

SAFETY DATA SHEET

Avatar® insecticide



Version	Revision Date:	SDS Number:	Date of last issue: -
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Avatar® insecticide

Recommended use of the chemical and restrictions on use

Recommended use : Can be used as insecticide only.

Restrictions on use : Use as recommended by the label.

Manufacturer or supplier's details

Company : FMC AG (Thailand) Ltd

Address : 159/22 Serm-Mit Tower, Unit 1404,
14th Floor, Sukhumvit 21 Road (Asoke)
Khwaeng Klongtoey Nua, Khet Wattana
Bangkok 10110
Thailand

Telephone : +662 700 9770

Telefax : +662 700 9777

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

Emergency telephone : For leak, fire, spill or accident emergencies, call:
1 703 / 741-5970 (CHEMTREC - International)
001-800-13-203-9987 (CHEMTREC)
Toll-free: 1800014808 (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 - : Category 2 (Nervous system)
single exposure

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

Short-term (acute) aquatic : Category 1
hazard

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Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :   

Signal Word : DANGER

Hazard Statements : H302 Harmful if swallowed.
H371 May cause damage to organs (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 or doctor/ physician if you feel unwell. Rinse mouth.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/ physician.
P314 Get medical advice/ attention if you feel unwell.
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

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
indoxacarb (ISO)	173584-44-6	30
kaolin	1332-58-7	>= 2.5 -< 10
Residues, petroleum, catalytic reformer frac-	68425-94-5	>= 1 -< 10

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tionator, sulfonated, polymers with formaldehyde, sodium salts		
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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 | : Move to fresh air.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance. |
| In case of skin contact | : Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.
Wash off immediately with soap and plenty of water.
Get medical attention if irritation develops and persists. |
| 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. |
| 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

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- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- 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 products : Fire may produce irritating, corrosive and/or toxic gases.
Chlorinated compounds
Fluorinated compounds
Nitrogen oxides (NO_x)
Carbon oxides
Hydrogen cyanide
- Specific extinguishing methods : 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.
Treat recovered material as described in the section "Disposal considerations".
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.
- 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 : Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

- Advice on protection against : Avoid dust formation.

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- 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.
Provide sufficient air exchange and/or exhaust in work rooms.
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.
Electrical installations / working materials must comply with the technological safety standards.
- 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
kaolin	1332-58-7	TWA (Respirable dust)	0.025 mg/m3 (Silica)	TH OEL
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
β-D-Fructofuranosyl-α-D-glucopyranoside	57-50-1	TWA	10 mg/m3	ACGIH

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

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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 : Always have on hand a first-aid kit, together with proper instructions.
Wear suitable gloves and eye/face protection.
When using do not eat, drink or smoke.

Hygiene measures : 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 : granular

Color : white

Odor : Faint odour

Odor Threshold : not determined

pH : 8.4
(1% solution in water)

Melting point/ range : Not available for this mixture.

Initial boiling point and boiling range : No data available

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : The product is not flammable.

Self-ignition : 207 °C

Upper explosion limit / Upper flammability limit : Not available for this mixture.

Lower explosion limit / Lower : Not available for this mixture.

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flammability limit

Vapor pressure : Not available for this mixture.

Relative vapor density : Not applicable

Density : 0.4 g/cm³
loose

0.44 g/cm³
Tap density

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The product is not oxidizing.

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 : No decomposition if stored and applied as directed.
Dust may form explosive mixture in air.

Conditions to avoid : Heat, flames and sparks.
Avoid dust formation.

Incompatible materials : Avoid strong acids, bases, and oxidizers.

Hazardous decomposition products : Stable under recommended storage conditions.

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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Skin contact
Inhalation

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity	: LD50 (Rat): 550 mg/kg Method: OECD Test Guideline 425 GLP: yes Remarks: (Data on the product itself) Information source: Internal study report
Acute inhalation toxicity	: LC50 (Rat, male and female): > 5.3 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 402 GLP: yes Remarks: (Data on the product itself) Information source: Internal study report

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

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toxicity

kaolin:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 LD50: > 2,000 mg/kg Method: OECD Test Guideline 420 Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): 36 mg/l Exposure time: 1 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg LD50: > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
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Skin corrosion/irritation

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

Product:

Species	:	Rabbit
Exposure time	:	72 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	(Data on the product itself) Information source: Internal study report

