SAFETY DATA SHEET

STEWARD® 30 WG

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	2025/03/24	50000054	Date of first issue: 2018/08/01

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : STEWARD® 30 WG

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Company : FMC Agro Philippines, Inc.

Address : Unit 10-A Six/NEO Bldg.,
5th Avenue cor. 26th Street,
1634 Bonifacio Global City, Taguig City
Philippines

Telephone : +63279443400

Telefax : +63279443465

E-mail address : SDS-Info@fmc.com

National Poison Control Center : U.P. PGH, Padre Faura, Manila (+63) 2 8524 1078
East Avenue, Quezon City (+63) 2 8928 0611
Southern Philippines Medical Center (+63) 82 227 2731
(formerly Davao Medical Center Davao City)

Emergency telephone : For leak, fire, spill or accident emergencies, call:
+(63) 2-395-3308 (CHEMTREC)
Toll-free mobile enabled: 1800 1 322 0553 (CHEMTREC)

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)

2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Oral) : Category 4

Specific target organ toxicity - single exposure : Category 2 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 1 (Blood, Nervous system)

Long-term (chronic) aquatic : Category 1

hazard

GHS label elements

Hazard pictograms :

Signal Word : DANGER

Hazard Statements : H302 Harmful if swallowed.
H371 May cause damage to organs (Central nervous system).
H372 Causes damage to organs (Blood, Nervous system) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P260 Do not breathe dust.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Dust can form an explosive mixture in air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
indoxacarb (ISO)	173584-44-6	30
Lignin, alkali, reaction products with formaldehyde and sodium bisulfite	68512-35-6	>= 30 -< 50
Silicon dioxide	112926-00-8	>= 10 -< 20

4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Do not induce vomiting without medical advice. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing Avoid inhalation, ingestion and contact with skin and eyes. If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	:	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet Do not spread spilled material with high-pressure water streams.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion prod-	:	Fire may produce irritating, corrosive and/or toxic gases.

ucts		Chlorinated compounds Fluorinated compounds Nitrogen oxides (NOx) Carbon oxides Hydrogen cyanide Hydrogen chloride Hydrogen fluoride
Specific extinguishing methods	:	Use a water spray to cool fully closed containers. Remove undamaged containers from fire area if it is safe to do so. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Firefighters should wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Do not touch or walk through the spilled material. If it can be safely done, stop the leak. Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Never return spills in original containers for re-use. Mark the contaminated area with signs and prevent access to unauthorized personnel. Only qualified personnel equipped with suitable protective equipment may intervene. For disposal considerations see section 13.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Never return spills in original containers for re-use. Pick up and transfer the spilled material to a properly labeled container without creating dust. For spills on concrete or other non-porous surfaces, the area can be cleaned using a small quantity of soap and water. Do not allow the cleaning solution to enter drains. Use an inert absorbent material to soak up the cleaning solution and transfer it to the properly labeled container. When the spill occurs on soil, the only effective way to decontaminate the area is to remove the top 5 to 7 centimeters of soil.

7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	Avoid formation of respirable particles. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	The product is stable under normal conditions of warehouse storage. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading “POISON” is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.
Further information on storage stability	:	No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Silicon dioxide	112926-00-8	TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	PH OEL
		TWA (Dust)	20 Million particles per cubic foot (Silica)	PH OEL

Personal protective equipment

Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type	:	Particulates type
Hand protection		
Material	:	Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Protective measures	:	Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions. Wear suitable protective equipment. When using do not eat, drink or smoke. In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Do not breathe dust. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	solid
Form	:	dry, free flowing granules
Color	:	dark brown
Odor	:	mild, woody
Odor Threshold	:	not determined
pH	:	7.5 (20 °C) Concentration: 10 g/l
Melting point/ range	:	No data available

Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Does not sustain combustion.
Self-ignition	:	not auto-flammable
Upper explosion limit / Upper flammability limit	:	Not available for this mixture.
Lower explosion limit / Lower flammability limit	:	Not available for this mixture.
Vapor pressure	:	Not available for this mixture.
Relative vapor density	:	Not applicable
Relative density	:	0.8
Density	:	No data available
Bulk density	:	800 kg/m3
Solubility(ies)		
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	not determined
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Surface tension	:	Not applicable
Molecular weight	:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Dust may form explosive mixture in air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid dust formation. Heat, flames and sparks. Avoid extreme temperatures.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity	:	LD50 (Rat, male): 1,876 mg/kg Method: OECD Test Guideline 401 LD50 (Rat, female): 687 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 5.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 402

Components:

indoxacarb (ISO):

Acute oral toxicity	:	LD50 (Rat, male and female): 281 - 291 mg/kg Method: OECD Test Guideline 420 Symptoms: ataxia, Tremors, Diarrhea, clonic convulsions GLP: yes LD50 (Rat, female): 179 mg/kg Method: OECD Test Guideline 401 Target Organs: Nervous system Symptoms: hypoactivity, Tremors, ataxia, Fatality

GLP: yes

Acute inhalation toxicity : LC50 (Rat, female): 4.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: nasal discharge, lethargy
GLP: yes

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Silicon dioxide:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC0 (Rat, male and female): > 0.14 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials
no mortality

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Components:

indoxacarb (ISO):

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Result : slight irritation
GLP : yes

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Result : No skin irritation

Silicon dioxide:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Based on data from similar materials

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Components:

indoxacarb (ISO):

Species : Rabbit
Result : slight irritation
Assessment : Not classified as irritant
Method : OECD Test Guideline 405
GLP : yes
Remarks : Product dust may be irritating to eyes, skin and respiratory system.

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Result : Moderate eye irritation

Silicon dioxide:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405
Remarks : Based on data from similar materials

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Product:

Test Type : Maximization Test
Species : Guinea pig
Assessment : Did not cause sensitization on laboratory animals.
Method : OECD Test Guideline 406

Components:

indoxacarb (ISO):

Species	:	Guinea pig
Result	:	May cause sensitization by skin contact.
Test Type	:	Maximization Test
Species	:	Guinea pig
Assessment	:	May cause sensitization by skin contact.
Method	:	US EPA Test Guideline OPPTS 870.2600
Result	:	May cause sensitization by skin contact.
GLP	:	yes

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Species	:	Guinea pig
Result	:	Not a skin sensitizer.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

indoxacarb (ISO):

Genotoxicity in vitro	:	Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: gene mutation test Test system: Chinese hamster ovary cells Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Result: negative
Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative

Silicon dioxide:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials

Genotoxicity in vivo	:	Species: Rat (male) Application Route: Inhalation Result: negative Remarks: Based on data from similar materials

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

indoxacarb (ISO):

Species	:	Rat, female
Application Route	:	Oral
Exposure time	:	24 m
	:	2.13 mg/kg bw/day
Result	:	negative
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Silicon dioxide:

Species	:	Rat
Application Route	:	Oral
Exposure time	:	103 weeks
Method	:	OECD Test Guideline 453
Result	:	negative
Remarks	:	Based on data from similar materials

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:

indoxacarb (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat Result: Animal testing did not show any effects on fertility.
Effects on fetal development	:	Species: Rabbit General Toxicity Maternal: NOEL: 500 mg/kg bw/day Developmental Toxicity: NOEL: 500 mg/kg bw/day Method: EPA OPP 83-3
Reproductive toxicity - Assessment	:	Animal testing did not show any effects on fertility. Animal testing did not show any effects on fetal development.

Silicon dioxide:

Effects on fertility	:	Species: Rat General Toxicity Parent: NOAEL: 1.5 mg/kg bw/day Fertility: NOAEL: > 6.9 mg/kg body weight

Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 2 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 2 mg/kg bw/day Symptoms: Reduced fetal weight., Reduced number of viable fetuses. Test Type: Embryo-fetal development Species: Rabbit Application Route: Oral General Toxicity Maternal: NOAEL: 500 mg/kg bw/day Embryo-fetal toxicity.: NOAEL: 500 mg/kg bw/day Symptoms: Reduced fetal weight., fused or incompletely ossified sternebrae

STOT-single exposure

May cause damage to organs (Central nervous system).

