosm, DT50 <3 h.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Container: Emptied containers retain vapour and product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to one third of that of the container. Add the rinsing's to the contents of the spray tank before recycling or destroying the container in the prescribed manner. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 3082
Road Transport ADR/IRD:

Class: 9
Packaging group: III
Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S
(Indoxacarb 127.5 g/l + Lambda-cyhalothrin 20 g/l)

Maritime Transport IMDG/IMO:

Class: 9
Packaging group: III
Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S
(Indoxacarb 127.5 g/l + Lambda-cyhalothrin 20 g/l)

Marine Pollutant (Y/N): YES

Air transport IATA/ICAO:

Class: 9
Packaging group: III
Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S
(Indoxacarb 127.5 g/l + Lambda-cyhalothrin 20 g/l)

Special/Environmental Precautions: None Known.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 50, 100, 150 200, 500 ml and 1, 5, 10, 20, 25 and 50 litres plastic containers, labelled according to South African regulations and guidelines.

Additional H-statement (s) (formulants):

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H318: Causes serious eye damage.

H330: Fatal if inhaled.

H332: Harmful if inhaled.

H400: Very toxic to aquatic life.

H401: Toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

JUDO^X 148 SC

SAFETY DATA SHEET

IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.
OEL/RL: Occupational exposure limit-recommended limit.
TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.
ST/STEL: Short-term exposure limits.
Disclaimer: 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 and use of the product. It is not applicable to unusual or non-standard 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.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.