Components:

indoxacarb (ISO):

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

kaolin:

Method	:	OECD Test Guideline 404
Result	:	No skin irritation

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Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Remarks : No data available

Serious eye damage/eye irritation

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

Product:

Species : Rabbit
Result : No eye irritation
Exposure time : 72 h
Method : OECD Test Guideline 405
GLP : yes
Remarks : (Data on the product itself)
Information source: Internal study report

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.

kaolin:

Result : No eye irritation
Method : OECD Test Guideline 405

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Result : Eye irritation

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 : Local lymph node test
Species : mice
Method : OECD Test Guideline 429
Result : Did not cause sensitization on laboratory animals.
GLP : yes
Remarks : (Data on the product itself)
Information source: Internal study report

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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

kaolin:

Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

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.

kaolin:

Genotoxicity in vitro	:	Test Type: Ames test Method: OECD Test Guideline 471 Result: negative
Genotoxicity in vivo	:	Remarks: No data available

Carcinogenicity

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

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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.

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.

kaolin:

Effects on fertility	: Remarks: No data available
Effects on fetal development	: Remarks: No data available

STOT-single exposure

May cause damage to organs (Nervous system).

Product:

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

Components:

indoxacarb (ISO):

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

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kaolin:

Remarks : No significant adverse effects were reported

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.

kaolin:

Assessment : The substance or mixture is not classified as specific target organ toxicant, 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

kaolin:

Remarks : No data available

Aspiration toxicity

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.67 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes
Remarks: (Data on the product itself)

LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.187 mg/l mg

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		a.i./kg Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.3 mg/l Exposure time: 48 h Test Type: Static renewal test Method: OECD Test Guideline 202 Remarks: (Data on the product itself) EC50 (Daphnia magna (Water flea)): , 0.0919 mg a.i./kg Exposure time: 48 h Test Type: Static renewal test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.67 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes Remarks: (Data on the product itself) Information source: Internal study report
Toxicity to soil dwelling organisms	:	NOEC (Eisenia fetida (earthworms)): > 100 mg/kg Method: OECD Test Guideline 222 Remarks: (Data on the product itself) LC50 (Eisenia fetida (earthworms)): > 100 mg/kg Exposure time: 28 d Method: OECD Test Guideline 222 Remarks: (Data on the product itself)
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): 508 mg/kg End point: Acute oral toxicity Method: US EPA Test Guideline OPP 71-1 NOEL (Apis mellifera L.): 0.085 µg a.i./bee Exposure time: 72 h End point: Acute oral toxicity Method: OECD Test Guideline 213 LD50 (Apis mellifera L.): 0.505 µg a.i./bee Exposure time: 72 h End point: Acute oral toxicity Method: OECD Test Guideline 213 NOEL (Apis mellifera L.): 0.4 µg a.i./bee Exposure time: 72 h End point: Acute contact toxicity Method: OECD Test Guideline 214

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LD50 (Apis mellifera L.): 1.21 µg a.i./bee
Exposure time: 72 h
End point: Acute contact toxicity
Method: OECD Test Guideline 214

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 toxicity) : 1

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

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		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

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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

kaolin:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 1,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

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Toxicity to algae/aquatic plants : EC50 (Raphidocelis subcapitata (freshwater green alga)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Toxicity to fish : LC50 (Zebra fish): > 10 - 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): > 10 - 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Persistence and degradability

Components:

indoxacarb (ISO):

Biodegradability : Result: Not readily biodegradable.

kaolin:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

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Residues, petroleum, catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Biodegradability : Result: Not readily 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

kaolin:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : Remarks: Not applicable

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

kaolin:

Distribution among environmental compartments : Remarks: Low mobility in soil.

Other adverse effects

Product:

Additional ecological information : See product label for additional application instructions relating to environmental precautions.

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

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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.
Dispose of as unused product.
Do not re-use empty containers.

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

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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

Hazardous Substance Act	:	Conditions of restriction for the following entries should be considered: indoxacarb (Number on list 614)
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Emergency Decree on Controlling the Use of Volatile Substances	:	Not applicable
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The ingredients of this product are reported in the following inventories:

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	Not applicable
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	:	2025/03/25
Date format	:	yyyy/mm/dd

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Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
TH OEL : Thailand. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average
TH OEL / TWA : Time weighted average

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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