Components:

indoxacarb (ISO):

Target Organs	:	Central nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.

STOT-repeated exposure

Causes damage to organs (Blood, Nervous system) through prolonged or repeated exposure.

Components:

indoxacarb (ISO):

Target Organs	:	Blood, Nervous system
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

indoxacarb (ISO):

Species	:	Rat, female
NOAEL	:	1.7 mg/kg
LOAEL	:	4.1 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Method	:	OECD Test Guideline 408
GLP	:	yes
Target Organs	:	Blood

Silicon dioxide:

Species	:	Rat, male and female

NOAEL	:	2,500 mg/kg
Application Route	:	Oral
Exposure time	:	13 weeks
Method	:	OECD Test Guideline 408
Remarks	:	Based on data from similar materials

Species	:	Rat, male and female
NOAEL	:	1.3 - 10 mg/l
LOAEL	:	5.9 mg/l
Application Route	:	Inhalation
Exposure time	:	13 weeks
Method	:	OECD Test Guideline 413
Remarks	:	Based on data from similar materials

Aspiration toxicity

Based on available data, the classification criteria are not met.

Further information

Product:

Remarks	:	Acute effects on nervous system: drowsiness, tremors, paralysis. Chronic effects include cyanosis

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1.8 mg/l Exposure time: 96 h Test Type: Static renewal test Method: OECD Test Guideline 203 GLP: yes LC50 (Lepomis macrochirus (Bluegill sunfish)): 3.2 mg/l Exposure time: 96 h Test Type: Static renewal test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.7 mg/l Exposure time: 48 h Test Type: Static renewal test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EbC50 (Pseudokirchneriella subcapitata (green algae)): > 1.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes Remarks: No toxicity at the limit of solubility.

Toxicity to soil dwelling organisms	:	Method: OECD Test Guideline 217 GLP: yes Remarks: No significant adverse effect on Carbon mineralization. Method: OECD Test Guideline 216 GLP: yes Remarks: No significant adverse effect on Nitrogen mineralization.
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): 593 mg/kg Method: US EPA Test Guideline OPP 71-1 GLP: yes LD50 (Apis mellifera (bees)): 0.53 µg/bee Exposure time: 48 h End point: Acute contact toxicity Method: OECD Test Guideline 214 GLP: yes LD50 (Apis mellifera (bees)): 0.73 µg/bee Exposure time: 48 h End point: Acute oral toxicity Method: OECD Test Guideline 213 GLP: yes

Components:

indoxacarb (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): >0.17 mg a.i./kg Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.90 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0.17 mg a.i./kg Exposure time: 48 h Test Type: flow-through test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (algae)): 0.0793 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes
M-Factor (Acute aquatic tox-	:	1

icity)

Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.15 mg/l Exposure time: 90 d Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes NOEC (Pimephales promelas (fathead minnow)): 0.0675 mg/l Exposure time: 28 d Test Type: Early Life-Stage Method: OECD Test Guideline 210 GLP: yes LOEL (Cyprinodon variegatus (sheepshead minnow)): 0.0417 mg/l Exposure time: 35 d Test Type: flow-through test Method: US EPA Test Guideline OPP 72-4 NOEL (Cyprinodon variegatus (sheepshead minnow)): 0.0169 mg/l Exposure time: 35 d Test Type: flow-through test Method: US EPA Test Guideline OPP 72-4
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.09 mg/l Exposure time: 21 d Method: OECD Test Guideline 202 GLP: yes NOEC (Daphnia magna (Water flea)): 0.0351 mg/l Exposure time: 21 d Test Type: Static renewal test Method: OECD Test Guideline 211 GLP: yes
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	NOEC (Eisenia fetida (earthworms)): 29.2 mg/kg Exposure time: 56 d End point: reproduction Method: OECD Test Guideline 222 GLP: yes NOEC (Eisenia fetida (earthworms)): 94.5 mg/kg Exposure time: 28 d Method: OECD Test Guideline 222 GLP: yes LC50 (Eisenia fetida (earthworms)): > 94.5 mg/kg Exposure time: 28 d Method: OECD Test Guideline 222

GLP: yes

NOEC (Eisenia fetida (earthworms)): < 62.5 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
GLP: yes

LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
GLP: yes

Toxicity to terrestrial organisms : NOEL (Apis mellifera (bees)): 0.048 µg/bee
End point: Acute contact toxicity
Method: OECD Test Guideline 214

NOEL (Apis mellifera (bees)): 0.163 µg/bee
End point: Acute oral toxicity
Method: OECD Test Guideline 213

LD50 (Apis mellifera (bees)): 0.232 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Method: OECD Test Guideline 213

LD50 (Apis mellifera (bees)): 0.068 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Method: OECD Test Guideline 214

LD50 (Colinus virginianus (Bobwhite quail)): 98 mg/kg
Method: US EPA Test Guideline OPP 71-1
GLP: yes

NOEC (Anas platyrhynchos (Mallard duck)): 720 ppm
Exposure time: 147 d
End point: Reproduction Test
Method: OECD Test Guideline 206
GLP: yes

NOEC (Colinus virginianus (Bobwhite quail)): 144 ppm
Exposure time: 147 d
End point: Reproduction Test
Method: OECD Test Guideline 206

NOEC (Anas platyrhynchos (Mallard duck)): 562 ppm
Exposure time: 5 d
Method: US EPA Test Guideline OPP 71-2
Remarks: Dietary

LC50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm
Exposure time: 5 d
Method: US EPA Test Guideline OPP 71-2
Remarks: Dietary

NOEC (Colinus virginianus (Bobwhite quail)): 316 ppm
Exposure time: 5 d
Method: US EPA Test Guideline OPP 71-1
Remarks: Dietary

LC50 (Colinus virginianus (Bobwhite quail)): 808 ppm
Exposure time: 5 d
Method: US EPA Test Guideline OPP 71-2
Remarks: Dietary

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 615 mg/l
Exposure time: 96 h

Silicon dioxide:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : NOELR (Desmodesmus subspicatus (green algae)): 10,000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Components:

indoxacarb (ISO):

Biodegradability : Result: Not readily biodegradable.

Lignin, alkali, reaction products with formaldehyde and sodium bisulfite:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: < 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Silicon dioxide:

Biodegradability : Result: Not biodegradable
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

indoxacarb (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 77.3
Exposure time: 21 d
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 4.52 (20 °C)
Method: OECD Test Guideline 107
GLP: yes

Silicon dioxide:

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Remarks: Based on data from similar materials

Mobility in soil

Components:

indoxacarb (ISO):

Distribution among environmental compartments : Koc: 4483 ml/g, log Koc: 3.65
Remarks: Low mobility in soil.

Kd: 46 - 150

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Do not re-use empty containers.

Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Indoxacarb)
Class	:	9
Subsidiary risk	:	ENVIRONM.
Packing group	:	III
Labels	:	9 (ENVIRONM.)
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (Indoxacarb)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passenger aircraft)	:	956
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Indoxacarb)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

Priority Chemical List (PCL)	:	Not applicable
Chemical Control Order (CCO)	:	Not applicable

The ingredients of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. indoxacarb (ISO) Indeno[1,2-e][1,3,4]oxadiazine-4a(3H)-carboxylic acid, 7-chloro-2,5-dihydro-2-[[(methoxycarbonyl)[4-(trifluoromethoxy)phenyl]amino]carbonyl]-, methyl ester, (4aR)- Lignin, alkali, reaction products with formaldehyde and sodium bisulfite
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

16. OTHER INFORMATION

Revision Date	:	2025/03/24
Date format	:	yyyy/mm/dd

Full text of other abbreviations

PH OEL	:	Philippines. Threshold Limit Values For Airborne Contaminants

PH OEL / TWA : Threshold limit for airborne contaminants

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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